



**International
Conference on
Global Innovation
and Trend
Economy 2020**

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SCAN HERE



PREFACE

Assalaamu ‘alaikum warahmatullahi wabarakaatuh

InCOGITE is “International Conference on Global Innovation and Trend in Economy”. InCOGITE on 2019 was held on November 7, 2019 in Pelita Harapan University (Building D | 5th Floor), Karawaci, Tangerang-Indonesia. The conference is hosted by Pelita Harapan University, Swiss German University and Multimedia Nusantara University. The InCOGITE-2020 will focus on conference aims to provide opportunities to exchange research ideas and produce new insights. This Opportunity also could be used as a way to broaden international network.

Let's innovate, explore, and share in the ICC-IRS forum for the strengthening of Indonesia's multiculturalism and pluralism identity by preserving the nation's local wisdom for the world of science.

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The Effect of Environmental Accounting on the Increase in Firm Value

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Abstract

This study aims to analyze the factors of environmental accounting which consist of material inputs, non-product output, compliance aspects, transportation aspects, other aspects, supplier assessment, and environmental complaints mechanisms to increase firm value. The sample in this study was 71 respondents from companies in Banten which were determined based on the purposive sampling method. Then the data were analyzed using multiple linear regression methods. The results showed that environmental accounting which is proxied by non-product output, other aspects, and environmental complaints mechanisms have a significant positive effect on increasing firm value. Furthermore, it was found that there was a significant negative effect between material input and supplier assessment on the increase in firm value. Also, it was found that the compliance aspect had a positive and insignificant effect on the increase in firm value and the transportation aspect had a negative and insignificant effect on the increase in firm value. Finally, the results of this study found that environmental accounting simultaneously has a significant effect on firm value.

Keywords: firm value, environmental accounting, Banten.

I. INTRODUCTION

This research is based on several facts regarding the low awareness of companies in Indonesia in carrying out environmental management responsibilities, especially manufacturing companies in Banten Province. Environmental damage in Banten continues to increase until now, especially damage to agricultural land, destruction of mountains, environmental pollution, destruction of food sources to climate change. This is evident among others in the case of PT. Sentra Usahatama Jaya (SUJ) and the reclamation of Pantai Pulorida in Cilegon, pollution of the Sungai Ciujung, sand mining in the Lebak area, and the potential threat of sea sand mining on the North Coast of Banten [1].

In addition, there was a phenomenon of 418 industries in Tangerang Regency, Banten during the 2014-2018 period which were sanctioned by the Dinas Lingkungan Hidup dan Kebersihan regarding waste pollution. As for the waste pollution carried out by the industry, such as not having a liquid waste permit, chimneys that have an environmental impact and are not treated so that they do not have a TPS (Temporary Storage) [2]. Furthermore, the phenomenon of pollution of the Sungai Ciujung in Serang Regency, whose condition is getting worse with the blackening of the river, is caused by PT. Indah Kiat Pulp & Paper, which made Wahidin Halim (Governor of Banten) impose sanctions and report violations of the Law as of July 10, 2019, to be tried in court [3].

Sustainability, shifting the company's paradigm is no longer about profit, but about the company's going concern. Companies must focus on so that the operations carried out are beneficial to the community around the company (people), the environment around the company (planet), and finally the profit expected by the company (profit). This concept is known as the triple bottom line [4]. Especially for environmental aspects, it can be realized through the application of environmental accounting.

Besides, the application of environmental accounting can identify environmental costs that are often hidden in the accounting system in general [5]. The application of environmental accounting by a company will have a positive impact on the company itself in increasing company profits and value in the eyes of the community. Environmental accounting provides a more comprehensive approach than conventional accounting, this can be seen from the attention to non-reciprocal transactions such as pollution, environmental damage, or negative things from company activities [6]. The company's value is marked by a good image and image for the surrounding community so that the community can give legitimacy to support the company's operational activities. The company has a long-term goal to increase the value of

the company by increasing the prosperity of its owners or shareholders [7]. Firm value is investors' perception of value, which is often related to the company's stock price. Firm value also describes the financial performance carried out by management in managing their finances [8].

Accounting research regarding corporate environmental accounting is still relatively rare, especially in Indonesia, existing research only measures environmental accounting based on secondary data sourced from company annual reports, such as [9], [10], [11], [12]. But unfortunately, the research conducted is not deep, it only focuses on items that are disclosed in the company's annual report without showing how much the company's environmental performance has been carried out.

Therefore, a more in-depth research is needed with direct observation and interview approaches and questionnaires related to the application of environmental accounting using indicators adopted from derivatives of the Global Reporting Initiative (GRI) version 4.0 using 7 variables consisting of 12 dimensions with 17 indicators. and refer to research [13]. The seven variables are material input, non-product output, compliance aspects, transportation aspects, other aspects, supplier assessment, and environmental complaint mechanisms. Thus, a common thread can be found between environmental accounting and the increase in firm value in Banten.

This research was conducted to answer the formulation of the problems found, namely:

1. Does environmental accounting which is proxied by material input affect the increase in firm value ?;
2. Does environmental accounting which is proxied by non-product output affect the increase in firm value ?;
3. Does environmental accounting, which is proxied by the aspect of compliance affect the increase in firm value ?;
4. Does environmental accounting which is proxied by the transportation aspect have an effect on the increase in firm value ?;
5. Does environmental accounting which is proxied by other aspects affect the increase in firm value ?;
6. Does environmental accounting which is proxied by supplier assessment have an effect on the increase in firm value ?;
7. Does environmental accounting, which is proxied by the environmental complaint mechanism affect the increase in firm value ?;

8. Does environmental accounting which consists of material input, non-product output, compliance aspects, transportation aspects, other aspects, supplier assessment, and environmental complaint mechanisms simultaneously affect the increase in company value?.

The research literature which is the basis of reference for the use of this research variable is as follows [13], [14]. Based on previous research and the discussion that has been submitted, the researcher draws the following hypothesis:

- H1. Input material influences the increase of firm value;
- H2. Non-product output influences the increase of firm value;
- H3. The compliance aspect influences the increase of firm value;
- H4. The transportation aspect influences the increase of firm value;
- H5. Other aspects influence the increase of firm value;
- H6. Supplier assessment influences the increase of firm value;
- H7. The environmental complaint mechanism influences the increase of firm value;
- H8. Environmental accounting which consists of material input, non-product output, compliance aspects, transportation aspects, other aspects, supplier assessment, and environmental complaint mechanisms simultaneously influences the increase of firm value.

II. RESEARCH METHOD

The population in this study were all manufacturing companies located in Banten for the 2016-2018 period, totaling 1,695 companies. Based on the purposive sampling method that has been determined previously, obtained a sample of 71 respondents from 5 companies that have been determined as follows: PT. Polychem Indonesia, Tbk. (ADMG), PT. Japfa Comfeed Indonesia, Tbk. (JPFA), PT. Malindo Feedmill, Tbk. (MAIN), PT. Charoen Pokphand Indonesia, Tbk. (CPIN) and PT. Gajah Tunggal, Tbk. (GJTL).

The types of data used in this study are primary data obtained through surveys, direct interviews and questionnaires, and secondary data obtained through financial reports and company annual reports for the 2016-2018 period. Furthermore, testing the data using the SPSS (Statistical Package for Social Science) software version 26.0. Reference in processing research data using sources from [15], [16], [17], [18], [19]. Analysis of research data using multiple linear regression analysis by the following equation:

$$FV_{it} = \alpha_0 + \alpha_1 MAI_{it} + \alpha_2 NPO_{it} + \alpha_3 KEP_{it} + \alpha_4 TRA_{it} + \alpha_5 LAI_{it} + \alpha_6 PEM_{it} + \alpha_7 MPL_{it} + E_{it}$$

Keterangan:

FV	: <i>Firm Value</i> (Nilai Perusahaan)
α_0	: Constant
$\alpha_1, \alpha_2, \alpha_3, \alpha_4, \alpha_5, \alpha_6, \alpha_7$: Coefficient
MAI	: Input Material
NPO	: Non-Product Output
KEP	: Compliance
TRA	: Transportation
LAI	: Others
PEM	: Supplier Assessment
MPL	: Environmental complaint mechanism
E	: Standard Error

III. RESULT AND DISCUSSION

After all samples were processed using the analysis method mentioned above, the following results were obtained:

Table 3.1 Results of the Research Instrument Validity Test

Question	t-count	t-table	N	Description
Question 1	0,625	0,234	71	Valid
Question 2	0,624	0,234	71	Valid
Question 3	0,633	0,234	71	Valid
Question 4	0,620	0,234	71	Valid
Question 5	0,778	0,234	71	Valid
Question 6	0,790	0,234	71	Valid
Question 7	0,710	0,234	71	Valid
Question 8	0,757	0,234	71	Valid
Question 9	0,772	0,234	71	Valid
Question 10	0,795	0,234	71	Valid
Question	0,697	0,234	71	Valid

11				
Question 12	0,747	0,234	71	Valid
Question 13	0,671	0,234	71	Valid
Question 14	0,718	0,234	71	Valid
Question 15	0,708	0,234	71	Valid
Question 16	0,738	0,234	71	Valid
Question 17	0,641	0,234	71	Valid

Based on the results of running the research instrument validity test in Table 3.1 above, it can be seen that the values in the Corrected Item-Total Correlation (r-count) column are all greater than the r-table value, namely, 0.234 obtained from the equation value ($df = n-2$), it is known that for a total sample (n) of 71, $df = 71-2 = 69$ is obtained. Based on the value in the r-table for df 69 with a significance level for the two-way test of 5% of 0.234. Therefore, it can be concluded that all the data used are valid.

Table 3.2 Reliability Test Results

Reliability Statistics

<i>Cronbach's Alpha</i>	<i>N of Items</i>
.948	17

Based on Table 3.2 above, the reliability test that has been carried out in this study is the alpha Cronbach's value of 0.948. To find out this reliability test, we refer to the book [16] which groups the scale into 5 (five). Cronbach's alpha value of 0.948 is included on a scale of 5, namely Cronbach's alpha value of 0.81 to 1.00, which means that this study is very reliable.

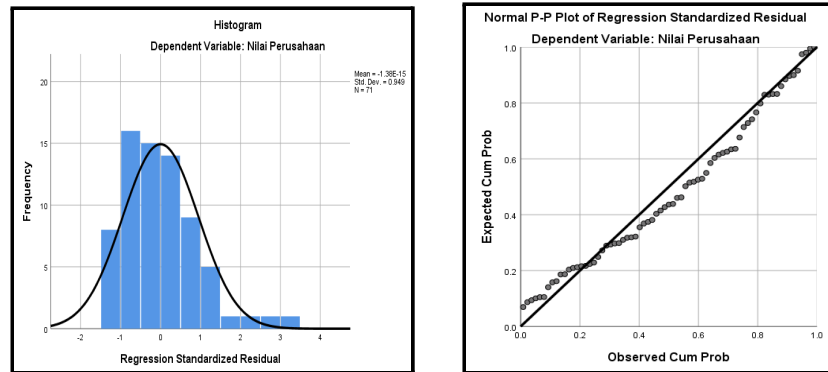


Figure 3.1 Normality Test Results

Based on the results of running research data, the normality test results were obtained in the analysis of the normal histogram and p-plot graph test as shown in Figure 3.1 above. The histogram graph test has a graph like a bell shape or does not experience skewness to the left or right. Furthermore, the p-plot graph test analysis shows that the dots spread around the diagonal line, and the distribution follows the direction of the diagonal line. This regression model is feasible to be used to predict firm value based on the input of material input variables, non-product output, compliance, transportation, other aspects, supplier assessment, and environmental complaint mechanisms as a proxy for the application of environmental accounting. Thus, this regression model fulfills the normality assumption.

Table 3.3 Data Normality Test Results
One-Sample Kolmogorov-Smirnov Test

		<i>Unstandardize d Residual</i>
<i>N</i>		71
<i>Normal Parameters^{a,b}</i>	<i>Mean</i>	.0000000
	<i>Std. Deviation</i>	.57780318
<i>Most Extreme Differences</i>	<i>Absolute</i>	.089
	<i>Positive</i>	.089
	<i>Negative</i>	-.062
<i>Test Statistics</i>		.089
<i>Asymp. Sig. (2-tailed)</i>		.200 ^{c,d}

The results of the normality test using the Kolmogrov-Smirnov statistical test are by looking at the Kolmogrov-Smirnov value and the significance of the processed data. From Table 3.3 above, it can be seen that the magnitude of the Kolmogrov-Smirnov value (statistical test) is 0.089 and significant at 0.200 or 20.0%, this means that the residual data is normally distributed because the significance is above 0.05 or 5%.

Next, Table 3.4 below describes the results of the multicollinearity test with the tolerance test results showing that no independent variable has a tolerance value of less than 0.10 (10%). The results of the Variance Inflation Factor (VIF) calculation also show that there is no one independent variable that has a Variance Inflation Factor (VIF) value of more than 10. Therefore, it can be concluded that there is no multicollinearity between variables in the regression model.

Table 3.4 Multicollinearity Test Results

Model		Tolerance	VIF
1	(Constant)		
	MAI	.271	3.696
	NPO	.216	4.621
	KEP	.482	2.075
	TRA	.397	2.517
	LAI	.423	2.367
	PEM	.401	2.493
	MPL	.509	1.967

The results of the heteroscedasticity test of this study can be seen in Figure 3.2 as follows:

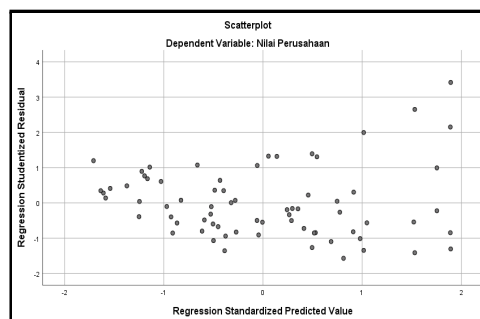


Figure 3.2 Heteroscedasticity Test Results

Based on Figure 3.2 above, it can be seen that there is no clear pattern, and the dots spread above and below the 0 on the Y-axis. Therefore, it can be concluded that there is no heteroscedasticity between the variables in the regression model.

Table 3.5 T-Test Result

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficient	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.727	.585		2.951	.004
Input Material	-2.187	.554	-1.116	-3.949	.000
Non Product Output	.961	.536	.598	1.793	.078
Compliance	.014	.254	.011	.056	.956
Transportation	-.182	.289	-.104	-.630	.531
Others	1.74	.416	.895	4.179	.000
Supplier	0	.283	-.548	-3.146	.003
Assessment	-.891	.176	.268	1.940	.057
Environmental Complaint Mechanism	.342				

a. Dependent Variable: Nilai Perusahaan

Based on Table 3.5 above, it can be seen that the variable non-product output (NPO), others (LAI), and environmental complaint mechanism (MPL) have a significance level of 0.078, 0.000; and 0.057 is less than 10% (<0.10) which indicates Hypothesis 2, Hypothesis 5, and Hypothesis 7 are ACCEPTED. This means that the application of environmental accounting through non-product output, etc., and environmental complaint mechanisms can be proven to have a significant positive effect on firm value. In addition, it was found that the input material variables (MAI) and supplier assessment (PEM) had a significance level of 0.000 and 0.003 <0.10 which indicated that Hypothesis 1 and Hypothesis 6 were ACCEPTED. These results indicate that the application of environmental accounting through material input and supplier

assessment can be proven to have a significant negative effect on firm value. However, the compliance variable (KEP) has a significant level of $0.956 > 0.10$ which means that Hypothesis 3 is DENIED, meaning that the application of environmental accounting through the compliance aspect has a positive but insignificant effect on firm value and the transportation variable (TRA) has a significant level of $0.531 > 0, 10$ which means that Hypothesis 4 is DENIED, meaning that the application of environmental accounting through the transportation aspect has a negative but insignificant effect on the increase in firm value.

Table 3.6
F-Test Result
ANOVA^a

	<i>Model</i>	<i>Sum of Square</i>	<i>Df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
1	<i>Regression</i>	24.771	7	3.539	9.540	.000 ^b
	<i>Residual</i>	23.370	63	.371		
	<i>Total</i>	48.141	70			

- a. Dependent Variable: Nilai Perusahaan
b. Predictors: (Constant), Material Input, Non Product Output, Kepatuhan, Transportasi, Lain-lain, Asesmen Pemasok, Mekanisme Pengaduan Lingkungan

Based on Table 3.6 above, it can be seen that the application of environmental accounting through variable material input (MAI), non-product output (NPO), compliance (KEP), transportation (TRA), others (LAI), supplier assessment (PEM), and the environmental complaint mechanism (MPL) simultaneously has a significant effect on increasing firm value so that Hypothesis 8 is ACCEPTED. This is evidenced by the test results in Table 3.6 above, where the significance level of 0.000 is smaller at $\alpha = 0.05 (<0.05)$. Thus, the application of environmental accounting which consists of material inputs, non-product output, compliance, transportation, etc., supplier assessment, and environmental complaint mechanisms jointly affect the increase in firm value.

IV. CONCLUSION

Input material and supplier assessment have a significant negative effect on the increase in firm value. Non-product output aspects, other aspects, and environmental complaint mechanism aspects have a significant positive effect on increasing firm value. In contrast, the compliance and transportation aspects have a positive and negative effect but not significant. Furthermore, based on the results of simultaneous testing (F test), it can be concluded that the application of environmental accounting through the material input aspects, non-product output aspects, compliance aspects, transportation aspects, other aspects, supplier assessment aspects, and environmental complaint mechanism aspects simultaneously have significant influence towards increasing firm value.

The application of environmental accounting is measured through direct surveys, interviews and distributing questionnaires which become novelty / renewable and answer gaps related to the application of environmental accounting, which so far is mostly measured from secondary data (company annual reports). The level of success and quality of the company's environmental accounting application is not only measured by the presentation in the company's annual report but can also be measured from the opinions of stakeholders (employees) as reflected in the answers to questionnaires and the results of surveys and direct interviews.

REFERENCES

- [1] Admin: Pemerintah Didesak Atasi Persoalan Kerusakan Lingkungan di Banten. Fakta Banten. [diakses 09 Agustus 2020]. <http://faktabanten.co.id/pemerintah-didesak-atasi-persoalan-kerusakan-lingkungan-di-banten/> (2017)
- [2] Irfan, A: 418 industri di Tangerang disanksi terkait pencemaran limbah. Antara Banten. [diakses 09 Agustus 2020]. <https://banten.antaranews.com/berita/37601/418-industri-di-tangerang-disanksi-terkait-pencemaran-limbah> (2019)
- [3] Mahyadi: Sungai Ciujung Tercemar, Gubernur Banten Minta Industri Diseret ke Pengadilan. Banten Hits. [diakses 09 Agustus 2020]. <https://bantenhits.com/2019/07/11/sungai-ciujung-tercemar-gubernur-banten-minta-industri-diseret-ke-pengadilan/> (2019)
- [4] Elkington, J: Cannibals with Forks : The Triple Bottom Line of 21st Century Business. Oxford: Capstone Publishing Ltd (1997)

-
- [5] Ikhsan, A: Akuntansi Lingkungan dan Pengungkapannya. Yogyakarta : Graha Ilmu (2008).
- [6] Rustika, N: Analisis Pengaruh Penerapan Akuntansi Manajemen Lingkungan dan Strategi terhadap Inovasi Perusahaan-Studi Empiris pada Perusahaan Manufaktur yang Terdapat di Jawa Tengah. Semarang: Universitas Diponegoro (2011)
- [7] Wahidahwati: Kepemilikan Manajerial dan Kepemilikan Intitusal pada Kebijakan Hutang Perusahaan ; Sebuah Perspektif Theory Agency. Simposium Nasional Akuntansi (SNA) IV (2002)
- [8] Suroto, S: Pengaruh Keputusan Investasi, Keputusan Pendanaan, dan Kebijakan Dividen terhadap Nilai Perusahaan. Vol. 4 (3) (2015)
- [9] Anjarwasana: Pengaruh Environmental Management Accounting (EMA) terhadap Nilai Perusahaan dengan Kinerja Keuangan sebagai Variabel Intervening. Universitas Katolik Widya Mandala (2018)
- [10] Ningsih, W.F. & Rachmawati: Implementasi Green Accounting dalam Meningkatkan Kinerja Perusahaan. Journal of Applied Business and Economics, 4(2). pp. 149-158 (2017)
- [11] Wailanduw & Handayani: Pengaruh Mediasi Pengungkapan Lingkungan pada Pengaruh Akuntansi Lingkungan dan Kinerja Lingkungan terhadap Nilai Perusahaan. Universitas Negeri Surabaya (2016)
- [12] Suka: Efektivitas Akuntansi Lingkungan dalam Meningkatkan Nilai Perusahaan. Universitas Muhammadiyah Yogyakarta (2015)

Analysing the Influence of Company's Dividend Policy and Financial Inclusion to Bank Risk and Performance

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Abstract

This study examines whether company's dividend policy and financial inclusion influences bank's risk and performance in the banking sector listed in Bursa Efek Indonesia during the period of 2013–2018 (6 years). Based on the analysis and hypothesis testing, this study showed the following results: Dividend Policy and Financial Inclusion has a significant impact on bank's risk and performance. Furthermore, changes in dividend payments over time positively affect subsequent changes in foreign shareholding Method: This research used companies in the banking sector listed in the Indonesia Stock Exchange as samples. Data was extracted from companies' financial statements for the years 2013 to 2018 and BankFocus application. Impact of dividend policy is analysed by eViews software version 10 and data analysis is done through multiple regression analysis to test the hypothesis.

Keywords: Dividend Policy, Financial Inclusion, Company Performance, Dividend Pay-out Ratio (DPR), Branches, Assets, Equity, Capital, National Financial Index.

I. INTRODUCTION

The more advanced a country is, the greater the role that the banking sector plays in controlling the country. Because of the banking world 's importance, there is a notion that the bank is "life" for spinning the wheels of the state economy. Therefore, investing in the capital market is still in demand from investors , especially in the banking companies (Sutedi, 2008). In 1998, pursuant to Law No. 10, Bank is a business entity that raises funds from the community in the form of deposits and channels them into the community in the form of credit and other ways to enhance the living standards of individuals. The company's stock sales to the public through the capital market is one of the ways companies get to meet the needs of funds and expand and keep competing. (2013 Persada)

1.Dividend PolicyIn the business concept foreign investors will put their money into the country and analyze for dividend policy. (Kharisma & Rachman, 2017). Some arguments on Dividend theory:

1.1 Stakeholder TheoryThe main benefit of stakeholder theory helps the corporate management to increase firm value as the effect of activities done and to minimize the probable disadvantage appeared by stakeholder (Ghazali and Chariri 2007).

1.2 Agency TheoryAn agency theory is a theory that sees how executives or managers make sure that their actions correspond to the willingness of the owners of a corporate organization. (Taufik & Widiyanti, 2014)

1.3 Irrelevant TheoryModigliani and Miller (MM) argued that value of the firm is not determined by the size of Dividend Pay-out Ratio but is determined by net profit before tax (EBIT) and firm risk class. So, according to MM, dividend is irrelevant to be counted because it cannot raise the safe of shareholders.

1.4 The Bird in The Hand TheoryGordon and Lintner (1956) stated that cost of corporate capital will rise as the effect of decreased dividend payment. Gordon and Lintner argued that investor viewed one bird in the hand is more valued than thousand birds in the air.

1.5 Signalling TheoryIn terms of theory, there is a tendency that stock prices will rise if there is an announcement of a dividend increase, and the share price will drop if there is an announcement of the dividend decline.

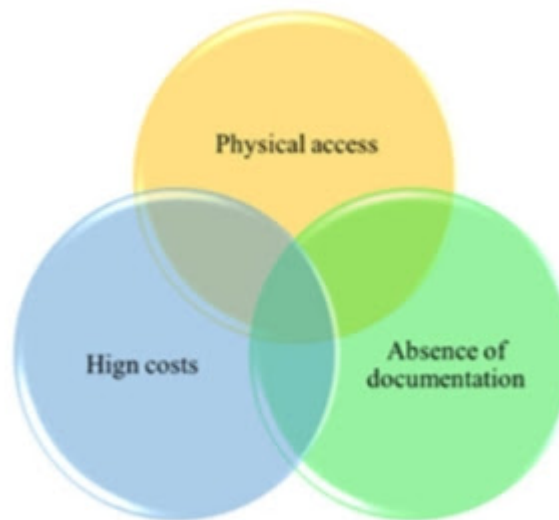
1.6 MM TheoryThis theory stated that capital structure does not influence the firm value. Modigliani and Miller (1961) proposed some assumptions in building his theory, such as no taxes, no broker fees, no bankruptcy fees, investor can borrow the same level as

the firm, all investors have the same information with management about investment opportunity in the future, EBIT cannot be influenced by using of debt.

2. Financial Inclusion

Financial inclusion is delivery of financial services, including banking services and credit, at an affordable cost to the vast sections of disadvantaged and low-income groups who tend to be excluded. The various financial services include access to savings, loans, insurance, payments, investment and remittance facilities offered by the formal financial system (Honohan & Beck, 2007).

Figure 1: Barrier hinder Financial Inclusion



investors have the same information with management about investment opportunity in the future, EBIT cannot be influenced by using debt. 2. Financial Inclusion Financial inclusion is delivery of financial services, including banking services and credit, at an affordable cost to the vast sections of disadvantaged and low-income groups who tend to be excluded. The various financial services include access to savings, loans, insurance, payments, investment and remittance facilities offered by the formal financial system (Honohan & Beck, 2007). Figure 1: Barrier hinder Financial Inclusion Among the key financial services that are of great relevance here are risk management or risk mitigation services. As banking services are public good, it is essential that availability of banking and payment

services to the entire population without discrimination is the prime objective of the public policy.

3. The Scope of Financial Inclusion The scope of financial inclusion can be expanded through 2 way:

1. Voluntary effort by the banking community itself for evolving various strategies to bring within the ambit of the banking sector the large strata of society.
2. Recent dynamics have seen another major player entering the market – financial technologies or fintech. Capitulating on the immense penetration of mobile and internet usage in Indonesia, the platform has enabled the Indonesian customers to get easier access to lending (borrowing). Providing access to financial services is increasingly becoming an area of concern for policymakers for the obvious reason that it has far-reaching economic and social implications. Various studies reveal that technology-based financial innovations carried out by banks and other financial service institutions can be relied upon to play a role in the economy through contributions in achieving financial inclusion which are then expected to encourage inclusive economic growth (eg Diniz et al., 2012; Ozili, 2018; Beck et al., 2018; Philip and Williams, 2019). In the National Strategy for Financial Inclusion, the financial inclusion strategy is elaborated to 6 pillars, namely 1) financial education, 2) public financial facility, 3) mapping of financial information, 4) supporting policy/regulation, 5) intermediary and distribution facility, and 6) consumer protection. To realize a sustainable financial inclusion program, it is necessary to have close coordination between Bank Indonesia and the relevant ministries and institutions for development, priority setting and program implementation, as well as implementation of program monitoring and evaluation. With close coordination, it is expected the objective to increase public access to financial services may be met. Therefore, referring to the information above, the author does research to answer the question; does a company's dividend policy and financial inclusion influence their risk and performance?

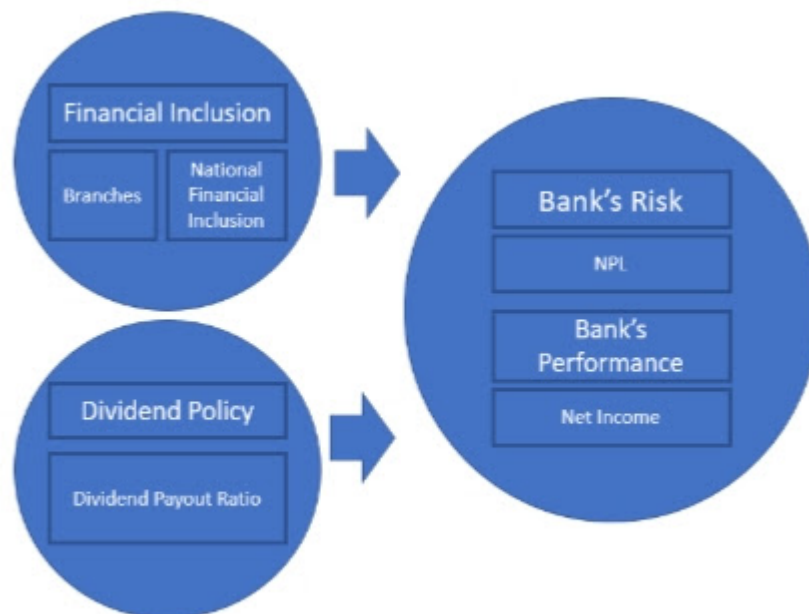
II. RESEARCH METHODS

This study uses quantitative research, which includes four types of designs, namely descriptive, correlational, quasi-experimental, and experimental (Punch, 2014). Descriptive design defines the status of a phenomenon variable in which hypotheses

are established after collection of the data. Correlational design explores the relationship between variables using statistical analysis and does not search for cause and effect where data collection is simply observational.

A quasi - experimental design sometimes referred to as causal-comparative establishes a relationship of cause and effect between two or more variables which includes control variables. Finally, an experimental design often referred to as true experimentation uses scientific method to establish a correlation-like relationship of cause and effect except that the independent variable is manipulated to produce different results. Seeing the aim of this research if the cause -effect relationship between dividend policy and financial inclusion in Indonesia is to be found without manipulating the independent variable, this research uses quasi - experimental (causal-comparative) design to gather results. The framework of this research is to examine the effects of dividend policy and financial inclusion towards bank's risk and performance.

Figure 2 The Research Framework



Based on the author's objective in this research, the author summarizes the hypothesis as followed:

1. There is a significant positive relationship between dividend policy and bank's risk and performance.

2. There is a significant positive relationship between financial inclusion and the bank's risk and performance.

1. Hypothesis I

H10: There is no significant positive relationship between dividend policy and bank's risk and performance.

H11: There is a significant positive relationship between dividend policy and bank's risk and performance.

2. Hypothesis II

H20: There is no significant positive relationship between financial inclusion and bank's risk and performance. H21: There is a significant positive relationship between financial inclusion and bank's risk and performance.

3. Purpose of The Study The purpose of this research is to identify the relationship between dividend policy and financial inclusion of banking company that listed in Indonesian Stock Exchange, with bank's risk and performance. The study is based on the research question and developed research hypotheses which had already been discussed earlier in the chapter. Therefore, the purpose of this research is explanatory

4. Measurement For this research, the author uses ten independent variables and two dependent variables. The breakdown of the variables in this research is as follows: 1. Dependent Variable

1.1 Net Income (Performance) To improve this research accuracy, the author will use Net Income on March 31 on the following year of the annual report. The reason for this is aligned with Kep-36/PM/2003 Rule Number X.K.2 Article 2a by Bapepam, who require each company to submit their annual report at maximum of three months after annual report date. With this method, the closing share price on March 31 will fully reflect the company's performance in the previous year.

1.2 NPL - Non-Performing Loan (Risk) A non performing loan (NPL) is a loan in which the borrower is default and has not made any scheduled payments of principal or interest for some time. In banking, commercial loans are considered non performing if the borrower is 90 days past due.

2. Independent Variable There are 10 independent variables that the author will use in this research. Those variables are Branches, Assets, Equity Ratio, Capital Ratio, Loan To Deposit (LTD) Ratio, National Financial Index, Banks 5, Gross Domestic Product (GDP), M2

(Broad Money Growth) and Dividend Pay-out Ratio. Banking companies listed in the Indonesian Stock Exchange at the latest as 2013 are follow:

Table 1 : Banking Company listed in Indonesia Stock Exchange in 2013

No	Code	Company Name	Listed Date	Number of Shares
1	AGRO	Bank Rakyat Indonesia Agroniaga	08/08/2003	21.129.857.328
2	BABP	Bank MNC Internasional Tbk.	15/07/2002	21.567.203.148
3	BACA	Bank Capital Indonesia Tbk.	04/10/2007	6.999.757.684
4	BBCA	Bank Central Asia Tbk.	31/05/2000	24.408.459.120
5	BBKP	Bank Bukopin Tbk.	10/07/2006	11.535.389.661
6	BBMD	Bank Mestika Dharma Tbk.	08/07/2013	4.049.189.100
7	BBNI	Bank Negara Indonesia (Persero)	25/11/1996	18.462.169.893
8	BBNP	Bank Nusantara Parahyangan Tbk	10/01/2001	791.895.641
9	BBRI	Bank Rakyat Indonesia (Persero)	10/11/2003	122.112.351.900
10	BBTN	Bank Tabungan Negara (Persero)	17/12/2009	10.484.100.000
11	BCIC	Bank JTrust Indonesia Tbk.	25/06/1997	9.912.003.256
12	BDMN	Bank Danamon Indonesia Tbk.	06/12/1989	9.488.796.931
13	BEKS	Bank Pembangunan Daerah Banten	13/07/2001	63.468.336.053
14	BJBR	Bank Pembangunan Daerah Jawa B	08/07/2010	9.740.399.289
15	BJTM	Bank Pembangunan Daerah Jawa T	12/07/2012	14.843.956.196
16	BKSW	Bank QNB Indonesia Tbk.	21/11/2002	20.232.319.124
17	BMAS	Bank Maspion Indonesia Tbk.	11/07/2013	4.399.026.922
18	BMRI	Bank Mandiri (Persero) Tbk.	14/07/2003	46.199.999.998
19	BNBA	Bank Bumi Arta Tbk.	01/06/2006	2.286.900.000
20	BNGA	Bank CIMB Niaga Tbk.	29/11/1989	24.880.290.775
21	BNII	Bank Maybank Indonesia Tbk.	21/11/1989	75.357.433.911
22	BNLI	Bank Permata Tbk.	15/01/1990	27.762.311.813
23	BSIM	Bank Sinarmas Tbk.	13/12/2010	15.183.894.926
24	BSWD	Bank Of India Indonesia Tbk.	01/05/2002	1.374.912.000
25	BTPN	Bank BTPN Tbk.	12/03/2008	8.065.864.461
26	BVIC	Bank Victoria International Tb	30/06/1999	8.584.337.680
27	INPC	Bank Artha Graha Internasional	29/08/1990	15.638.233.167
28	MAYA	Bank Mayapada Internasional Tb	29/08/1997	6.313.147.533
29	MCOR	Bank China Construction Bank	03/07/2007	16.465.148.150
30	MEGA	Bank Mega Tbk.	17/04/2000	6.894.138.227

31	NAGA	Bank Mitraniaga Tbk.	09/07/2013	1.612.710.000
32	NISP	Bank OCEC NISP Tbk.	20/10/1994	22.715.776.032
33	NOBU	Bank Nationalnobu Tbk.	20/05/2013	4.393.533.177
34	PNEN	Bank Pan Indonesia Tbk	29/12/1982	23.837.645.998
35	SDRA	Bank Woori Saudara Indonesia l	15/12/2006	6.515.116.991

5. Regression Analysis Model

Regression model analysis will be used to carry out the data empirically. There are 2 regression models to identify financial inclusion's and dividend policy impact on bank's risk and performance in Indonesia as follows:

$$NPL = \beta_0 + \beta_1 \text{Branches} + \beta_2 \text{Asset} + \beta_3 \text{Equity} + \beta_4 \text{Capital} + \beta_5 \text{LTD} + \beta_6 \text{NFI} + \beta_7 \text{Banks5} + \beta_8 \text{GDP} + \beta_9 \text{M2} + \beta_{10} \text{DPR} + \varepsilon$$

$$NI = \beta_0 + \beta_1 \text{Branches} + \beta_2 \text{Asset} + \beta_3 \text{Equity} + \beta_4 \text{Capital} + \beta_5 \text{LTD} + \beta_6 \text{NFI} + \beta_7 \text{Banks5} + \beta_8 \text{GDP} + \beta_9 \text{M2} + \beta_{10} \text{DPR} + \varepsilon$$

Where:

- NPL= Non-Performing Loan (Risk Indicator)
- NI= Net Income (Performance Indicator)
- Branches= Number of Bank's Branches
- Assets = Banks Total Assets
- Equity = Equity Ratio
- Capital= Capital Ratio
- LTD= Percentage of Loans to Deposit Ratio
- NFI= National Financial Inclusion Index
- Banks 5 = Five Banks Assets Concentration
- GDP = % of Gross Domestic Product
- M2 = % of Broad Money Growth

6. Statistical Method Use in The Research
In this research, the author will use several statistical methods as follow:

6.1 Descriptive Statistic
Descriptive statistic will comprise the overview of all data used in this research from all variables. The overviews include maximum, minimum, average, mean, and standard deviation out of all 130 samples. Sequentially, multiple tests to select which models will best fit the research will be conducted followed by the regression using eViews.

6.2 Panel Data
Panel data analyzes have many possible outcomes depending on the quantity of independent variables which can complex the estimation parameter. There are thus several approaches for carrying out this analysis.

6.2.1 Common Effect model
The calculation that pools all-time series and cross-sectional data and uses the Ordinary Least Square (OLS) approach to estimate the parameters is a model without the influence of a person (common effect). OLS is one of the popular methodologies used in linear regression to estimate parameter values. Also known as Pooled Least Square (PLS), this model is a simple approach in which every observation is regarded as independent observation.

6.2.2 Fixed Effect model This is a statistical method which measures explanatory variables, and is also treated as non - random variables. This approach calculates the possibilities where omitted variables could alter the time series or cross section of the intercept. This model adds dummy variables to allow for the intercept adjustments.

6.2.3 Random Effect model Random effect model restores least square process efficiency by calculating time series and cross section errors. The random effect model is the modification of the predicted least square generalization (GLS).

6.2.4 Chow Test Chow test is also known as variance analysis and is used to evaluate the assumption of implicit regression model where the assumption of parameter is constant for all samples. This test is to test whether the Fixed Effect Model is the best suites model for this research (Brooks, 2019).

6.2.5 Hausman Test Hausman test is used to test whether the variables have a two - way relationship (endogenous or exogenous) to decide how to treat them. The Hausman test is mostly to decide whether the fixed - effect model or random - effect model is the most suitable model to conduct this research (Brooks, 2019).

6.3 Classic Assumption Test In this analysis, the classic assumption test consisting of the normality test, the multicollinearity test, the heteroscedasticity test and the autocorrelation test is used to continue with the multiple-regression test. As stated in chapter 3, this study uses a regression model with 10 independent variables and 2 dependent variables and therefore the classic assumption test applied to the regression model.

6.3.1 Normality Test The normality test aims to verify if there is a regular distribution of the regression model, confounding variable or residual. If this presumption is violated, then the statistical test will become invalid. There is an endless list of methods to detect whether or not the data were normally distributed. One way to see the test of normality is by using graph analysis. Looking at the histogram graph comparing observational data with the approaches to distribution, a normal distribution can detect normality testing.

6.3.2 Multicollinearity Test Multicollinearity is one of several statistical methods for discovering the relationship between variables and their significance, especially among independent variables. The matrix shows the strength of each variable 's correlation with each other (Sekaran & Bougie, 2013). When in the matrix of Pearson's Correlation Coefficient, the coefficient value exceeds 0.5 or 50 per cent, it indicates a high correlation between the two variables. There are two types of multicollinearity test results, that is complete and close multicollinearity. Complete multicollinearity

occurs when there is an acceptable correlation between two or more variables and is usually used twice in a regression when

there is incorrect use of one independent variable. Conversely, when there is no important yet unquestionable relationship between 2 or more variables, there is close multicollinearity (Brooks, 2019)

6.3.3 Heteroscedasticity Test One of the crucial assumptions in linear regression model is that the variance of the errors is constant over observations, and when the errors have constant variance these errors are called homoscedastic. The standard estimation methods are inefficient if the errors have either non - constant or heteroscedastic variance. The residuals of the model are being plotted to assess the assumption, and if the plot shows a certain pattern it is an indication of heteroscedastic. If the plot has no obvious pattern and the spot is randomly dispersed, this is an indication of no heteroscedastic presence.

6.3.4 Autocorrelation Test The autocorrelation test is used to test whether the linear regression model has connection between the period t errors with the period-1 error or earlier. It will conduct a Run Test to find out if there are autocorrelations. If there is no correlation between the residual the residuals are said to be random. If the statistical likelihood is greater than $\alpha = 0.05$ (Ghozali, 2006), autocorrelation does not occur.

III. DISCUSSIONS

The purpose of the study is to determine the impact of dividend policy and financial inclusion to bank risk and performance. The financial component of this research will be branches, assets, equity ratio, capital ratio. loan to deposit ratio, national financial index, banks⁵, growth domestic product, M2 and dividend pay-out ratio. This financial component will be the ten dependent variable use in this research, as well as two independent variables, which is net income and non-performing loan ratio. The data from each variable was collected from each bank's annual report and other sources. Finally, this research used secondary data of 22 companies under the banking industry that are listed in Indonesian Stock Exchange from 2013-2018. Although there are 35 companies, only 22 were

chosen because some of them haven't been listed in 2013, being suspended by the regulators in the stock exchange, and did not produce positive net income from the period of 2013 until 2018. Data from other ASEAN countries including Singapore, Malaysia, Thailand, Philippine and Vietnam are also included in the research for comparison purposes.

Those banks are Maybank – Malayan Banking Berhad and CIMB (Malaysia), Bank of The Philippines Island and BDO Bank (Philippines), DBS Bank and OCBC (Singapore), Ayudhya Bank and Bangkok Bank (Thailand) & VietinBank and Vietcom Bank (Vietnam). The highest value of dividend pay-out ratio (DPR) is BBNP with 98.20% from financial year of 2014 as it will be merge with Bank Danamon Indonesia. This number is higher than their DPR in 2015 of 91.90%. For this research, the non-performing loan gross is going to be used. A gross non-performing loan means that the bank considers not only a loan that default, but also a loan that almost default. The highest non-performing loan on this research is 9.26% by Bank Bukopin (BBKP) in 2016. The equation formed based on the regression are as follow:

$$NPL = \beta_0 + \beta_1 \text{Branches} + \beta_2 \text{Asset} + \beta_3 \text{Equity} + \beta_4 \text{Capital} + \beta_5 \text{LTD} + \beta_6 \text{NFI} + \beta_7 \text{Banks5} + \beta_8 \text{GDP} + \beta_9 \text{M2} + \beta_{10} \text{DPR} + \varepsilon$$

$$NI = \beta_0 + \beta_1 \text{Branches} + \beta_2 \text{Asset} + \beta_3 \text{Equity} + \beta_4 \text{Capital} + \beta_5 \text{LTD} + \beta_6 \text{NFI} + \beta_7 \text{Banks5} + \beta_8 \text{GDP} + \beta_9 \text{M2} + \beta_{10} \text{DPR} + \varepsilon$$

**Indonesian Banks:
NPL as Dependent Variable**

$$NPL = 12.4470 - 0.418884 + 0.651671 + 1.282850 - 0.163500 - 1.213255 - 0.553159 - 2.615834 - 2.032307 - 0.103804 - 0.035197 + \varepsilon$$

Net Income as Dependent Variable

$$NI = -102.6004 + 0.278468 + 0.6980282 + 0.265804 + 1.478140 + 0.688742 - 2.018082 + 24.46882 - 1.688386 + 0.661502 + 0.058909 + \varepsilon$$

**ASEAN Banks:
NPL as Dependent Variable**

$$NPL = 28.62956 - 2.005170 - 9.552340 + 0.200448 - 0.707818 + 2.325714 - 0.140654 + 0.180508 + 0.224732 + 0.250671 - 0.091222 + \varepsilon$$

Net Income as Dependent Variable

$$NI = 7.181508 + 0.988734 - 1573.833 - 0.061406 - 0.069608 - 0.699846 + 0.056002 + 1572.943 + 0.080283 - 0.49954 + 0.141143 + \varepsilon$$

Constant value of 12.4470 means that if the company's independent variable is equal to zero, then the performance of the company measured by NPL will increase by 12.4470. Now we can conclude that all the independent variables in this research influence the NPL and Net Income significantly.

IV. CONCLUSION

The following results are formulated, based on the findings and analysis: Dividend policy and financial inclusion impact banking sector risk and performance. This finding gives an indication that will respond whenever the amount of dividend pay-out ratios and branches changes on the annual report of companies, and when investors want to invest in the banking sector they will focus on those three variables.

REFERENCES

- [1] Abdelsalam, O. (2008). Board composition , ownership structure and dividend policies in an emerging market. <https://doi.org/10.1108/03074350810915879>
- [2] Aduda, J., & Kalunda, E. (2012). Financial Inclusion and Financial Sector Stability With Reference To Kenya : A Review of Literature. 2(6), 95–120.
- [3] Atkinson, A. (2013). Promoting Financial Inclusion through Financial Education: OECD/INFE Evidence, Policies and Practice. (34).
- [4] Baker, H. K., Powell, G. E., Baker, H. K., & Powell, G. E. (2012). How Corporate Managers View Dividend Policy. 38(2), 17–35.
- [5] Bank, A. D. (2015). Promoting Financial Inclusion through Financial Technology. (December).
- [6] Carlos, J., & Mejía, U. (2018). Financial Inclusion in Latin America 2007 - 2015 : Evidence using Panel Data Analysis. 2117, 237–249. <https://doi.org/10.2478/mjss-2018-0155>
- [7] Central, B. I. S. (2011). K C Chakrabarty : Financial inclusion and banks – issues and perspectives. 1–9.
- [8] Chauvet, L., Jacolin, L., Chauvet, L., Jacolin, L., Inclusion, F., & Banque, S. (2017). Financial Inclusion and Firms performance. (May 2015).

-
- [9] Durai, T., & Stella, G. (2019). Digital finance and its impact on financial inclusion. (January).
- [10] Farrukh, K., Irshad, S., Khakwani, M. S., Ishaque, S., & Ansari, N. Y. (2017). Impact of dividend policy on shareholders wealth and firm performance in Pakistan. 1–11. <https://doi.org/10.1080/23311975.2017.1408208>
- [11] Fauziah, F., Iskandar, R., Paminto, A., & Ulfah, Y. (2019). Bank Health , the Dividend Policy and Firm Value in Indonesia Banking Sector. 8(2), 41–49.
- [12] Finance, C., & Miller, M. H. (2009). The Cost of Capital, Corporation Finance and the Theory of Investment. 48(3), 261–297.
- [13] Gibson, J. (2015). The Impact FinTech is having on the Financial Services Industry in Ireland.
- [14] Gopalan, S., Rajan, R. S., Iems, H., & Paper, W. (2015). How Does Foreign Bank Entry Affect Financial Inclusion in Emerging and Developing Economies ?
- [15] Iqbal, K. (2017). Financial Inclusion and the Banking Sector : Some Critical Issues. Jambheshwar, G.,
- [16] Sura, J. S., Management, C. F., & Operations, S. M. (2007). EXAMINING APPLICATION OF LINTNER'S DIVIDEND MODEL IN INDIAN BANKING INDUSTRY. 6(4), 40–59.
- [17] Kablana, A. S. K., & Chhikara, K. S. (2013). A Theoretical and Quantitative Analysis of Financial Inclusion and Economic Growth. <https://doi.org/10.1177/0258042X13498009>
- [18] Kelkar, V. (2010). Financial Inclusion for Inclusive Growth. 39(January 2008), 55–68.
- [19] Khan, H. R. (2011). Financial inclusion and financial stability : are they two sides of the same coin ? (September 2009), 1–12.
- [20] Li, Y., Spigt, R., & Swinkels, L. (2017). The impact of FinTech start-ups on incumbent retail banks ' share prices. <https://doi.org/10.1186/s40854-017-0076-7>
- [21] LIM, L. K. (2013). DETERMINANTS OF DIVIDEND POLICY IN MALAYSIAN BANKING SECTOR. Lumsden, E. (2018). The Future Is Mobile : Financial Inclusion and Technological Innovation in the Emerging World. (2).
- [22] M. Brownbridge, T. Bwire, D. K. R. and G. A. T. (2016). The Impact of Financial Inclusion on the Interest Rate Channel of the Monetary Policy Transmission Mechanism M. Brownbridge, T. Bwire, D. K. Rubatsimbira and G. A. Tinyinondi Bank of Uganda, Kampala Uganda.
- [23] Miller, M. H. (1986). Behavioral Rationality in Finance : The Case of Dividends. 59(4)
- [24] Miller, M. H. (1988). The Modigliani-Miller Propositions After Thirty Years. 2(4), 99–120.

-
- [25] Miller, M. H., & Modigliani, F. (1961). Dividend Policy, Growth, and the Valuation of Shares. 34(4), 411–433.
- [26] Modigliani, F. (2007). MM--Past, Present, Future Franco. 2(4), 149–158.
- [27] Modigliani, F., & Miller, M. H. (2009). American Economic Association Corporate Income Taxes and the Cost of Capital : A Correction. 53(3), 433–443.
- [28] Mokaya, S. O., Momanyi, D., & James, L. T. (2013). The Effect of Dividend Policy on Market Share Value in the Banking Industry ; the Case of National Bank of Kenya. 2(2), 91–101.
- [29] Nidar, S. R., & Gunawan, A. A. (2016). Dividend Policy In Indonesia State Owned Enterprises. 5(06).
- [30] Nuryakin, C., Sastiono, P., Maizar, F. A., Amin, P., Yunita, L., Afrizal, M., & Tjen, C. (2017). Financial Inclusion through Digital Financial Services and Branchless Banking : Inclusiveness , Challenges and Opportunities. (June), 1–10.
- [31] Onaolapo, A. A., & Odetayo, T. A. (2012). Financial Inclusion as Tools for Survival in Globally Competitive Environment : Lessons for Nigerian Microfinance Banks. 1(4), 241–247.
- [32] Pham, T., Nguyen, T., & Nguyen, K. (2014). Does bank competition promote financial inclusion ? A cross-country evidence. 1–10.
- [33] Rafindadi, A. A., & Bello, A. (2019). Is Dividend Payment of any Influence to Corporate Performance in Nigeria ? Empirical Evidence from Panel Cointegration. 9(2), 48–58.
- [34] Rahman, Z. A. (2017). National Financial Inclusion Strategies and Measurement Framework
- [35] IFC Satellite Seminar on Financial Inclusion. (July).
- [36] Shaheen, R. (2018). Effect of Institutional and Insider Ownership on Dividend Policy : Evidence from Pakistan. 04(02).
- [37] Shoop, A. (2018). Identifying and Evaluating EarlyStage Fintech Companies : Working with Consumer Internet Data and Analytic Tools.
- [38] Simon-Oke, O. O. and O. P. O. (2002). EVALUATION OF THE EFFECT OF DIVIDEND POLICY ON THE PERFORMANCE OF CORPORATE FIRMS IN NIGERIA. <https://doi.org/1.1/fjmt.2016/v1n1p10>
- [39] Suwanna, T. (2012). Impacts of Dividend Announcement on Stock Return. *Procedia - Social and Behavioral Sciences*, 40, 721–725. <https://doi.org/10.1016/j.sbspro.2012.03.255>

-
- [40] Tambunan, T. (2015). Financial Inclusion, Financial Education, and Financial Regulation: A Story from Indonesia. Teigland, R.,
- [41] Siri, S., Larsson, A., Puertas, A. M., & Bogusz, C. I. (2018). The rise and development of FinTech: Accounts of disruption from Sweden and beyond.
- [42] Wardhana, L. I. (2017). Essays on The Dividend Policy of Financial and Non-Financial Firms.

Analysis of Activity Based Costing Method as the Basis Determination of Hospital Services Rates

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Abstract

The aim of this study is to get the accuracy of determining hospital rates. This study, which is Hospital X at the city of Batam, Indonesia uses a comparative descriptive analysis method with qualitative and quantitative approaches. Cost Drivers used in this study as a cost grouping are the number of inpatient days, the number of inpatients, and floor area. The results of inpatient service calculation based on the activity based costing system at the Hospital obtained a difference for the VIP class of IDR 459,646.68 and a difference for the class I of IDR 213,252.30 where the rate set by the Hospital was higher than it should be (over value). While the difference for class II is IDR 169.50 and the difference for class III is IDR 74,088.22 where the rate set by the hospital is lower than it should be (under value).

Keywords: Hospital, ABC Method, Rate, Cost.

I. INTRODUCTION

In profit-oriented organizations, sales are the main source of profit making by pressing the total costs incurred. In presenting health services, hospitals will receive income from the services and facilities offered, one of which is inpatient services. Accuracy in determining hospital rates is one of the important factors, especially in the rates of inpatient services because it will have an impact on the sustainability of hospitals, as well as assessment and consumer confidence. Due to the fierce competition, several hospitals set rates for inpatient services based on observations of other hospitals without calculating the costs incurred. There are also hospitals that use traditional accounting methods to determine their inpatient services rates by calculating the cost of salaries, electricity and water, consumption, and building depreciation only. Determination of such tariffs will cause cost distortions because the products produced do not reflect the costs absorbed as a whole. The distortion can cause undercoat and overcoat of the product. In addition, it can affect the profitability of hospitals.[1]

II. LITERATURE REVIEW

A. Cost accounting

Cost accounting measures, analyzes, and reports financial and financial information related to the cost of acquiring or using resources in an organization [2]. Cost Classification: Production Cost, Variable Cost, Fixed Cost, Direct Cost, Indirect Cost, Differentiation Cost, Opportunity cost and Sunk cost

B. Traditional Accounting Methods

Risk is the core issue of an enterprise's foreign investment. Compared with economic risk, non-economic risk is not only harmful, but also more difficult to predict and prevent, especially for developing country companies that lack comparative advantages. Institutional theory holds that the good institutional quality of the host country can effectively reduce the external uncertainty of foreign companies, reduce transaction costs and risks, and is an important factor in attracting foreign investment (Busse and Hefeker, 2007). But the interesting thing is that the results of research on China are not completely consistent with the classical institutional theory (Chi and Fang, 2014). A study by Kolstad and Wiig (2012) found that the size of China's OFDI has a negative correlation with the quality of the host country's system. Dong Yan (2011) researched Chinese direct investment in Africa and Jiang Guanhong and Jiang Dianchun (2012) researched Chinese direct investment in developing countries. They also found that Chinese companies prefer to invest in host countries with higher institutional

risks. This shows that Chinese companies' OFDI behavior is different from traditional multinational companies and has its own uniqueness.

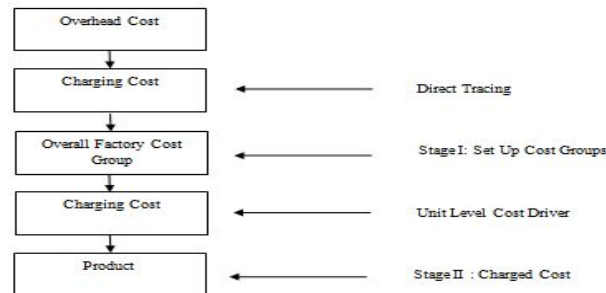


Fig. 1 Calculation of BOP with Traditional Accounting Methods [3]

C. The advantages and disadvantage of traditional accounting methods

The advantages of traditional accounting methods include [4]: Easy to Apply and Easy to Audit, While the disadvantage are [3]: The results of the offer are difficult to explain, Competitor prices seem unnatural, Products produced show high profits, The operational manager wants to stop products that seem profitable, Profit margins are difficult to explain, The company has a newbe which produces high profits, Customers do not complain about price increases, The accounting department spends a lot of time providing cost data for special projects, Some departments use an accounting system at their own expense and the last is Product costs change due to changes in financial reporting regulations

D. Activity Based Costing (ABC) System

Activity Based Costing System (ABC System) is used by modern companies to measure costs more accurately than traditional cost accounting methods. Basically the ABC system is a method of cost accounting for charging the cost of goods by adding up all the costs of activities that produce goods or services [5].

E. Basic Concepts of ABC System

The basic concept of Activity Based Costing basically appears because the traditional cost accounting system was deemed inadequate to meet the information needs of calculating the cost of goods needed accurately. There are two important assumptions underlying the Activity based costing method, are [4]:

a. Activities that incur costs, that auxiliary resources or indirect resources, provide the ability to carry out activities not just to cause costs.

b. Product or service customer, where the product causes the emergence of demand on the basis of activities to make products or services that are required by various activities that generate resources to carry out these activities.

In traditional accounting methods, BOP will be charged to the organizational unit, then then charged to each product or service. The loading procedure with this method is likely to distort the cost of the product or service. This distortion will become more serious when an important part of factory overhead is not related to output volume and the company produces products in various combinations with differences in volume, size, or complexity

This is different from the Activity Based Costing (ABC) method of the system. In the ABC method, tracking costs starts with the use of resources on activities and associates the costs of activities on products, services, or customers. The two stage procedure in the Activity Based Costing System method are [3] :

The first stage imposes factory overhead costs on the activity or activity cost center

The second stage imposes costs or activities from the activity cost shelter to the cost object by using an appropriate activity consumption cost driver that measures the demand for the cost object placed on the activity or activity shelter

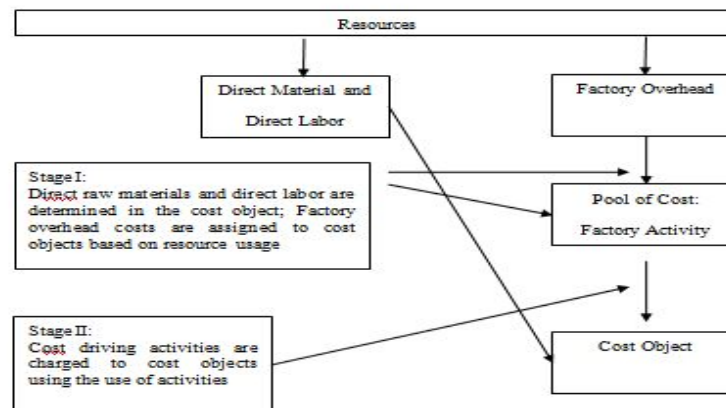


Figure 2 Two-Step Procedures on the Activity Based Costing System [6]

F. Advantages and Disadvantages of Activity Based Costing System

The ABC system method has the following advantages:

- a. Product costs are more realistic, especially in high-tech manufacturing industries where factory overhead is a significant proportion of total costs.
- b. More and more factory overhead costs can be traced to the product.

-
- c. ABC recognizes that activities cause costs, not products, and products consume activities.
 - d. ABC focuses on the real nature of cost behavior and helps in reducing costs and identifying activities that do not add value to the product.

In addition, the ABC method also has the following disadvantages [6]:

- a. Allocation
- b. Some costs require allocations from departments and products based on changing measurements.
- c. Ignore costs
- d. Product costs identified by the ABC system do not cover all costs associated with the product.
- e. ABC systems require considerable time and money to develop and implement them.

G. Cost Hierarchy in the Activity Based Costing System Method

The cost hierarchy in ABC systems includes [2]:

- a. Output unit-level cost: Activity costs are imposed on each unit of individual product or service
- b. Batch- level cost: Activity costs associated with a group of units, products, or services and not with each individual product or service unit.
- c. Product-level cost: Costs of activities undertaken to support each product or service regardless of the number of units or batches made
- d. Facility-level sustaining cost : Activity costs that cannot be traced to individual products or services but support the company's overall operations.

H. Comparison of Traditional Accounting Methods and ABC Systems

- a. The ABC method uses activities as cost drivers to determine how much overhead consumption of each product. Whereas traditional accounting methods allocate overhead costs arbitrarily based on one or two non-representative allocation bases.
- b. The ABC method focuses on cost, quality and time factors while the traditional accounting method focuses on short-term financial performance such as earnings. If traditional methods are used to determine product prices and profitability, the numbers are not reliable.
- c. The ABC method has a much smaller need for variant analysis than the traditional method, because cost pools and cost drivers are more accurate and clear, and ABC

can use historical cost data at the end of the period to eliminate costs actual when a need arises [7].

I. Cost Driver

Cost driver is a cost trigger used to calculate the source cost of each unit of activity, then each resource cost is charged to a product or service by switching the cost of each activity to the quantity of each activity assumed at a certain period.

The main factor that must be considered in choosing the right cost driver are:

a. Degree of correlation

How clearly the cost driver expresses the consumption of the actual activity of the product, it can be measured by the degree of correlation between the quantity of activity traced on the product to the actual consumption of activity by the product.

b. Cost measurement

To reduce the measurement costs of activity triggers (cost of measurement), the ABC System uses triggers that are easily determined in quantity. Choosing a cost trigger that uses the number of transactions generated by the activity instead of a cost trigger based on the duration of the activity, can reduce the cost of measurement in designing an activity based cost system. Determining data from triggers based on the number of transactions is easily obtained, because transactions are generated when an activity is carried out.

c. Behavioural effects

In choosing cost drivers, the effect of using certain cost drivers for individual cost behavior in a company must be considered. Behavioral effects can be beneficial (beneficial) or dangerous (harmful). The beneficial behavior if the behavior due to the use of certain cost triggers is desired. While the effect is dangerous if due to the use of these triggers is not desirable.

d. Cost Efficiency

Efficiency is a measure of success judged by the amount of resources sacrificed to obtain certain results. Large companies with diverse types of activities have a large amount of expenses. If left unchecked, these expenses can have an impact on the decline in profits generated by the company. Therefore it is necessary to do cost efficiency in the company to reduce unnecessary expenses, so that there is no waste of costs [8].

Procedure for Overhead Charges using the ABC System Method

In the first stage, the determination of cost of goods based on activities involves the following four steps [9]:

1. Identify and classify costs into various activities
2. Link costs to activities

3. Identify Cost Drivers
4. Determine the cost / unit cost driver

$$\text{Rate per unit of cost driver} = \frac{\text{Amount of activity}}{\text{Cost driver}}$$

$$\text{Charged Overhead} = \text{Rate per Unit cost driver} \times \text{selected cost driver}$$

Furthermore, in the second stage of tracking and charging the cost of activities for each product using the cost driver with the formula [9]: After getting the results of overhead costs charged to each activity, the rates can be calculated using the formula [10]:

$$\text{Rate per room} = \text{Charged overhead} \times \text{expected profit}$$

III. RESEARCH METHOD

A. *The scope of research*

This study uses a comparative descriptive analysis with a quantitative approach that explains about a situation or an event that arises in the object of research, then compares with the conditions or variables applied by the research object. The quantitative approach is used to test a theory, to describe a fact and statistics that show the relationship between variables.

B. Types and Sources of Data

This study uses quantitative data types, namely data in the form of numbers and qualitative data, namely data in the form of documents sourced from primary data and secondary data. Primary data sourced from direct observation, interviews with relevant sections in accordance with the object of research, and written data collection. While secondary data by reading and studying books and literature relating to the issues raised in this study to obtain a theoretical basis that will be used in the discussion.

The data analyzed in this study is a collection of costs incurred due to activities that trigger it. The data includes fixed cost data (building depreciation and facility depreciation), variable cost data (doctor visit costs, consumables costs, consumption costs, water and electricity costs, administrative costs, laundry costs, and cleaning costs), and other supporting data (number of inpatients, length of stay, and room size).

IV. RESULTS AND DISCUSSION

Based on the results of interviews with the party of Hospitals X in Batam, Indonesia and based on data , the following results are obtained:

Tabel 1 Other Supporting Data

Class	Number of Patients (Person/People)	Long Stay (days)	Hospital Room Size (m ²)
VIP	188	376	65
I	513	1.026	50
II	1.555	3.110	60
III	3.611	7.222	70
Total	5.867	11.812	245

Source: Data processed, 2020

Costs included in inpatient service activities include :Nurse expenses, The cost of a doctor's visit, Consumption costs, Electricity and water costs, Consumables Cost, Laundry costs, Administration costs, Cleaning service costs, Building depreciation costs and Facility depreciation costs

Based on the costs above are grouped into several cost activities, i.e :

1. Activities of patient care services: Nurse salary costs
2. Doctor's visit activity: The cost of a doctor's visit
3. Patient service activities: Administration costs, Consumables Cost, Electricity and water costs, Cleaning service costs and Laundry Cost.
4. Patient care activities: Consumption Cost
5. Inventory and building maintenance activities: Building depreciation costs and Facility depreciation costs

The next step is to classify costs into various activities, i.e.:

1. Output unit-level cost: Nurse salary costs, Doctor's visit fee, Electricity and water costs, Laundry costs and Consumption costs
2. Batch- level cost: Administration costs, Consumables costs and Cleaning service costs
3. Facility-level sustaining cost: Building depreciation costs and Facility depreciation costs

Following are the calculation results obtained from each cost:

Table 2 Costs Based on Each Activity

No	Cost	Amount (IDR)
Output unit-level cost		
1	Nurse salary costs	489.600.000,-
2	Doctor's visit fee	586.700.000,-
3	Electricity and water costs	195.649.000,-
4	Laundry Cost	76.135.000,-
5	Consumption Cost	231.180.000,-
Batch- level cost		
6	Administration Cost	22.000.000,-
7	Consumables cost	4.060.800,-
8	Cleaning service cost	54.800.000,-
Facility-level sustaining cost		
9	Building depreciation costs	112.340.000,-
10	Facility depreciation fee	32.699.470,-
Total		2.205.164.270,-

Source: Data processed, 2020

After knowing each cost, the next step is to identify the cost driver to calculate the cost per unit cost driver, which is as follows:

Table 3 Identify Cost Drivers and Cost per Unit Cost Driver

No	Activity	Cost Driver	Amount (IDR)	Rate /Unit
1	Unit Level Activity Cost			

	Nurse Fee	11.812 days	489.600.000	41.449,37
	Doctor's visit fee	11.812 days	586.700.000	49.669,82
	Electricity cost			Equal to Rate
	• VIP	376 days	6.768.000	18.000,-
	• Class I	1.026 days	15.390.000	15.000,-
	• Class II	3.110 days	46.650.000	15.000,-
	• Class III	7.222 days	108.330.000	15.000
	Water Cost	11.812 days	18.511.050	1.567,13
	Laundry cost	5.867 people	76.135.000,-	12.976,81
	Consumption Cost	11.812 days	231.180.000	19.571,62
2	Batch Related Activity Cost			
	Administration cost	5.867 people	422.000.000	71.927,73
	Consumables cost			
	• VIP	188 people	4.060.800	21.600,00
	Cleaning service cost	11.812 days	54.800.000	4.639,34
3	Facility Sustaining Activity Cost			
	Inventory maintenance depreciation cost			Equal to rate
	• VIP	376 days	11.400.000	30.319,15
	• Class I	1.026 days	28.130.000	27.417,15
	• Class II	3.110 days	30.810.000	9.906,75
	• Class III	7.222 days	42.000.000	5.815,56
	Depreciation cost for building	5.677 m ²	32.699.470	5.677,00

Source: Data processed, 2020

The next step is to calculate the overhead costs charged to each class with the percentage of profit as follows:

Table 4 Percentage of expected profit

Class	Percentage of expected profit
VIP	25%
Class I	20%
Class II	15%
Class III	15%

Source: Data processed, 2020

Following are the results of inpatient service rate calculation based on the unit price cost driver each Class:

Table 5 Inpatient Services Rates Based on the ABC System

Class	Cost of Sales (IDR)	% Profit	Rate (IDR)
VIP	228.282,66	25%	285.353,32
I	209.789,75	20%	251.747,70
II	187.103,92	15%	215.169,50
III	181.815,85	15%	209.088,22

Source: Data processed, 2020

Table 6 Comparison of Inpatient Services Rates

Class	ABC rates (IDR)	Hospitals rates (IDR)
VIP	285.353,32	745.000,-
Class I	251.747,70	465.000,-
Class II	215.169,50	215.000,-
Class III	209.088,22	135.000,-

Source: Data processed, 2020

Calculation of inpatient services based on activity based costing system obtained a VIP rate of IDR 285,353.32; class I tariffs of IDR 251,747.70; class II tariffs of IDR 215,169.50; and class III tariff of IDR 209,088.22. When compared with the rates set by the Hospital, the difference obtained for the VIP class of IDR 459,646.68 and the difference for the class I of IDR 213,252.30 where the rate set by the Hospital is higher than it should be (over value). While the difference for class II is IDR 169.50 and the difference for class III is IDR 74,088.22 where the rate set by the Hospital is lower than it should be (under value).

V. CONCLUSIONS

From the calculations performed using the activity based costing system method, the hospital inpatient services for the VIP class is IDR 285,353.32; class I tariffs of IDR 251,747.70; class II tariffs of IDR 215,169.50; and class III tariff of IDR 209,088.22.

The difference in rates is due to the activity based costing method, the imposition of overhead costs on each product. In the traditional cost accounting method established by the RS, it uses unit-level activity costs to charge fees. The hospital only calculates the costs incurred such as salaries, water and electricity costs, consumption, and depreciation of facilities in determining the tariff for inpatient services, so that in calculating the basic price does not get the right results. While in the ABC method, overhead costs on each product are charged to many activities such as nurse salaries, doctor visit wages, administrative costs, consumption costs, laundry costs, consumables, cleaning service costs, and building depreciation costs, so in the ABC method able to allocate activity costs to each room appropriately based on the consumption of each activity, i.e. number of inpatient days, number of patients and room area per class so that the calculation of cost of goods and selling prices of services is more precise and accurate, so as to facilitate financial data users such as managers to make the right decisions in controlling costs to the service operational system and evaluating the performance of hospital managers. Based on the conclusions above, the authors' suggestion for the hospital is that the hospital management should start considering the calculation of inpatient rates using the activity based costing system method because these calculations provide more accurate cost information. But still consider external factors such as competitor rates and the ability of the community that can influence the pricing of inpatient services.

REFERENCES

- [1] S. K. Walandouw and B. Kaunang, "Penerapan Metode Activity Based Costing System Dalam Menentukan Besarnya Tarif Jasa Rawat Inap Pada Rumah Sakit Umum Bethesda Kota Tomohon," *J. Ris. Ekon. Manajemen, Bisnis dan Akunt.*, vol. 3, no. 1, pp. 1214–1221, 2015, doi: 10.35794/emba.v3i1.8125.
- [2] C. T. Horngren, G. Foster, S. M. Datar, M. Rajan, C. Ittner, and A. A. Baldwin, *Cost Accounting: A Managerial Emphasis*, vol. 25, no. 4. 2010.
- [3] D. Hansen and M. Moven, *Managerial Accounting*, 8th ed. Ohio: Thomson South-Western, 2007.
- [4] D. Mulyanti, "Analisis Penerapan Metode Activity Based Costing Terhadap Tarif Rawat Inap Pada Rumah Sakit Umum Kasih Bunda," *Ecodemica*, vol. 1, no. 2, pp. 91–100, 2016.

-
- [5] B. Indrasurya, M. AR, and M. Saifi, "ACTIVITY BASED COSTING (ABC) SYSTEM DALAM MENENTUKAN TARIF LAYANAN RAWAT INAP (Studi Kasus Pada Rsud Dr. Harjono S. Kabupaten Ponorogo)," *J. Adm. Bisnis S1 Univ. Brawijaya*, vol. 37, no. 2, pp. 128–136, 2016.
- [6] H. Budiyantri, M. Narsa, and Irma, *Gambaran Umum Akuntansi Manajemen*, 2nd ed. Tangerang Selatan: Penerbit Universitas Terbuka, 2016.
- [7] Lamrisma and E. Lilianti, "Analisis Penerapan Metode Activity Based Costing (ABC) Dalam Menentukan Tarif Jasa Rawat Inap Di RSUD Kota Prabumulih," pp. 28–39, 2018.
- [8] M. Gobel, "Analisis Efisiensi Biaya Operasional Melalui Pengelolaan Tunjangan Makan Dan Jaminan Pemeliharaan Kesehatan Pada Perusahaan Jasa Outsourcing," *J. Ris. Ekon. Manajemen, Bisnis dan Akunt.*, vol. 1, no. 4, pp. 1868–1879, 2013.
- [9] L. Walther M and S. J. Chrsitopher, *Managerial Cost Accounting.*, 5th ed., vol. 39, no. 156. Utah: Christopher J. Skousen & Ventus Publishing ApS, 2009.
- [10] R. Maryatmo, N. Yuyun, and S. Rahayu, "HAMBATAN PENYERAPAN KREDIT USAHA KECIL STUDI KASUS DI PASAR ANYAR I SINGARAJA BALI 1," *JEJAK*, vol. 2, no. 1, pp. 1–7, 2009.

Analysis of the Development Cashless Transaction on the Need for Money Paper Based

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Abstract

This study discusses the Analysis of Cashless Development of Cash Needs. This study aims to see the extent of the readiness of the people in Batam for the use of non-cash transactions (debit / credit cards, emoney, etc.), as well as see whether the community is ready to no longer use paper-based money. This research method is qualitative (primary) or by distributing questionnaires with a total of 400 respondents in Batam and some data from information obtained from news and Bank Indonesia. The results of this study are people in Batam are still not ready yet to no longer use paper money due to internet facility factors that have not reached every region, not to mention because people are accustomed to using paper money, and public knowledge is still minimal in the use of non-cash transactions. The people of Batam prefer to reduce the production of paper based money by Bank Indonesia but do not eliminate the paper-based money because not all regions or transactions can use non-cash transaction facilities.

Keywords: Debit / Credit Card, E-money, Batam Community need of Money Paper Based

I. INTRODUCTION

The financial and banking sector is currently entering the non-cash usage stage, which means that transactions that used to use paper money (currency) are turning into non-cash transactions or using electronic money. Non-cash developments have increased from year to year, apart from being supported by technological advances, there have been changes in people's lifestyles and the development of innovations adding to the types of non-cash transactions. The use of non-cash money can use a credit card, debit card, or other e-money support applications such as Go Pay, OVO, and others. In the financial and banking sector, the role of technological developments and information systems has presented cashless payment instruments. According to Bank Indonesia (2006), the presence of non-cash payment instruments can replace the role of cash in economic transactions in Indonesia. At this time, people certainly expect speedy payment and transaction processes for the smooth running of their daily activities. The public needs at least a reliable, secure, and fast payment system and make transactions. The tools that support the payment system are of course very coveted by the wider community. With the development of information technology, communication and science, many developers have created various kinds of innovations and products that support electronic-based non-cash payment systems (electronic payment).

In 2010, Indonesia implemented non-cash transactions at which time Bank Indonesia carried out socialization activities to the public regarding non-cash payments and Bank Indonesia on August 14, 2014, launched an annual program with the theme of the National Non-Cash Movement (GNNT). With this program, it is hoped that the Indonesian people will begin to switch to using non-cash transactions as a substitute for cash. Associated with the money demand theory regarding the opportunity cost of holding money, or the cost lost when holding cash rather than non-cash is the loss of profits in the form of discounted savings, interest, and benefits from non-cash payments. As an economic actor, in allocating the form of wealth (money), they will consider the advantages and disadvantages. The existence of an advantage by holding money in non-cash form will make economic actors hold money in non-cash form and change people's behavior in conducting transactions, with this it indirectly decreases people's need for cash and will ultimately reduce the amount of money circulated by Bank Indonesia.

Table 1 : Money Supply and Its Components

Komponen Uang Beredar	2020		% (yoy)	
	Mar*	Apr*	Mar'20*	Apr'20*
Uang Beredar Luas (M2)	6,440.5	6,238.3	12.1	8.6
Uang Beredar Sempit (M1)	1,648.7	1,576.4	15.4	8.4
Uang Kartal di Luar Bank Umum dan BPR	620.4	634.1	5.9	7.0
Giro Rupiah**	1,028.3	942.3	22.0	9.4
a.l: Uang Elektronik	2.3	2.2	(10.0)	(14.8)
Uang Kuasi	4,763.6	4,637.3	10.8	8.5
Simpanan Berjangka (Rupiah & Valas)	2,464.6	2,422.7	5.5	4.1
Tabungan (Rupiah & Valas)	1,900.0	1,870.6	11.7	10.1
Giro Valas	398.9	344.1	52.3	39.8
Surat Berharga Selain Saham	28.2	24.6	44.6	20.6

Source: Bank Indonesia, 2020

Information :

*Temporary data

** Including electronic money issued by banks. According to the 2016 Monetary Financial Statistics Manual & Compilation Guide (MFSMCG 2016), electronic money issued by banks is categorized as transferable deposit as is demand deposit / demand deposit rupiah.

Broad money supply (M2) slowed down in April 2020. M2 position in April 2020 was recorded at Rp 6,283.3 trillion, or grew by 8.6% (yoy), lower than the previous month's growth of 12.1% (yoy) (table 1). The slowdown in M2 was caused by a slowdown in all its components, including the narrow money supply (M1), quasi money, and securities other than shares. The growth of electronic money float (balance) issued by banks decreased (-14.8%, yoy), deeper than the previous month's decline (-10.0%, yoy). Electronic money in April 2020 was recorded at IDR 2.2 trillion, with a 0.14% share of M1. Meanwhile, the position of currency in the community (excluding banking and BI) in April 2020 was recorded at Rp 634.1 trillion or grew by 7.0% (yoy), an increase compared to the previous month (5.9%, yoy). This increase is in line with the increasing demand for currency entering the month of Ramadan.

The results of the research [1] in Japan show that the substitution of cash ownership for non-cash payments is insignificant, which means that non-cash payments cannot fully replace the use of cash in making transactions, this is inversely proportional to research from [2] which shows that the innovation of credit and debit card payments will affect cash users. With the phenomenon of increasing cashless transactions in Indonesia and differences in the results of previous studies, researchers will try to conduct research back in the latest year to prove the existing theory where researchers want to see the development of cashless transactions on the need for cash (currency) that occurs on the island of Batam.

II. LITERATURE REVIEW

Transactions according to KBBI [3] are buying and selling agreements in trade between the buyer and the seller. According to [4] a transaction is an event in the business world and not only in the process of buying and selling, paying and receiving money but also due to losses, fires, flows, and other events that can be valued in money. Before humans recognized paper money, humans carried out a barter system when making transactions where to get the desired item, we had to exchange the item with the goods we had where the value of the two goods was the same. The following are the types of transaction systems used from the past until now.

A. Barter

Barter is the exchange of property with other assets desired. This kind of exchange started from the beginning of human transactions and is still used by some people. According to [5] that from 9000 - 6000 BC livestock was used as a unit of exchange, then when agriculture was developed the crops were used as a means of bartering, only around 1200 BC China used cowry shells as a means of payment until coins were found around the year 1000 BC

B. Silver.

Around 500 BC, silver coins were the earliest coins used as money. With a print and given the symbol of a god or emperor, as a sign of the great value of money. This coin was first displayed in Lydia, a region of Turkey, the silver was used as a means of payment repeatedly and was subsequently repaired by the Persians, Greeks, Macedonians, and the Roman Empire. In contrast to China, which uses coins from a metal base consisting of bronze, gold and silver [5]

C. Banknotes

From the seventh century to the fifteenth century AD, the Chinese kingdom from the Siu dynasty to the T'ang dynasty, had experienced economic progress and cultural development, as evidenced by the first use of paper as money. Even in this period, the number of paper currencies was recorded too much to cause inflation [6]

D. Gold

Around 1535, the use of gold as a currency standard had been started by the Chinese, then in 1816. England followed the use of gold as the standard of value, which meant that the currency value was pegged to a certain weight of gold on the assumption that gold coins would help prevent inflation. , followed by the United States in 1900. Until mid-1931 Britain and America abandoned gold and switched to paper money, followed by countries around the world [7].

Modern Money Supply Theory

The modern money supply theory or paper standard system was developed by economists after Keynes. In the standard paper system, the sources of the creation of money in circulation are monetary authorities (government and central bank) and financial institutions (monetary system). Monetary authorities are distributors of core money or base money, while financial institutions (banks) are distributors of secondary money to the public. The process of creating money in circulation is a market process, which means that the result of the interaction between demand and supply and not just the printing of money or government decisions, in modern money supply theory, there is a process of adjusting the balance between demand and supply of money, which is called the money multiplier. In reality, the money that a bank creates does not only depend on the willingness of the bank alone but also on the results of the interaction of money market players.

The Role of Money in the Economy

The function of money according [8] consists of three functions, namely ;

a. As a Medium of Exchange

Money is a legal means of payment in making economic transactions in people's lives. Money functions to make it easier to carry out economic transactions, which is to act as a medium of exchange to get the desired service or goods.

b. As a Store of Value

Money as a store of value can be interpreted as transferring the purchasing power of the present to the future. When people get money, people can set aside a part of their income to be saved and can be used at a later date.

c. As a Unit of Account

Money is a measure that we use to measure the price of goods or services in economic transactions. Money also shows the value of goods and services that can be bought and sold, and money can measure the level of wealth owned by economic actors.

People's motives for holding money consist of transaction motives, precautionary motives, and speculation motives. Transaction motive, where someone holds money to be used in daily economic transactions, where if income increases, the need for money for transactions will also increase. The watchful motive is a motive used to deal with uncertainties in the future. Meanwhile, the speculative motive is a motive where money can be transferred into other, more profitable forms of assets.

Money Demand Theory

The theories of money demand in outline explain what factors influence the nature of the individual in determining the amount of money demanded from the individual's preference in saving the form of wealth he has. The theory of money demand put forward by several economists, such as Irving Fisher's money demand theory, Cambridge's money demand theory, Keynes's money demand theory, and so on.

Broadly speaking, in the money demand theory, there are two variables that determine the demand for money. The first is the scale variable or what is commonly referred to as the constraint variable. The constraint variable is a variable that limits our maximum to hold money in the form of cash / in the form of physical money. The second is the variable cost of holding cash (opportunity cost of holding money). It is the lost cost of holding cash in the form of interest and capital gains if we hold wealth in the form of bonds and stocks.

With the development of non-cash payment instruments, it can provide benefits and convenience in transactions. Associated with the theory of money demand which discusses the opportunity cost of holding money, then if you use cash in transactions you will lose costs such as the benefits of interest income, discounted spending and ease of transactions if you hold money in non-cash form, the greater the opportunity cost of holding. money will decrease the desire to hold cash so that it will affect the amount of cash circulated by Bank Indonesia.

Payment Tool As A Media In Transaction

Payment instruments are instruments or tools used to perform an obligation arising from an economic transaction activity. The payment instruments are divided into cash payment instruments and non-cash payment instruments.

1. Cash payment instrument as a valid transaction medium:

Cash payment instruments are payment instruments using cash or cash, namely banknotes and coins. By using cash payment, the public will directly make transactions and get the desired goods. However, by using cash payment instruments, we are required to keep a larger cash supply to meet all payment obligations and there is an opportunity that is the cost of holding money so that we will lose the cost of holding cash in the form of loss of interest, discounts and convenience when holding money in non-cash form.

2. Non-cash payment instruments as an alternative to cash payments in transactions:

Non-cash payment instruments are payment instruments that use paper based instruments and card based instruments to fulfill obligations in economic transactions. Payment using a card is a non-cash payment instrument where payment transactions are made using a card (card) where the card contains funds or money which will be deducted from the funds in the card if the transaction is successful. There are various types of payment instruments using this card, such as credit cards, debit cards, flash cards, etc. The bank or non-bank institution that issues the card is referred to as the issuer. The bank or non-bank institution conducting cooperation with merchants is called an acquirer. Meanwhile, the principal is the party responsible for managing the system or network among its members (Directorate General of Accounting and Payment Systems, Bank Indonesia).

The credit card is a non-cash payment instrument that can be used for shopping transactions, where the payment obligation using a credit card is fulfilled in advance by the credit card issuer and the credit card user is obliged to reimburse the payment to the issuer within a predetermined period.

An ATM card or debit card can also be used as a means of non-cash payment transactions, the debit card issuer is issued by a bank that has received permission from Bank Indonesia to issue both debit and credit cards. In order to have the card, the public is required to have a bank account in question.

The Effect of Non-Cash Payments on the Indonesian Economy

Bank Indonesia as the monetary authority that regulates the payment system in Indonesia is currently promoting a non-cash program. At the beginning of 2010, Bank Indonesia started to conduct outreach activities for the development of non-cash payment instruments. Bank of Indonesia launched the Non-cash National Movement Program (GNNT) in August 2014 with the aim of increasing public awareness to make non-cash payments in transactions

The presence of non-cash payment instruments has had an impact on the Indonesian economy. Technology, information and science have encouraged the development of electronic card-based non-cash payment instruments. According to Dias in [9]. The existence of non-cash payment instruments using cards can reduce the opportunity cost for people to hold money for both transaction and precautionary needs. The use of card-based non-cash payment instrument [10] can be more practical and efficient and saves transaction costs, saves time, and can also provide income in the form of interest as a return for putting money in the form of savings. If you hold money in cash, you will lose costs such as interest, giving discounts, and benefits if you use non-cash. From the side of banks and non-banks that issue

electronic card-based non-cash payment instruments, they will benefit so that it will increase profits from these bank and non-bank institutions.

The practical and efficient use of non-cash payment instruments can increase the consumption level of users. This will have an impact on increasing the amount of demand for output so that it will have the potential to increase output. This will encourage increased production in the real sector and will encourage economic growth [11].

According to the deputy of Bank Indonesia, Puji Atmoko, the advantages of cashless on the central bank's side, can reduce the cost of printing, maintaining and destroying cash so that it can save the budget. On the balance sheet side of the central bank, the issuance of non-cash payment instruments in the form of e-money, both issued by banks and non-banks, has the potential to reduce the currency component in the base money, which means that it will reduce the liabilities side of the central bank's balance sheet [11]. With cashless, the circulation of counterfeit money can be minimized so that it will reduce the circulation of counterfeit money that occurs in Indonesia.

III. METHODS

A. Population and Sample

The object of this research is the need for cash when cashless use is being widely used by the community. Researchers will take the population from the Batam community, according to [12] the sample is a part of the determined population. Samples must be in accordance with predetermined requirements in order to get more accurate results for research needs [13]. according to [12] the proper sample size in the study is 30 to 500 samples. The number of samples taken using the Slovin formula :

$$n = \frac{N}{1+N(e)^2}$$

Information :

N = population size

n = Number of Samples

E = Batam Error Tolerance

Table 2 : Total Population Based on Batam City District

Sub-district	Total Population		
	2016	2017	2018

Belakang Padang	19.229	19.311	20.012
Bulang	9.924	9.969	10.331
Galang	15.723	15.788	16.361
Sungai Beduk	86.691	87.386	90.558
Sagulung	242.355	258.674	268.063
Nongsa	63.133	65.094	67.457
Batam Kota	243.952	257.674	267.027
Sekupang	124.165	127.637	132.270
Batu Aji	173.479	180.680	187.238
Lubuk Baja	86.193	86.571	89.900
Batu Ampar	65.335	66.141	68.542
Bengkong	106.220	108.091	112.014
Total	1.236.399	1.283.196	1.329.773

Source : Badan Pusat Statistik Batam, 2020

The population of Batam city (N) = 1,329,773 people in 2018 with data from BPS Batam 2020, the researcher uses a 5% error margin where this formula will be included in the Slovin e = 5% formula, the number of samples that must be used in this study is as much as: The population of the city of Batam (N) = 1,329,773 people in 2018 with data from BPS Batam 2020, the researcher uses a 5% error margin where this formula will be entered into the Slovin e = 5% formula in this study are as many as:

$$n = \frac{1.329.773}{1+1.329.773(0,05)^2} = 400$$

From the above calculations, to find out the sample size with an error rate of 5% is as many as 400 respondents who live in Batam city, sampling uses saturated sampling theory, which means that all members of the population that the researcher can use as samples. The stages of this research can be seen in the image below :

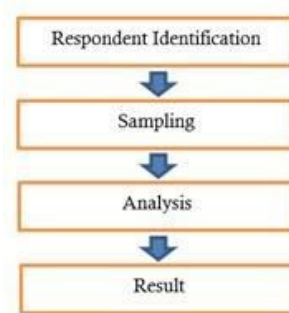


Fig 1 : Methodology

IV. RESULTS

Identification of the characteristics of the sample obtained, the sample randomly selected shows the female gender as many as 233 respondents (58.3%), and male gender as many as 167 respondents (41.8%) from a total of 400 respondents. The age of the respondents that the researchers found was <25 years as many as 248 respondents (62%), 25 - 45 years as many as 129 respondents (32.3%), and > 45 years as many as 23 respondents (5.8%). Non-cash application users of the respondents obtained were Gopay as many as 158 respondents (39.5%), OVO 137 respondents (34.3%), DANA 39 respondents (9.8%), and others such as debit cards, credit cards, flash BCA, etc. as many as 66 respondents (16.5%). The length of time using non-cash applications is that 299 respondents (74.8%) have used the application for less than 2 years, 67 respondents (16.8%) are 3-5 years, and 34 respondents (8.5%) have been using non-cash for more than 5 years, and of the 400 respondents, 114 respondents (28.5%) had credit cards, the remaining 286 respondents (71.5%) did not have credit cards. For debit card ownership, 355 respondents have a debit card, while the remaining 45 respondents (11.3%) do not have a debit card.

This research is a survey type research, from the distribution of 400 respondents in Batam the researcher found the results of the respondents' conclusions that, there are still many who think that Bank Indonesia still needs to print banknotes, and is still comfortable using paper money as a form of luxury in shopping. Of the 400 respondents, only 98 respondents (24.5%) agreed that Indonesia had to make changes from paper money to non-cash money, while the remaining 302 respondents (75.5%) stated that they did not agree with the use of non-cash money. . The reasons given vary such as, education in Indonesia is still uneven so that people still do not fully understand the use of non-cash money, there are

still many areas that do not have internet facilities, bother to always fill balances into applications, confused when they want to snack roadside, and other reasons that researchers cannot explain one by one.

V. CONCLUSION

From 400 respondents, all use non-cash applications, be it from Gojek, OVO, DANA, and other types of non-cash, even though all respondents use non-cash applications and are used to it, but only 98 respondents (24.5%) stated that want Bank Indonesia to no longer issue paper money (KARTAL) they think that paper money is very dirty, not environmentally friendly, and wasteful in the budget for printing money, it is better if the banknotes are eliminated so that the Indonesian people can simplify using the non-cash payment system, However, the remaining 302 respondents (74.5%) stated that they did not agree and wanted Bank Indonesia to only reduce the issuance of banknotes (KARTAL) with the aim of preventing excessive inflation due to too many banknotes circulating in the community, but not to lose banknotes. because not all places support in making non-cash purchases, as well as mas ih many areas that have not been reached with internet facilities. From the results of this study, the researchers concluded that, Indonesia, especially the Batam region, still has not agreed to use non-cash transactions in full, respondents are still not accustomed to using non-cash applications and are more comfortable using paper money in shopping. Researchers personally actually want Bank Indonesia to reduce the printing of banknotes and focus more on non-cash transactions, researchers believe that one day we will all start getting used to using non-cash transactions and begin to switch to no longer using paper money.

REFERENCES

- [1] H. & T. M. Fujiki, "Currency Demand, New Technology, and The Adoption of Electronic Money : Micro Evidence From Japan," *Economics Letters*, 2014.
- [2] B. & H. Fung, "Central Bank Digital Currencies : A Framework for Assesisng Why and How," *SSRN Electronic Journal*, 2016.
- [3] D. A. R. Drs. Suharso, *Kamus Besar Bahasa Indonesia*, Semarang: Widya Karya Semarang, 2017.
- [4] Mursyidi, *Akuntansi Biaya*, Bandung: Refika Aditama, 2010.
- [5] G. Davies, *A History of Money : From Ancient Times to Present Day*, University of Wales Press, 2002.

-
- [6] B. O'Connor, *A Political History of The American Welfare System : When Ideas Have Consequences*, Rowman & Littlefield Publisher, Inc, 2004.
- [7] N. V. G. B. W. Jacob F Kirkegaard, *Transatlantic Economic Challenges in an Era of Growing Multipolarity*, Peterson Institute For International Economics Bruegel, 2012.
- [8] N. G. Mankiw, "Macroeconomics," Worth publisher, 2007.
- [9] A. Yudhistira, "Analisis Faktor Yang Mempengaruhi Preferensi dan Aksesbilitas Terhadap Penggunaan Kartu Pembayaran Elektronik," *Jurnal Ilmiah Fakultas Ekonomi dan Bisnis Universitas Brawijaya*, 2014.
- [10] T. Segara, "Bank Indonesia," 14 Agustus 2014. [Online]. Available: https://www.bi.go.id/id/ruang-media/siaran-pers/pages/sp_165814.aspx.
- [11] Pramonno, "Dampak Pembayaran Non Tunai Terhadap Perekonomian Dan Kebijakan Moneter," Jakarta, Bank Indonesia, 2006, p. 26.
- [12] Sugiyono, "Metode Penelitian Kuantitatif Kualitatif Dan R & D," in *Metode Penelitian Kuantitatif Kualitatif Dan R & D*, Bandung, Alfabeta, 2015, p. 215.
- [13] A. Ferdinand, "Metode Penelitian Manajemen," in *Metode Penelitian Manajemen*, Universitas Diponegoro, 2014, p. 173.
- [14] M. Kuncoro, *Metode Kuantitatif*, Yogyakarta: Sekolah Tinggi ilmu Manajemen YKPN, 2011.
- [15] P. S. N. Gregory Mankiw, "The Politics and Economics of Offshore Outsourcing," NBER Working Paper, pp. 1027 - 1056, 2006.
- [16] I. A. Putri, "Pengaruh Perkembangan Cashless Transaction Terhadap Kebutuhan Uang Tunai (Kartal) Masyarakat," *Jurnal Ilmiah Mahasiswa FEB*, 2014.

Leverage and Executive Pay-Performance of the Indonesian Family Firms

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Abstract

This study aims to investigate the impact of firm performance on executive compensation. This study also examines the moderating role of leverage on the firm performance and executive pay-performance relationship. Used data panel regression as a method, this study showed that firm performance had a positive impact on executive compensation. This paper also showed that leverage weakens the pay-performance relationship. These results indicate that creditors prefer to assess family firm performance based on the risk rather than accounting performance. Higher leverage illustrated a high risk. The firm with high risk indicated poor executive performance. As a result, compensation will be lower.

Keywords: Leverage, Executive compensation, Pay-performance, Firm performance, Family firm

I. INTRODUCTION

Contemporary corporate governance literature has many research topics in executive compensation. The executive compensation has been increased to disclosure in the annual report as transparency for executive compensation. Indonesian public companies have been mandated to disclose their executive compensation during 2016 with the release regulation in Otoritas Jasa Keuangan Number 32/POJK.04/2016.

Firm family control has an effective organizational control from family ownership [1]. This mechanism can be seen as more family members have acted as an executive in the firm. This mechanism can influence the management incentive contract and low control in management. This is indicated by real earnings management in the family firm has a higher level [2].

The early literature suggests that executive compensation is an incentive to reduce agency problems [3]. In contrast with reality, executive contracts are not free from agency problems such as insider compensation [4]. Performance-based compensation contracts have been designed to mitigate agency problems and increase transparency and offer shareholder value. Executive compensation has low future firm performance [5]. It is thought that hard to determine firm performance is due to efforts by executive management [6].

An alternative mechanism to firm monitoring is using the role of their creditor. Prior literature and study explain that leverage level as a determinant in executive compensation. The study by K. Wang & Xiao (2011) explains that executive compensation had decreased in financial leverage. This negative relationship between financial leverage and executive compensation is consistent with some previous studies [8] [9]. In contrast, some previous literature suggests that leverage has a positive relationship with executive compensation [10][11] and [12]. The creditor has the ability to monitor cash hold the firm using the contractual right and play monitoring to control excessive in executive compensation.

We examine the effect of firm performance on executive compensation (executive pay-performance) and explain the creditor monitoring on executive compensation contracts to understand the family control firm's challenge. This study finds creditors' role as an outside monitoring mechanism to mitigate agency problems among management incentive contracts. Besides, prior research suggests that the leverage level as proxy creditor power has an inconsistent relationship with the executive contract. We find that the leverage level can be an alternative to control mechanisms. A higher leverage level will decrease executive compensation and reduce executive pay-performance.

This study contributes to the extant literature by conducting a more thorough investigation of the creditor monitoring mechanism from perspective agency theory. This study

also contributes to the family firm's controlling mechanism in the emerging market, with the feature as a less developed regulatory and legal system [13].

II. RESEARCH METHODS

In this study, we use hand-collected data in financial statements and annual reports of Indonesia family listed companies. This study has three kinds of data: executive compensation, firm financial performance (ROA), leverage level, and control variables. All data information is collected for the 10-year period from 2009 to 2018. The firm in financial service is excluded from observation because there are differences in accounting policies and different regulatory policies. The firm in the financial industry has a high leverage level besides their business model.

This study uses executive compensation as dependent variables. We use the natural log cash executive compensation of the board of directors and the commissioner board as a proxy for executive compensation. Our crucial interest variable as an independent variable is the leverage level using debt to assets ratio. We use return on assets (ROA) as a measure of firm performance.

The regression analysis in this study using pooled regression analysis. The analysis to mitigate the impact of an outlier in this study uses winsorize all variables at the 10th and 90th percentile values. To test the hypothesis, we employ a specific version of the model with an interaction variable stated as follows:

$$\text{ToTREM} = \alpha + \beta_1 \text{ROA} + \beta_2 \text{Leverage} + \beta_3 \text{LevROA} + \varepsilon$$

Where:

ToTREM: Total executive compensation

ROA: Return on assets, measure as net income divided by total assets

Leverage: Firm leverage level, measure as total liability divided by total assets.

LevROA: Interactional variable between ROA and leverage level.

A higher β_1 indicated that the alignment between performance and executive pay had been better. We expected creditor play monitoring to lower executive compensation and the coefficient of LevROA to be negative.

III. EMPIRICAL RESULTS

Table 1 presents the descriptive analysis of leverage and executive pay-performance in sample Indonesian family firms. The average of executive compensation in Indonesia listed family firms is Rp. 22.98274 between 2009 until 2018. In our sample, Indonesian family firms have an average firm performance as indicated using the return on assets (ROA) at 5%, whereas the leverage level is low at 48%.

Table 1. Descriptive statistics. All of the variables are winsorized at the 10th and 90th percentiles.

Variable	Obs	Mean	Std. Dev.	Min	Max
TOTREM_W	1211	22.9827	1.09643	20.7704	24.8966
		4	3	8	9
ROA_W	1211	0.05037	0.06000	-0.0758	0.20181
		3	4		5
LEV_W	1211	0.48663	0.18903	0.18032	0.82763
		4	6	3	4

Table 2 reports the correlation among the variables that are used in this study. The correlation between ROA and executive compensation is positive and significant at the 5% level. The independent variable leverage level is also negatively correlated with executive compensation. The coefficient correlation varies from -0.3398 (between leverage and ROA) and 0.3076 (between ROA and executive compensation), indicating no multicollinearity problem in our data analysis.

Table 2. Correlation Analysis. All of the variables are winsorized at the 10th and 90th percentiles. The superscripts * indicates significant at the level 5% levels

	TOTREM_W	ROA_W	LEV_W	levROA_W
TOTREM_W	1.0000			
ROA_W	0.3076*	1.0000		
LEV_W	0.0029	-0.3398*	1.0000	

Multivariate analysis

Table 3 explains the relationship between leverage level and executive compensation in multiple regression analysis. Column (1) consists of the fixed effects model and column (2) consists of the result of the random-effects model. The Hausman test indicated in the

random-effects model has indicated the endogeneity problem. This study, the fixed effect has performed as suitably analyzed using Hausman test.

As column (1) documented, the coefficient ROA is positive and significant in the level 5%. This indicates that executive pay-performance has been used in the Indonesian family firm. Moreover, the leverage has a negative coefficient and significant in the level 1% indicate the creditor monitoring mechanism can reduce executive compensation. The interaction variable coefficient between leverage level and ROA is significantly negative, suggesting that an increase in leverage level is associated with a decline in executive pay-performance.

The main problem that appears in a family firm is the agency problem. Compensation for executives sometimes cannot reflect the executive performance, so to prevent this, a family firm can implement executive compensation based on firm performance. The results of panel data regression analysis, firm performance has a positive effect on executive compensation. It indicates that the compensation from executives depends on the firm's performance, so agency problems in the family firm can be reduced and the monitoring function has been running well.

Table 3. Pooled sample regression estimating. All of the variables are winsorized at the 10th and 90th percentiles. The superscripts ***, ** indicates significant at the level 1%; and 5% level respectively

	Fixed Effects***	Random Effects
Constant	23.1954 (0.0000)***	23.1025 (0.0000)***
ROA_W	1.9129 (0.0160)**	2.2490 (0.0050)***
LEV_W	-0.4370 (0.0050)***	-0.3206 (0.0340)**
levROA_W	-4.8087 (0.0040)***	-4.6423 (0.0050)***
R ²	0.83	0.78

Fixed effects vs Random Effects: Chi2 = 47.61: Prob>Chi2 = 0.0000*** (Hausman Test)

However, the findings also showed that leverage weakens the performance and executive compensation relationship. Even though the firm has already better financial

performance (proxied by ROA), creditors tend to underestimate the performance of executives. As a result, it can reduce executive compensation. Creditors consider market performance more than financial performance. Farrell & Whidbee (2003) show that external stakeholders tend to focus on risk management rather than the performance of the executive, on the one hand, the leverage ratio can also be interpreted as the level of firm risk. The firm with better financial performance but also high risk cannot reflect better executive performance. Executives have already known that their compensation is based on financial performance, so executives decide to invest aggressively to create high financial performance regardless of the level of risk. Therefore the executive has a good performance based on accounting performance but not good enough in risk management.

IV. CONCLUSION

This study set out to test the influence of leverage on executive pay-performance in Indonesian family firms. We find the consistent result as evidence of the mitigating effect of financial leverage level on executive pay-performance. Our results support the notion that creditors play an important role in reducing agency problems over performance-based executive compensation contracts.

The results of this study have several implications. First, the monitoring function of a family firm can be implemented well if executive compensation is based on performance. Second, the performance-based compensation framework is not limited based on financial performance but also market performance and risk management. Third, creditors tend to consider market performance and risk level more than financial performance, so a firm should pay more attention to market performance and better risk management.

REFERENCES

- [1] M. Cheng, B. Lin, and M. Wei, "Executive compensation in family firms: The effect of multiple family members," *J. Corp. Financ.*, 2015.
- [2] M. R. Razzaque, M. J. Ali, and P. R. Mather, "Real earnings management in family firms: Evidence from an emerging economy ☆," 2016.
- [3] M. C. Jensen and W. H. Meckling, "Theory of the Firm : Managerial Behavior , Agency Costs and Ownership Structure Theory of the Firm : Managerial Behavior , Agency Costs and Ownership Structure," *J. financ. econ.*, vol. 3, pp. 305–360, 1976.

-
- [4] Z. Wu, J. H. Chua, and J. J. Chrisman, "Effects of family ownership and management on small business equity financing," *J. Bus. Ventur.*, vol. 22, no. 6, pp. 875–895, Nov. 2007.
- [5] S. Basu, L. S. Hwang, T. Mitsudome, and J. Weintrop, "Corporate governance, top executive compensation and firm performance in Japan," *Pacific Basin Financ. J.*, vol. 15, no. 1, pp. 56–79, Jan. 2007.
- [6] D. Nichols and C. Subramaniam, "Executive compensation: Excessive or equitable?," *J. Bus. Ethics*, vol. 29, no. 4, pp. 339–351, Feb. 2001.
- [7] K. Wang and X. Xiao, "Controlling shareholders' tunneling and executive compensation: Evidence from China," *J. Account. Public Policy*, vol. 30, no. 1, pp. 89–100, Jan. 2011.
- [8] G. Cai and G. Zheng, "Executive compensation in business groups: Evidence from China," *China J. Account. Res.*, vol. 9, no. 1, pp. 25–39, Mar. 2016.
- [9] H. Da Wang, C. H. Lin, and C. C. Cho, "The dark and bright sides of agency problems: Evidence from insider compensation of family pyramidal firms," *Asia Pacific Manag. Rev.*, Oct. 2018.
- [10] B. D. Guillet, D. Kucukusta, and Q. Xiao, "An examination of executive compensation in the restaurant industry," *Int. J. Hosp. Manag.*, vol. 31, no. 1, pp. 86–95, Mar. 2012.
- [11] B. Amoako-Adu, V. Baulkaran, and B. F. Smith, "Executive compensation in firms with concentrated control: The impact of dual class structure and family management," *J. Corp. Financ.*, vol. 17, no. 5, pp. 1580–1594, Dec. 2011.
- [12] D. J. Denis and J. Xu, "Insider trading restrictions and top executive compensation," *J. Account. Econ.*, vol. 56, no. 1, pp. 91–112, Jul. 2013.
- [13] T. Swanpitak, X. Pan, and S. Suardi, "Family control and cost of debt: Evidence from Thailand," *Pacific Basin Financ. J.*, vol. 62, p. 101376, Sep. 2020.
- [14] K. A. Farrell and D. A. Whidbee, "Impact of firm performance expectations on CEO turnover and replacement decisions," *J. Account. Econ.*, vol. 36, no. 1–3 SPEC. ISS., pp. 165–196, Dec. 2003.

Polarization Conflicts and Stakeholders Interests in Tin Mining Industry Policies in Bangka Belitung Islands Province, Indonesia between 2000 and 2019

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Abstract

Bangka Belitung Islands Province is the second largest tin producer that has been widely known in the international market. It has been exploited since the 18th century. In the New Order era, tin mining was exploited by two large companies, namely PT. Timah, Indonesia Tbk and PT. Koba Tin, Malaysia. The purpose of this study was to analyze the polarization of conflicts and stakeholders interests in tin mining policies in Bangka Belitung Islands Province between 2000 and 2019. This study used a qualitative approach with phenomenological analysis techniques. Data collection was carried out by conducting interviews with key informants, Focus Group Discussion, with 30 supervisors, in-depth interviews, and documentation. This study concluded that the polarization of various interest groups in tin mining policies is related to how the stakeholders in the policy reacted to the direct and indirect impact of certain policies to their values and interests. The implication of this research is that the central government must consider the stakeholders relationship interests in formulating mining policies and implementation.

Keywords: Indonesia, tin mining, stakeholders, polarization, conflicts, interests.

I. INTRODUCTION

Indonesia has the potential of the wealth of natural resources in the mining sector such as oil, gas, gold, iron, coal, copper, silver and so on which are spread in various regions. In fact, some regions, such as Kalimantan, Sumatra, Riau, and Irian Jaya, make the natural wealth of the mining sector as the main resource to promote their regional economic growth.

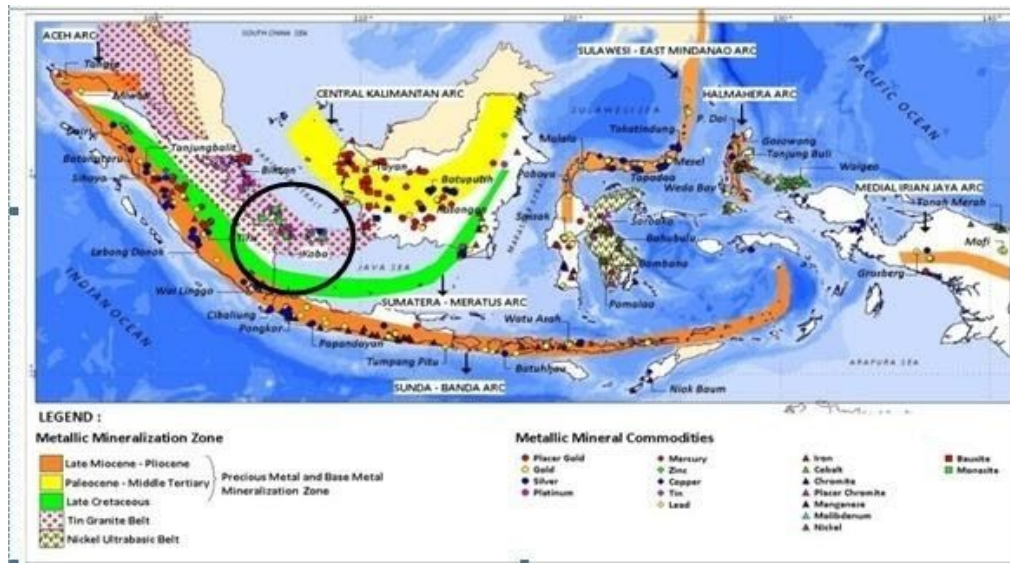


Fig. 1. Worth of Natural Resources in Indonesia

Source: Directorate General of Mining and Energy, 2012[1]

Bangka Belitung Islands Province is the second largest tin producer after China which has been widely known in the international market with the Bangka Tin Mining trademark (see Figure 2). Tin mining in the Bangka Belitung Islands Province has been exploited since the 18th century by Vereenigde Oostindische Compagnie (Dutch East India Company).

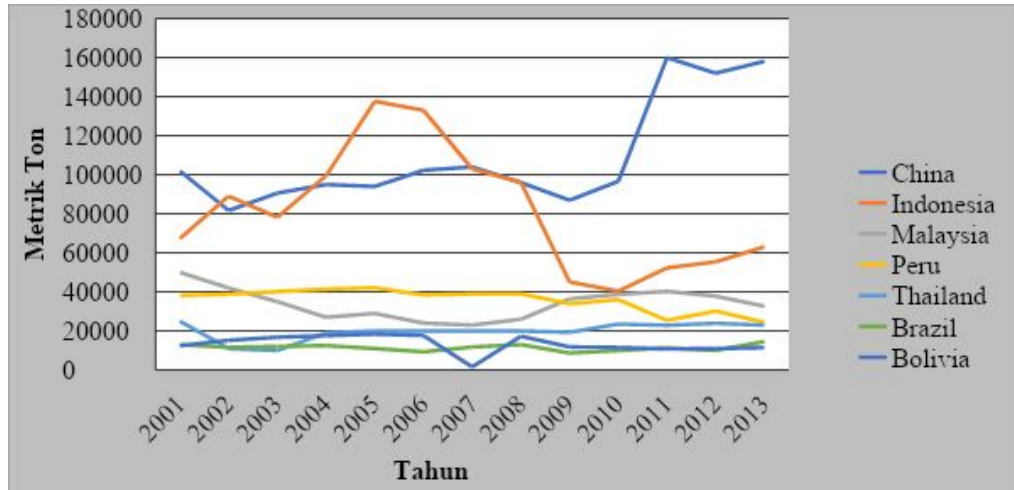


Fig. 2. Producing Countries and World Tin Production in 2001-2013

Source: Processed from PT Timah's Financial Report [2]–[14]

In the New Order era, tin mining was carried out by two large companies, namely PT. Timah Tbk and PT. Kobatin. However, since the era of regional autonomy, tin minerals have also been exploited by foreign and domestic smelter companies and communities.

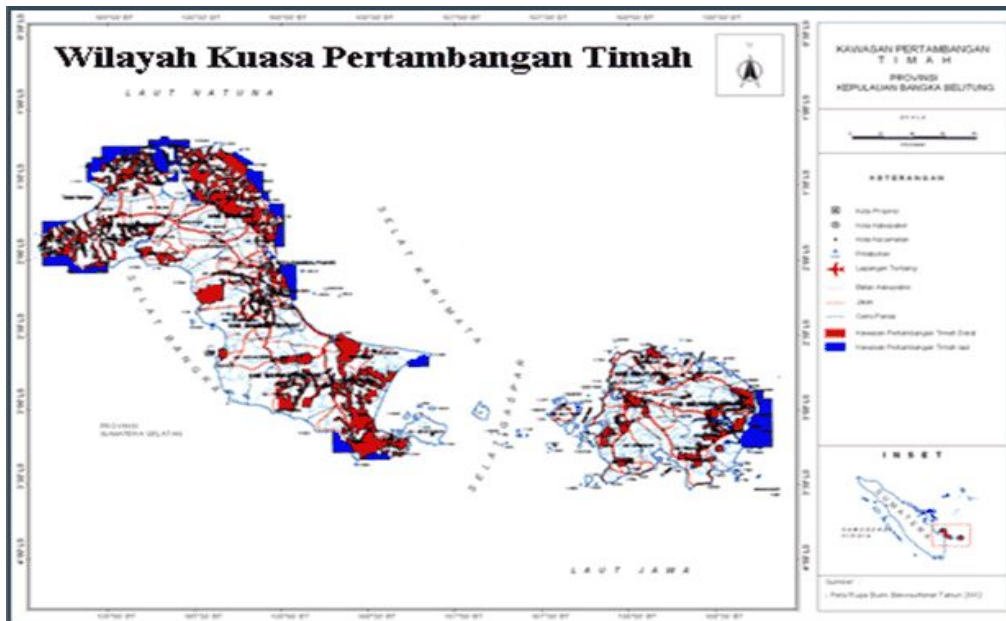


Fig. 3. Tin Mining Exploration Licence Map in Bangka Belitung Islands Province

Source: PT Timah (2013)[6]

Several studies [15, pp. 1][16] [17]–[20] find that the natural resource management policy of mining does not create proportional alignments in the economic, social, political, environmental, technological aspects and institutional changes. The mining policy tends to have more pro-economic and exploitative motive and brings negative impacts to social and institutional aspects [15, pp. 2], [21], [22, pp. 42], [23], [17], [19]

Rigg [24] states that the development of the mining sector in several regions in Indonesia is an enclave model. Some provinces in Indonesia that are rich in natural resources such as East Kalimantan, Irian Jaya, Riau, South Sumatra and Aceh have high Gross Regional Domestic Product (GRDP) but also have high levels of poverty. There are two reasons for this: First, the existence of extractive industries, namely the wealth flowing from enclave industries which does not contribute to the prosperity of local people. Thus, the main impact of the natural endowment booming is only benefited by industry and elite groups outside the region. Second, mining revenues have been taken by the central government and deposited in other provinces.

The World Bank continues to encourage several countries that have relatively low performance in natural resource governance such as Angola, Iraq, Indonesia, Congo, Colombia, Mexico, Nigeria, Sudan to conduct institutional reforms in their mining policy sector [21], [25], [26]. The World Bank concern is also outweighed by weak institutional capacity and natural resource conflict in those countries that have abundant natural resources [15, pp. 239]. Therefore, efforts are needed to build strong institutional mechanisms and capacities to support the creation of legal certainty and joint commitment [15, pp. 227].

The main analysis of this chapter focuses on the nature of competing interest groups [15, pp. 231]. Politics is often related to the struggle between competing interests, and shows that group competition can create bad incentives for the public. Political competition often contains a battle between representatives of different interest groups to control public wallets and their use for the benefit of their own groups. Politicians compete for the opportunity to side with their own groups at the expense of others will influence the country's fiscal policy. Dixit et al. [27] show how the budget division in the election period depends on the situation of political competition, especially the possibility of a change of government in the following period.

Specifically, Freeman [28] promotes the importance of stakeholder analysis in management of natural resource management. This is due to one of the main obstacles in the success of natural resource management policies because the regulatory aspects in most countries are not enough to adequately address the interests of all parties involved by

identifying the interests and influence of each stakeholder, then the regulation will achieve its objectives: Empirical studies of the need to involve various stakeholders in achieving mining policy objectives in various countries such as Namibia, China, Peru, Africa and other countries provide empirical support to bring up new ideas that the involvement of all stakeholders is very important.

This study focuses on the analysis of stakeholders in the tin mining industry policies in the Bangka Belitung Islands Province, Indonesia. The analysis was carried out following a series of analyzes conducted by [29] which includes: 1) identification of stakeholders, 2) making groupings and categorizing stakeholders, and 3) investigating the polarization of the interests and influence of stakeholders.

II. LITERATURE REVIEW

A. Concept of Institutional

In the various institutional literature, many institutional definitions were put forward by experts. Some institutional definers are rules, collective actions, structures and rules of the game.

North [30] says that institutions are a set of rules, procedures that are adhered to behavioral, ethical and moral norms to limit individual behavior. In this case the institution includes the basic rules of the game in which the economy operates. North [31] describes institutions as rules (rules of the game) in society. Furthermore, institutions as boundaries are made to form a pattern of harmonious interaction between individuals in carrying out political, social and economic interactions. Based on its form, North [31] divides institutions into two categories: informal and formal. Informal institutions are institutions whose existence in the community is generally not written. Customs, traditions, agreements, conventions and the like with various names and designations are grouped as informal institutions. Whereas formal institutions are written regulations such as legislation, agreements, contractual agreements, regulations in the fields of economy, business, politics and others. Agreements that apply both at international, national, regional and local levels are included in formal institutions.

The definition of institution that is most often a reference is understanding according to North which defines institutions as constraints created by humans to regulate and shape political, social and economic interactions. These rules consist of formal and informal rules and enforcement processes (enforcement) [30, pp. 257].

Institutions are built by humans to create a good order and reduce uncertainty in social life. North said that the institutional role of both formal institutions and informal

institutions is very important in economic development. Without a good institution, transaction costs in each economic activity will be higher. The presence of institutions is very important as a tool to regulate and control economic actors in the market. Good institutions will be able to create fair and dynamic competition [30, pp. 232].

The rules of the game include regulations that make the community more established in interacting. At this level, institutional definition can be divided into two classifications: first, in terms of processes, institutions refer to efforts to design patterns of interaction between economic actors so that they can make transactions. Second, in terms of objectives, the institution concentrates on creating economic efficiency based on economic, political and social power structures between actors [33].

By expanding the rational theory of human economics, it can be said that tin mining industry policies emerge from certain historical and social settings [34]. This theory shows that institutions are ways to support interests and deal with conflicts between individuals, organizations or groups and environmental forces and actor [35].

B. Analysis and Mapping of Stakeholders

The stakeholder approach was initially introduced into management theory in response to dissatisfaction with financial effectiveness criteria. Its roots are found in Richard E. Freeman's book *Strategic Management: A Stakeholders Approach*. According to him [28], the main assumption of stakeholder theory is that organizational effectiveness is measured by its ability to fulfill not only shareholders, but also agents who have shares in the organization [28]. Since then, many articles have been published which aim to contribute to compiling and developing the theory.

The stakeholders term means "every group or individual who can influence or be influenced by the achievement of organizational goals" [34, pp.46]. Bryson [36] proposes a more comprehensive definition, namely "every person, group, or organization that can place on the attention, resources, or output of the organization or which is influenced by results".

In business management, the growing awareness of stakeholders can influence the success of the company. This approach analyzes stakeholders to understand their interests and influences, and how this can support or threaten company performance [37]. Thus, stakeholder analysis is used to mobilize, neutralize or weaken stakeholders to achieve the company's strategic goals. However, in terms of policy analysis, development and management of natural resources, stakeholders' analysis is increasingly seen as an approach that can empower marginalized stakeholders to influence the decision-making process.

One of the root causes of the stakeholder approach is based on the practical fact that limited resources, limited time and attention, and limited patience of managers to deal with external constraints. In general, the views of stakeholders try to determine which groups have relations directly related to the economic interests of the company. Some experts define stakeholders in terms of their needs for the sustainability of the company [38], [39]. Clarkson [38] defines stakeholders as people who have put something at risk in relation to the company, while [41], and [42] talk about stakeholders as contractors or participants in conjunction with exchange.

Policy analysts have been tried for a long time to understand how information, institutions, decisions and policy agendas involve interest groups in social networks. In policy research, stakeholder analysis is seen as a way to produce information about relevant actors to understand behavior, interests, agendas, and influence on the decision-making process [35, pp. 48]. The views of civil society groups need to be involved and asked to foster appreciation so as to foster political will.

In political science, stakeholder research application helps policies to work more effectively with stakeholders, facilitate transparent policy implementation of decisions or objectives, understand the policy context, and assess the future feasibility of policy choices [35, pp. 51]. The stakeholder approach is adapted from business management that is currently used in policy, development and natural resource management [43].

Stakeholder analysis can be used primarily to support a project management in managing the strategic activities of public and private sector organizations [28]. Stakeholder analysis can help to support various forms of policy analysis.

Stakeholder theory is often also used to analyze the development of natural resources including the mining sector and continues to develop as a knowledge that aims to explain the relationship between certain organizations and people, groups and other organizations in their environment [18], [44]–[46].

Grimble and Wellard [47] in his study of the principles and methods and application of stakeholder analysis in natural resource management, argued that stakeholder analysis has been developed in response to the challenges of various interests and goals where trade needs to be negotiated between the interests of economic efficiency, environmental goals and justice. Stakeholder analysis is an approach to gain an understanding of the whole system and assessing the impact of system changes by identifying key actors or stakeholders and assessing each other's interests in a system [45, pp. 175].

The importance of institutional analysis in development has related changes in the form values social values and institutions [15, pp. 229], [46, pp. 2-3]. The importance of

institutional approach is due to the nature of the policy process which contains various values of interest and influence of stakeholders. Stakeholder influence in a policy system can affect the development objectives achievement. It also determines the impact of a project, program and policy [47], and [48]. Institutional analysis is also conducted by describing the policy changes of tin mining policy at the central as well as district levels in the province of Bangka Belitung Islands. This analysis is necessary because the existence of the regulation can affect the dynamics of economic development in the region.

III. METHODS

This research is a qualitative study and applied the institutional analysis to address questions related to the polarization of interests and influence of stakeholders to explain the policy dynamics of tin mining industry development in Bangka Belitung Islands Province. The importance of institutional analysis in development has changed pertaining social systems values and institutions [15, pp. 229], [46, pp. 2-3].

Unit of analysis is at the government level, entrepreneurs and communities (civil society) which become stakeholders involved in the tin mining industry policy. Stakeholders in the tin mining industry can be explained as follows.

1. PT Timah Tbk is the largest state-owned tin mining company in Indonesia. The company began commercial operations on August 2, 1976.
2. PT Koba Tin is a joint venture company between Kajuara Mining Corporation Pty Ltd - a company from New South Wales, Australia and PT Timah Tbk. PT Koba Tin began its operations in 1974.
3. The Central Government is represented by the Ministry of Energy and Mineral Resources which has authority in formulating and evaluating tin mining policies in the Bangka Belitung Islands Province.
4. The provincial government is a stakeholder who has the authority and responsibility for formulating, granting mining exploration licenses and mining related-rule
5. Regency Governments are stakeholders who have the authority and responsibility for formulating, granting mining exploration licenses and mining related-rule in the area of the local administration.
6. Indonesian Police (POLRI) is an institution that enforces the law of illegal tin mining business that coordinates with local government officials.

7. Suppliers/tin collectors are communities who operate inside and outside the tin mining authority.
8. The mining community is a community that was initially used by PT Timah Tbk to refer to its mining partners. Eventually, the mining community conducted illegal mining activities without having the government license.
9. The tin traders association is an association that organizes tin traders to accommodate and deliver aspirations related to tin mining policies.
10. Smelter is a company which is operated by private parties. The smelter generally has an operating permit from the local government and produces tin without a brand and a low quality for export. The smelter products are purified in Malaysia or Singapore.
11. Indonesian Forum for the Environment (WALHI) is a non-governmental organization whose role is to supervise tin mining activities that have an impact on the environment.
12. NGOs are organizations that are actively involved in advocating and monitoring tin mining activities in the Bangka Belitung Islands Province for example rescuing coral reefs and empowering communities pertaining to the environmental issue.
13. Mass media is an institution that reports on tin mining policy issues in order to conduct social control roles in the local development.
14. Higher Education is an element of an institution that has a role in conducting research and community empowerment. This function is carried out by implementing educational programs on tin mining activities, environmental monitoring and management.

Respondents were selected using the purposive sampling method. The respondents were selected deliberately based on their understanding of the implementation problems of the tin mining industry policy in the Bangka Belitung Islands Province.

The selection criteria of respondents were adapted from the selection criteria of respondents proposed by [51], which were adjusted to the development of the tin mining industry in the Bangka Belitung Islands Province. Respondents were selected with the following criteria:

1. Having responsibility in implementing the tin mining industry policy in the Bangka Belitung Islands Province;

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2. Understanding policies related to the implementation of the tin mining industry policy in the Bangka Belitung Islands Province;
 3. Having interests related to the implementation of the tin mining industry policy in the Bangka Belitung Islands Province;
 4. Having the possibility to relate or be influenced by policies related to the development of the tin mining industry in the Bangka Belitung Islands Province.

The method of analyzing institutional dimensions uses stakeholder analysis. Stakeholder analysis is expected to map the position, interests and influence of stakeholders [49, pp. 80]. Stakeholder analysis is often used to analyze management of natural resource policy management [18], [19], [53]. In this section, the sources and types of data, data collection and analysis methods will be explained.

Source of data collection in stakeholder analysis is divided into two categories, namely primary and secondary :

1. Primary data is collected through questionnaires, interviews and direct observation to the research locus, namely the provincial and district/city governments, mining companies, community organizations and communities with an interest in the tin mining industry policy.
2. Secondary data are collected from the results of reports and documents of agencies/institutions related to the tin mining industry policy. Secondary information was obtained from publications, documents, films, local newspapers and national archival records in relation to the phenomenon of the tin mining industry policy during the period 2004-2013.

Primary data and secondary data are needed to provide comprehensive data for this study. In addition, using secondary information and primary data allows researchers to cross check findings and find more accurate research result.

This technique is used to obtain and disclose more in-depth information relating to the explanation of the interests and influence of each stakeholder in the tin mining industry of Bangka Belitung Islands Province period 2004-2013.

The researcher recorded and noted that the data from the interview could be recorded properly. Therefore, in conducting interviews the researchers used interview guidelines and radio tapes. Interviews are one of the most important ways to get various and deep information. The method of in-depth interviews was conducted to provide opportunities to

engage in social interaction with respondents. This method also helps to compare the truth of answers with observation methods and questionnaires. In other words, in-depth interviews allow researchers to identify their perspectives on stakeholders and other institutions in tin mining policies.

The technique of Focus Group Discussion is used to obtain information in determining stakeholders involved and affected in tin mining sector activities. This technique is used to help researchers in the field to get clearer data and information. Group discussion activities involve experts and competent parties as well as those affected in tin mining activities.

Documentation techniques are used to obtain written data through available literature. Documentation as a data source that is complementary to the main data that is relevant to the problem and the focus of the research includes the results of meetings, discussions, legislation, print and electronic media and reports. This data is used to complete the results of interviews and observations of places and events.

Observation technique is direct observation and systematic recording to the field in order to search data and complete data which are not obtained in interviews. This observation also involves observing activities or behavioral and non-behavioral observation. With this observation, it is expected to be able to record events in situations related to propositional knowledge and knowledge directly obtained from the data; understand difficult situations in the field; and re-check data mechanisms [54]. In addition, according to [55], observations also require perceived concepts that provide a basic framework for attracting an important core of a particular event, activity or behavior.

From the data processing using interest affects matrix (interest influence matrix), stakeholders for each category in tin mining industry development policy as Figure.

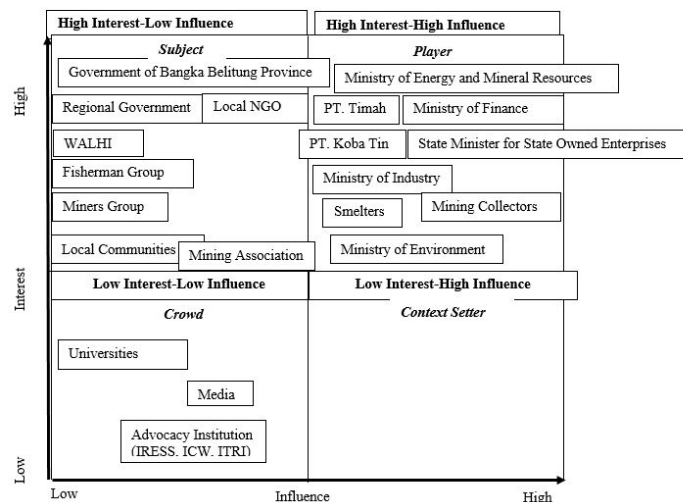


Fig. 4. Map of Interest and Influence of Stakeholders in Tin Mining Industry Policy

Source: Primary Data (2016)

1. Key players are stakeholders with high interest and influence consisting of the Ministry of Energy and Mineral Resources, Ministry of Industry, Ministry of Environment, Ministry of Finance, PT. Timah, PT. Koba Tin, Smelter, mining associations, and tin collectors.
2. Context setters are stakeholders who have high influence and low interest. There are no stakeholders context setters in the development policy of the tin mining industry.
3. Subjects are stakeholders with high interests but low influence consists of the Provincial Government of Bangka Belitung Islands Province, district government, law enforcement, community tin mining, mining communities, fisher groups, and the general public.
4. Crowd is a stakeholder who has a low level of importance and influence consists of universities, media, and advocacy institutions.

Based on the results of in-depth interviews, FGDs, field observations, and documentary searches from print and electronic media there is a polarization of interests and influences of key stakeholders, major and supporters of the tin mining industry policy in the Bangka Belitung Islands Province. The following is a result of the identification of the interests of various stakeholders in the tin mining industry.

IV. DISCUSSION

A. *Interest and Influence of Key Player*

The results of stakeholder analysis show that the central government consisting of the Ministry of Energy and Mineral Resources, Ministry of Industry, and Ministry of Finance, Ministry of Environment, and The State Minister for State Owned Enterprises, is a key player that has a high level of importance and influence on tin mining industry policies. The central government institutions are institutions that have the authority to formulate, implement, monitor, and evaluate policies for the realization of the tin mining industry policy objectives. Key players can influence the tin mining industry policy through the formulation of policies that support the realization of mining industry policies that play a role in national economic development. In general, the authority of the central government in the tin mining sector includes investment, trade, and revenue determination for the central government and local governments in the tin mining sector.

a. *Ministry of Energy and Mineral Resources*

i. *Interests*

The central government through the ESDM Ministry has a high level of importance and influence in the development of the tin mining industry. The ESDM Ministry as key players has economic, social, environmental and political interests in the tin mining industry. The ESDM Ministry has economic and social interests so that the mining sector contributes to national development and people's welfare. The political interest of the Ministry of Energy and Mineral Resources is to implement the success of policies in the tin mining sector in the interests of state revenues that have been politically charged by the government.

The Ministry of Energy and Mineral Resources through mining sector policies is encouraged to support the development achievement goals outlined in the national RPJMN for the period 2010-2014. The National RPJMN 2010-2014 contains national development targets to reduce the number of poor people and unemployed people by using four track strategies, namely pro growth, pro job, pro poor and pro environment. This development policy is directed at increasing growth that generates employment, reduces poverty and does not damage the environment [56].

ii. *Influence*

The ESDM Ministry has a strong influence through its authority to formulate, implement, monitor, and evaluate policies in giving licenses, providing protection, formulating and ratifying regulations in the tin mining industry. Since the era of regional autonomy, the central government through the ESDM Ministry has issued several policies in the management of the tin mining industry.

b. *Ministry of Industry*

i. *Interests*

The Ministry of Industry has a high interest and influence in the tin mining industry. The Ministry of Trade has economic and political interests to realize the management of the tin mining industry so that it can provide value addition for increasing state revenues. This policy is to maintain that the tin mining industry contributes significantly to state revenues in the short and long term.

ii. *Influence*

The Ministry of Industry has influence through authority in the formulation, development policies of the tin mining industry. The influence of the Ministry of Trade through its political authority in formulating regulations in giving authority to permit tin

mining management, providing protection for tin trade, formulating and ratifying regulations in the field of tin trade. Since the era of regional autonomy, the central government through the Ministry of Trade has issued several policies related to the trade in tin mining.

c. Ministry of Finance

The Ministry of Finance includes key player stakeholders, namely stakeholders who have high interests and influence. The Ministry of Finance has political and economic interests so that state and regional revenues will increase through the distribution of taxes and non-taxes to local governments in the general mining sector that have been determined by the political policies of the central government.

i. Interests

The Ministry of Finance has an economic interest so that the tin mining industry business plays a strategic role for state revenues. The Ministry of Finance has the role of distributing income proportionally to the regions in stipulating regional income provisions. This was accommodated by the existence of the Revenue Sharing Fund policy for the central government to the regional government. This fiscal policy has a political mission to manage state income funds in order to create a fiscal balance in the region. Another political interest is also one of the interests of the Ministry of Finance, considering that it is a burden on the state revenue target submitted to the Ministry of Finance to increase revenue from the mining sector.

ii. Influence

The Ministry of Finance has a high influence with its political authority in formulating, implementing, monitoring, and evaluating policies related to the determination of the composition of taxes and non-taxes received by the central government and local governments from the mining sector. Since the era of regional autonomy the central government through the Ministry of Finance has issued policies related to the determination of the composition of taxes and non-taxes received by the central government and local governments in the mining sector.

The high influence of the Ministry of Finance as a regulator is the technical policy formulator in determining Revenue Sharing Fund producing regions as well as facilitators and evaluators in the preparation and evaluation of the performance of the tin mining sector. The Ministry of Finance politically

economically considers aspects of the importance of distribution the Revenue Sharing Fund function for the provincial and district districts of the city from the ecological and social aspects to the community and other interests.

The Ministry of Finance has an interest in carrying out regulation number 25 of 1999, in which the central government provided Revenue Sharing Funds based on certain percentages for the government, provincial and district governments. State revenues divided by these results include tax revenues including: (a) Land and Building Tax (b) Fees for Acquisition of Land and Building Rights (BPHTB), and (c) Personal Income Tax.

d. Ministry of Environment

Based on the results of the Ministry of Environment's analysis including key player stakeholders, stakeholders who have high interests and influence. The Ministry of Environment has an interest so that state, private, and community companies that carry out mining activities must pay attention to environmental management aspects.

i. Interests

The Ministry of Environment has environmental political interests so that all parties conducting tin mining activities must pay attention to environmental protection and management based on regulations. The Ministry of Environment has a role to formulate, monitor and evaluate the performance of state and private companies and the community in the mining and post-mining processes. One of the important things for the Company in its efforts is to always carry out company activities in accordance with applicable regulations, including in terms of the impact of company activities in the environmental field. The company has the authority to compile and practice the preparation of Environmental Impact Analysis (AMDAL) documents and environmental permits which are prerequisites that must be fulfilled by business actors to achieve sustainable development goals.

ii. Influence

The Ministry of Environment has a high level of importance and influence in formulating and implementing policies related to the preparation and implementation of environmental governance policies carried out by tin mining companies. Some legislative policies that have been issued by the

government related to environmental management must be obeyed by the company.

e. State Minister for State Owned Enterprises

The State Minister for State Owned Enterprise includes key player stakeholders, namely stakeholders who have high influence and high interests. The Ministry of SOEs has an interest so that state companies (PT. Timah) carry out tin mining activities can contribute to state revenues. The Ministry of BUMN also encourages state companies to collaborate with small businesses and conduct community development programs.

i. Interest

The State Minister for State Owned Enterprises has political and economic interests so that all state companies (PT. Timah Tbk) became the driving force in contributing to the state revenue from the tin mining industry. The Ministry of BUMN has the role to formulate, monitor and evaluate the performance of state enterprises so that they can play a strategic role in contributing to state revenues. The Ministry of BUMN also has an interest in encouraging state companies to realize good corporate governance practices in accordance with the principles of Good Corporate Governance (GCG).

ii. Influence

The State Minister for State Owned Enterprises has influence through political authority to formulate, implement, monitor, and evaluate policies related to good state corporate governance policies to realize Good Corporate Governance (GCG). Some legislative policies that have been issued by the government are related to the management of state companies that must be obeyed by mining companies.

The State Minister for State Owned Enterprises also seeks to increase the effectiveness of the success of the policies that have been formulated. The State Minister for State Owned Enterprises organizes various forms of activities such as seminars and training, socialization of legislative products, State Minister for State Owned Enterprises company FGD forums, meetings, socialization workshops, Integrated Enterprise Risk Management (IERM) Implementation workshops, State Minister for State Owned Enterprises Executive Club Workshop, State Minister for State Owned Enterprises Workers Media workshop.

f. Private Company (Smelter)

i. Interests

Smelter has a high level of importance and influence in the tin mining industry policy. Smelter as a private company has economic interests to maintain the sustainability of the company's business in the long term. The political interests of smelters are to comply with the regulations set by the central government and local governments in running the tin mining industry business. Smelter also has an interest in carrying out its obligations as a driving force for both national and regional revenues from tax and non-tax revenues from the tin mining sector.

In terms of meeting its production needs, the smelter company relies on the supply of tin ore produced by community mines to meet production needs. Thus, there is interdependence between the tin smelter companies as buyers with people's minds as the supply. However, the presence of a private tin smelter company has opened new jobs, in addition to opening up the people's mining business itself

ii. Influence

Smelter has a strong political and economic influence in the tin mining industry policy. The form of influence that the smelter has through the relationship between the company owner and the local government. Strong relations between the authorities and business due to the authority of the regional government to issue permits for the construction of smelters. Smelters generally have operating licenses from the district government and produce tin without a brand and / or with low quality, which is then exported and purified in Malaysia and Singapore

g. PT. Timah Tbk

i. Interests

PT. Timah Tbk has a high level of importance and influence. Tin companies have political, economic, business, social and environmental management interests. Politically and economically, the company seeks to maintain the business continuity of the company in order to be able to carry out the political mandate of policy as a driving force for national income from tax and non-tax revenues obtained from the tin mining sector. This contribution is given

through, Taxes (Income Tax, VAT), PBB, Royalties, IUP contributions, Production Contributions, Dividends and Stamp Duty.

For regional governments, the presence of tin companies with social interests has a significant contribution to improving the regional economy, especially in terms of revenue sharing from general mining taxes and good employment that are directly related to mining activities and follow-up activities from the presence of tin companies.

ii. Influence

PT. Timah Tbk is the largest company that has the authority to manage tin natural resources in the Bangka Belitung Islands Province. As a state company, PT. Timah is responsible for maintaining the company's business sustainability. In addition, the company also has influence through its political authority to implement and supervise all policies set by the central government. Therefore, changes in laws and regulations greatly influence the company and its impact on the company's financial statements.

The tin company is the largest state-owned enterprise that manages tin mining in Bangka Belitung Islands Province. The existence of PT Timah Tbk. As a state company, it is expected to be able to improve the standard of living and people's welfare in Bangka and Belitung. In addition to obtaining the authority to carry out mining activities, the company is given a regulation on land tenure with the Mining Authority. The ownership of PT Timah's mining authority in the area of Bangka Island reaches 360,000 hectares (which means 35% of the total area of Bangka Island). Whereas Belitung Island covers an area of 57,470.25 hectares (30% of the area of Belitung Island) [6].

h. PT. Koba Tin

i. Interests

PT. Koba Tin has a high level of importance and high influence. The company has rights and obligations in implementing central government policies related to interests as a driving engine for national income from both tax and non-tax revenues from the tin mining sector.

PT. Koba Tin has an interest in maintaining the company's business continuity. The company as the mining authority holder is obliged to pay PNBK to the state in the form of fixed contributions, exploration fees and / or exploitation contributions and payments related to the mining authority

concerned. The mining authority holder must deposit all PNBP directly to the state treasury.

ii. Influence

The Koba Tin Company is the largest private company that has the authority to manage tin natural resources in the Bangka Belitung Islands Province. PT. Koba Tin is one of the partners of PT. Timah Tbk where 7% of the total IUP determined by the Government is controlled by PT Koba Tin. As a private company, PT. Koba Tin is collegially responsible for maintaining the company's business continuity. In addition, the company also has influence through its political authority to implement and supervise all policies set by the central government.

i. Tin Collectors

i. Interests

Tin collectors have a high degree of importance and influence on the tin mining industry. The tin collector has an interest in buying the results of community mining activities for personal interests, community miners and state and private tin companies.

ii. Influence

There were significant changes in the situation that occurred in tin mining in Bangka Belitung Island Province. In 2000, a portion of the community en masse uncontrolled mining in the PT.Timah mining authority with simple, small-capacity equipment in PT.Timah's reserves.

j. Tin Mining Association

i. Interests

The tin mining association has a high level of importance and influence on the tin mining industry. This association has an interest in maintaining the business continuity of their company. They articulate their business interests through the formation of associations. This group has a fairly extensive network and tends to develop its activities from other types of interest groups such as with community miners.

ii. Influence

In an effort to safeguard its interests, this association group has polarized interests. The owner of the association has a smelter company trying to

maintain the sustainability of their business. This is because the source of their tin production is very dependent on the people's mining business. While on the other hand, the mining community is very dependent on the smelter company to distribute tin mining products. The community sells tin mining products to smelters rather than to PT. Tin because of the higher price.

B. Interest and Effect of Stakeholders Subject

Local government agencies such as the Provincial Government of Bangka Belitung Islands, district / city governments, community miners, groups of fishermen, community miners, and the general public are included in the category of subject stakeholders, namely stakeholders who have high interests but have low influence in the tin mining industry policies.

a. Provincial Government of the Bangka Belitung Islands Province

i. Interests

The government of Bangka Belitung Islands Province has economic, political, social and environmental interests in the tin mining industry. In consideration of the Regional Regulation of the Bangka Belitung Islands Province Number 3 of 2004 concerning Management of General Mining Business, it states that management and utilization need to be developed for the welfare of the community so that balance and harmony between aspects of mining, occupational safety and health and the environment are continuously achieved. Management of mining business can be taken through the establishment of territories with authority as mining business areas, so that the impact is very positive on the efforts of people's welfare, which at the same time will increase Regional Original Income (PAD). Thus, the interests of managing the tin mining business for the Provincial Government of the Bangka Belitung Islands Province are also directed to be able to protect and maintain in the efforts of mining activities that are sustainable and environmentally sound.

ii. Influence

The Provincial Government of the Bangka Belitung Islands Province has a low level of influence. The Provincial Government of Bangka Belitung Islands Province has political influence through its authority to formulate, implement, monitor, and evaluate regional regulations related to efforts to preserve the environment, determine the composition of taxes and non-taxes received by

local governments from the mining sector. The Government of Bangka Belitung Islands Province seeks to make tin mining a significant contribution to regional development.

b. Regional Governments in the Bangka Belitung Islands Province

i. Interests

Regional governments in the Bangka Belitung Islands Province are concerned that the tin mining industry provides economic, social and environmental benefits to local governments. Taxes and various revenues from tin mining contributions will increase regional income. As for the district community, tin mining will also increase new jobs. In addition to the activities of state-owned companies, tin mining is also accompanied by the establishment of smelter companies built in various districts / cities which are expected to be able to increase Original Local Government Revenue and will be able to absorb formal workers from the Bangka Belitung Islands Province.

ii. Influence

Local governments have influence in the policies of the tin mining industry through political authority to formulate and implement regional regulations in the tin mining sector. Local governments have an influence in managing tin mining policies after changes in the national political map that have impacted changes in regional governance.

c. Miners Community

i. Interests

The mining community has a high level of importance but its influence is low in the tin mining industry policy. The mining community has an interest in carrying out small-scale mining activities in the mining concession area owned by the tin company and outside the mining company owned by the tin company to make ends meet.

ii. Influence

The tin mining community has an influence in carrying out mining activities based on regulations set by the central government and local governments. The existence of unconventional tin mines, better known as TI, began in 1998 after the May 1998 riots in Jakarta where many Chinese people who went to Bangka became unemployed. Bangka Regent asks PT. Timah to allow the community to mine in part of the mining concession area that has been abandoned. As a consequence, people have to sell tin sand only to PT. Lead.

The IT activity has become increasingly widespread since the issuance of the Minister of Industry and Trade Decree Number. 146 / MPP / Kep / 4/1999 dated 22 April 1999 that Tin is categorized as free goods (unattended) and revocation of tin status as a strategic commodity, so that it is no longer monopolized by one BUMN and can be exported freely by anyone.

d. Fishermen Society

i. Interests

The fishing community has a high level of importance but has a low influence on the tin mining industry. The fishing community has an interest in managing marine products to meet their daily needs. However, due to mining activities in the sea area has caused disruption to the income of fishermen.

ii. Influence

These fishing communities have a low but high importance. In an effort to safeguard its interests, several groups of fishermen made agreements and actions against the presence of mines in their catchment area. The community asked the government and tin companies to stop and not issue mining permits in the sea area.

Tin mining activities carried out by PT. Floating tin and unconventional mines have caused protests by fishing communities in the mining area. These protests were carried out by fishermen because mining activities have caused a decline in fishermen's catches.

e. Local Communities

i. Interests

From the local community, those who supported tin mining activities were found in village elites and village government apparatus. The attitude tendency of the village elites is usually followed by local villagers who get direct benefits from tin mining activities in the village area. This support is related to compensation given by company partners and by tin companies to the village government as income for the village government. The amount of compensation funds is determined based on an agreement between the village elite and the tin company. The proceeds provided by the company and the smelter are used for physical and social development activities.

On the other hand, rejection and opposition to tin mining activities emerged from local community groups who deliberately developed forms of

organization to mobilize refusal actions. This movement of community groups is supported by non-governmental organizations (NGOs). One group that openly rejects mining activities is the people who do not receive compensation in the form of money. Opposing groups consider compensation not to provide long-term benefits and detrimental to their daily income. Mining operations on marine areas assessed by local residents can damage the environment and marine habitats that influence the reduction in catches of people who work as fishermen.

f. Indonesian Forum for the Environment (WALHI)

i. Interests

Based on interviews with the chairman of WALHI Province of Bangka Belitung that WALHI has an interest in preserving the environment due to tin mining activities. According to WALHI, the tin mining industry has caused environmental damage on land and at sea. The government and companies lack adequate controls to minimize environmental damage, resulting in insecure quality of environmental management especially carried out by unconventional miners, which is caused by the two companies not having concrete and holistic-systemic steps that are able to overcome the complexity of unconventional mining problems in the areas of Mining Authority that they manage, as well as weak supervision from companies and local government

ii. Influence

WALHI is an environmental organization that conducts an environmental campaign that works with fishing communities directly affected by tin mining. The campaign movement was carried out by conducting demonstrations in the field as well as going directly to the location of mining activities in the coastal marine mining area. The results of the movement are published on the internet so that they can be accessed by all people at the local, national and international levels.

g. Law Enforcement

i. Interests

Law enforcement has an interest so that industrial activities in tin mining management are carried out based on regulations set by the government to create conducive conditions in the region. This effort cannot be separated from the performance of law enforcement officers. Law enforcement officials are the actual motorized drivers of the implementation of all the tin mining industry development policies in the Bangka Belitung Islands Province.

ii. Influence

The problem that arises related to the tin mining policy is the emergence of mining without permission. Community mining activities without this permit have had a broad negative impact, namely environmental damage including the presence of critical lands, under-land and ex-mining land, illegal mining, smelters without sources of production, tin smuggling, and unclear environmental management commitments, labor accidents, and management of associated minerals containing radioactive elements.

C. Interests and Influence of Crowd Stakeholders

Colleges, Indonesian Forum for the Environment (WALHI), and Non-Governmental Organizations Community stakeholders are stakeholders who have high interests but have low influence on the tin mining industry policies.

a. Universities

i. Interests

Universities are stakeholders who have a low level of importance and influence. Universities have an interest in dedicating their knowledge to practice the Tri Dharma of Higher Education. In the tin mining industry policy, the role of universities is to conduct research, service and policy advocacy to the public and the government.

ii. Influence

Higher education has low importance and influence related to the tin mining industry policy. This is because all policies in the mining sector are owned by the central government. Higher education is one of the nation's moral strengths having the obligation to play an active role in contributing both in the form of thoughts and concrete actions for the progress of the nation. In accordance with the mission that the university wants to develop through the

Tri Dharma College which covers the fields of education, research, and community service, all of which lead to the goal of progress for the community.

b. Advocacy Institutions and Private and Government Professional Organizations

i. Interests

Advocacy institutions and private professional organizations and governments are stakeholders who have a low level of importance and influence. This organization has a concern for tin mining policies that adopt goals for achieving development and people's welfare. The role of this organization is the publication of research results in print and electronic media and influencing the government through the delivery of research results for government decision-making materials in the tin mining sector. The issue of tin mining has entered an alarming condition due to mining activities that are not managed properly. Policies made by the central government and local governments should not marginalize the interests of the general public and the environment. Critics from various NGOs and CSOs about the government were unable to dampen tin mining activities. The tin mining policy should need to be looked at comprehensively considering that all the policies of the regional and central government must always prioritize the principle of benefits for the community and the environment.

ii. Influence

Advocacy institutions and private professional organizations and governments are stakeholders who have a low level of importance and influence. This organization is involved in the ITRI and CIRESS, JATAM, and ICW tin mining sectors. Print and electronic media organizations convey information to the public regarding the production and income of tin companies, tin mining activities and the marketing process of tin. The concern of the mass media is shown by the intensity of the news regarding tin smuggling that occurred in Bangka Belitung, environmental damage carried out by tin mining in prohibited areas such as protected forest areas, production forests, coastal areas, residential areas, watersheds and so on. This information is material for interested parties to carry out monitoring and evaluation to be followed up as material for policy making.

c. Mass Media

i. Interests

Print and electronic media consisting of local and national media are stakeholders who have a low level of importance and influence. The media has an interest in conveying information to the public about various tin mining activities in the Bangka Belitung Islands Province.

ii. Influence

The media plays an important role in conveying development information so that it can be known to the public. Various local media including national contributes in conveying information about tin mining activities. Publications submitted by the media can be known by local and national governments as well as other interested parties to be subject to evaluation. Tin mining activities in Bangka Belitung have had a wide impact both in the environmental, social, economic and political fields. The role of the local press is not only to disseminate information about the activities and impacts of tin mining activities in influencing the social, political and economic climate in Bangka Belitung Island Province. In addition, the press has also become an important part of overseeing the performance of various interest groups in carrying out their functions and duties. Almost every time the newspapers photograph about the effects of environmental damage, labor accidents, tin smuggling. This information is an important material for interest groups to be a follow-up material for the interests of development and people's welfare.

V. CONCLUSIONS

Polarization of interests between the central government and local governments concerning the proportion of Revenue Sharing Funds. The Ministry of Finance has a high interest and influence so that the tin mining industry contributes significantly to state revenues. The central government has the authority to determine Revenue Sharing Fund through Law No.33 of 2004 concerning Financial Balance between Central and Regional Governments. Revenue Sharing Fund for the regional government can contribute to the development and welfare of the people. Local governments have a high degree of importance towards and a low influence on the fair distribution of Revenue Sharing Fund between the central government and regional governments.

Polarization of interests between the regional government and WALHI, NGOs, universities, media with PT. Tin is related to environmental damage. Tin companies and foreign investors have a high interest and influence to conduct mining because the ownership of Mining Authority is supported by the central government. Local governments, WALHI, and NGOs have high interests but do not have a strong influence.

Polarization of interests between regional governments and smelters related to taxes and contributions, and environmental management. Smelter has an interest in carrying out exploration, reclamation and tax payments. Local governments have an interest in getting tax revenues and post-mining environmental management. In this case, the local government has high interests and low influence. While the smelter has high importance and high influence.

Polarizing the interests of the mining community with tin companies related to community livelihoods. The tin company has an interest in safeguarding the potential of tin reserves in the mining authority. The community has an interest in making ends meet through mining activities. The company has high interests and high influence. While the community has high interests and low influence.

Polarizing the interests of the smelter and tin company related to tin mining power and the price of buying and selling tin. The smelter has a business continuity interest, the company can play an important role in contributing to state and regional income. The tin company has a high importance and influence through the authority to carry out production and exploration activities and the marketing of tin commodities. Conflict occurs when the smelter company buys tin from the community from mining in the tin mining power. In this case the smelter has a high interest and low influence. While tin companies have high influence and importance.

Polarization of interests between the provincial and district/city governments with companies related to livelihoods and community access to tin. The Bangka Belitung Islands Provincial Government has an interest so that tin natural resources can contribute to the local government and the welfare of the community. The Provincial Government of Bangka Belitung Islands has a high interest and low influence through the authority to issue governance policies related to tin mining in Bangka Belitung and lobby to the Central Government so that natural resources can play an important role for local government and community welfare

Polarization of interests that occur between fishing communities and tin companies related to community livelihoods. The fishing community has an interest in safeguarding sea damage which has an impact on the decline of community income. The tin company has an

interest in increasing tin production through marine mining activities owned by the company's Mining Authority. In this regard, the company has high interests and high influence. Whereas fishermen communities have high importance but low influence.

Polarization of interests that occur between law enforcement officials and the mining community is related to illegal mining activities. Law enforcement officials have an interest so that tin natural resource management is carried out in accordance with the regulations set by the central government. While the mining community has an interest in fulfilling living needs. Law enforcement has high importance and low influence. Whereas the mining community has high importance and low influence.

Polarization of interests between tin companies and foreign investors with universities and the media related to issues of environmental damage and public welfare. Universities and media are independent institutions that have an interest so that mining activities pay attention to environmental sustainability and community welfare. The company has an interest in the company's business sustainability. Related to this, universities and media have low interests and influence through publications, advocacies and research activities.

REFERENCES

- [1] Kementerian Energi dan Sumber Daya Mineral, Kajian analisis isu-isu sektor ESDM. Jakarta: Kementerian Energi dan Sumber Daya Mineral, 2012.
- [2] PT. Timah Tbk., Laporan tahunan PT. Timah 2001. Pangkalpinang, 2001.
- [3] PT. Timah Tbk., Laporan tahunan PT. Timah 2002. Pangkalpinang, 2002.
- [4] PT. Timah Tbk., Laporan tahunan PT. Timah 2011. Pangkalpinang, 2011.
- [5] PT. Timah Tbk., Laporan tahunan PT. Timah 2012. Pangkalpinang, 2012.
- [6] PT. Timah Tbk., Laporan tahunan PT. Timah 2013. Pangkalpinang, 2013.
- [7] PT. Timah Tbk., Laporan tahunan PT. Timah 2003. Pangkalpinang, 2003.
- [8] PT. Timah Tbk., Laporan tahunan PT. Timah 2004. Pangkalpinang, 2004.
- [9] PT. Timah Tbk., Laporan tahunan PT. Timah 2005. Pangkalpinang, 2005.
- [10] PT. Timah Tbk., Laporan tahunan PT. Timah 2006. Pangkalpinang, 2006.
- [11] PT. Timah Tbk., Laporan tahunan PT. Timah 2007. Pangkalpinang, 2007.
- [12] PT. Timah Tbk., Laporan tahunan PT. Timah 2008. Pangkalpinang, 2008.
- [13] PT. Timah Tbk., Laporan tahunan PT. Timah 2009. Pangkalpinang, 2009.
- [14] PT. Timah Tbk., Laporan tahunan PT. Timah 2010. Pangkalpinang, 2010.

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- [15] Humpreys, M, J. . Sachs, and J. . Stiglitz, Escaping resource curse. New York: Columbia University Press, 2007.
- [16] A. Bebbington and J. Bury, "Institutional challenges for mining and sustainability in Peru," Proc. Natl. Acad. Sci., vol. 106, no. 41, pp. 17296–17301, 2009.
- [17] D. Acemoglu, Root causes: A historical approach to assessing the role of institutions in economic development. USA: World Bank, 2003.
- [18] World Bank, Mining: World Bank support to mining sector reform. Washington DC: World Bank, 2012.
- [19] World Bank, Mining: IDA support to mining sector reform. Washington DC: World Bank, 2010.
- [20] World Bank, Mining and local economic development. Washington DC: World Bank, 2008.
- [21] G. McMahon, The World Bank's evolutionary approach to mining sector reform. Washington DC: World Bank, 2010.
- [22] M. Sumardjono, Pengaturan sumber daya alam di Indonesia antara yang tersurat dan tersirat. Yogyakarta: Gadjah Mada University Press, 2011.
- [23] Asian Development Bank, From dependency to sustainability: A case study on the economic capacity development of the Ok Tedi mine-area community. Metro Manila, The Philippines: ADB Publication, 2008.
- [24] J. Rigg, No Title. London: Routledge, 1997.
- [25] World Bank, Innovative approaches for multi-stakeholder engagement in the extractive industries. Washington DC: World Bank, 2013.
- [26] World Bank, The local economic impacts of resource abundance: What have we learned? Washington DC: World Bank, 2015.
- [27] A. Dixit, G. M. Grossman, and F. Gul, "The dynamics of political compromise," J. Polit. Econ., vol. 108, no. 3, pp. 531–68, 2000.
- [28] R. E. Freeman, Strategic management: a stakeholder approach. Massachusetts: Pitman, 1984.
- [29] M. S. Reed et al., "Who's in and why? A typology of stakeholder analysis methods for natural resource management," J. Environ. Manage., vol. 90, no. 5, pp. 1933–1949, Apr. 2009, doi: 10.1016/j.jenvman.2009.01.001.
- [30] D. C. North, "Institutions and economic growth: An historical introduction," World Dev., vol. 17, no. 9, pp. 1319–1332, Sep. 1989, doi: 10.1016/0305-750X(89)90075-2.
- [31] D. C. North, Institutions, institutional change and economic performance. Cambridge: Cambridge University Press, 1990.
- [32] L. Arsyad, Ekonomi pembangunan. Yogyakarta: UPP STIM YKPN, 2010.

- [33] M. Kuncoro, *Ekonomika pembangunan: Masalah, kebijakan dan politik*. Jakarta: Erlangga, 2010.
- [34] S. Parto, "Economic activity and institutions: Taking Stock," *J. Econ. Issues*, vol. 39, no. 1, pp. 21–53, 2003.
- [35] A. Vatn, *Institutions and the environment*. Cheltenham: Edward Elgar, 2005.
- [36] J. M. Bryson, "What to do when stakeholders matter: Stakeholder identification and analysis techniques," *Public Manag. Rev.*, vol. 6, no. 1, pp. 21–53, 2004, doi: 10.1080/14719030410001675722.
- [37] R. Brugha and Z. Varrasovsky, "Stakeholders analysis: A review health policy and planning," vol. 15, no. 3, pp. 239–246, 2000.
- [38] N. Bowie, "The moral obligations of multinational corporations," in *Problems Of International Justice*, Boulder, CO: Westview Press, 1988, pp. 97–113.
- [39] R. E. Freeman and D. L. Reed, "In vitro assessment of antimicrobial potency and synergistic effects of three medicinal plants (*Mentha arvensis*, *Carissa carandas* and *Calendula officinalis*) extract against pathogenic bacteria," *Calif. Manage. Rev.*, vol. 25, no. 3, pp. 93–94, 1983, doi: 10.5897/ajmr2014.7057.
- [40] M. B. E. Clarkson, "A stakeholder framework for analyzing and evaluating corporate social performance," *Acad. Manag. Rev.*, vol. 20, no. 1, pp. 92–117, 1995.
- [41] R. E. Freeman and W. M. Evan, "Corporate governance: A stakeholder interpretation," *J. Behav. Econ.*, vol. 19, pp. 337–359, 1990.
- [42] C. W. L. Hill and T. M. Jones, "Stakeholder agency theory," *J. Manag. Stud.*, vol. 29, no. 2, pp. 131–154, 1992, [Online]. Available: <http://dx.doi.org/10.1016/j.jcae.2013.11.002> <https://doi.org/10.1080/10978526.2018.1540935> <https://doi.org/10.1016/j.intaccudtax.2018.03.002> www.econjournals.com <https://doi.org/10.1016/j.bar.2017.09.008> <http://0-proquest.umi.com.library.ecu.edu>
- [43] T. Donaldson, L. E. Preston, and L. E. E. E. Preston, "Theory the stakeholder of the concepts, evidence, corporation, and implications," *Acad. Manag. Rev.*, vol. 20, no. 1, pp. 65–91, 1995, [Online]. Available: <http://www.jstor.org/stable/258887>.
- [44] World Bank, *Issue brief series: Communities, artisanal and small-scale mining (CASM)*. Washington DC: World Bank, 2008.
- [45] G. McMahon, *The Afghanistan mining sector as a driver of sustainable growth: benefits and opportunities for large-scale mining*. Washington DC: World Bank, 2010.
- [46] J. Strongman, "Mining and the community--From enclave to sustainable development," *Proc. a Conf. Organ. by World Bank, Met. Min. Agency Japan*, vol. July, 1998.

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- [47] R. Grimble and K. Wellard, "Stakeholder methodologies in natural resource management: A review of principles, contexts, experiences and opportunities," *Agric. Syst.*, vol. 55, no. 2, pp. 173–193, 1997, doi: 10.1016/S0308-521X(97)00006-1.
- [48] M. Kuncoro, *Dasar-dasar ekonomika pembangunan*. Yogyakarta: UPP STIM YKPN, 2010.
- [49] R. Mason and I. Miroff, *Challenging strategic planning assumption*. New York: John Wiley & Sons Ltd., 1981.
- [50] G. Walt, *Can interest group influence government policy? Health policy: An introduction to process and power*. London: Zed Publication, 1994.
- [51] K. Schmeer, "Conducting a stakeholder analysis health reform tools series," *Policy Toolkit Strength. Heal. Sect. Reform*, vol. 2, p. 42, 1999.
- [52] B. Enserink, L. Hermans, J. Kwakkel, W. Thissen, J. Koppenjan, and P. Bots, *Policy analysis of multi-actor systems*. Lemma: The Hague, 2010.
- [53] World Bank, *Reshaping economic geography: World development report*. Washington DC: World Bank, 2009.
- [54] L. J. Moleong, *Metodologi penelitian kualitatif*. Bandung: PT. Remaja Rosdakara, 2007.
- [55] M. Q. Patton, *Qualitative research and evaluation methods (3rd ed.)*. Thousand Oaks: CA: Sage, 2002.
- [56] Direktorat Jenderal Mineral dan Batubara Kementerian Energi dan Sumber Daya, *Direktorat Jenderal Mineral dan Batubara Kementerian Energi dan Sumber Daya Mineral*. Jakarta: Kementerian Energi dan Sumber Daya Mineral., 2015.

The Analysis and Implementation of Psak 71 (Ifrs 9): Financial Instruments at PT X for the Year 2019

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Abstract

PSAK 71 was issued by the Indonesian Accounting Standard Board (DSAK-IAI), as an adaptation of IFRS 9: Financial Instruments to replace the old accounting for financial instruments standard, PSAK 55 (IAS 39). The new accounting standard is implemented in Indonesia effective from January 2020. "PT X" is a private company in Indonesia that runs in the heavy equipment industry and was chosen to be the research subject. This research is conducted to identify the financial impacts arised from PSAK 71 (IFRS 9) implementation towards Statement of Financial Position, Income Statement and Statement of Cash Flow of PT X in 2019 compared to the previous accounting standard PSAK 55 (IAS 39).

The result of this research shows that there is no significant impact towards PT X financial statements, specifically its Statement of Financial Position, Income Statement and Statement of Cash Flow.

Keywords: PSAK 71, IFRS 9, Accounting for Financial Instruments, Expected Credit Losses, Impairment, Financial Statements.

I. INTRODUCTION

The heavy equipment demand of a country is massively affected by its economic growth and development. With the increasing demand of heavy equipment in the market and the complexity of the heavy equipment business as it is commonly highly cyclical and capital-intensive, the capital management in the heavy equipment industry is important. Financial instruments, which have an ability to increase a company's financial asset, are one of the ways of effective capital management. Financial instruments are defined as cash, an ownership interest or a contractual right to receive or obligation in form of cash or other financial instruments (Kieso, Weygandt, and Warfield, 2016: 226). It can be used to finance and often to expand the entities' operation by selling their equity securities and debt securities (Spiceland, Sepe and Nelson, 2013)

However, the accounting treatment for financial instruments has been criticized for being too complex and not fit to the real business requirement (HUIAN, 2019). Not only that, reflecting on the 2008 financial crisis, the old accounting standard uses backward looking, rather than forward looking which often lacks anticipation and the provision recognition is "too little and too late". To answer the criticisms, the International Accounting Standard Board (IASB) replaced IAS 39 Financial Instruments: Recognition and Measurement with International Financial Reporting Standard 9 (IFRS 9) Financial Instruments. Indonesia adapted the new change in regulation with PSAK 71, replacing the PSAK 55 as the old regulation.

PSAK 71 brings major changes to: (1) classification & measurement (2) impairment (3) hedge accounting. However, as noted by the Indonesian Accountants Association (IAI) the most significant impact due to this change is the method in determining the provision for loan impairment (IAI, 2016).

Major companies will be facing significant impacts to their financial reports as the result of the replacement of the standard, including PT X, one of a heavy equipment company dealers in Indonesia. These companies are required to provide more provisions on their financial assets, receivables and other types of investments, moreover on the perspective of financial assets including receivables, investments, long term loans and equity investments. It is important for a firm to understand the new standard and the affected areas in order to do better in financial planning and to be successful in adapting to the changes. With sufficient planning, however, the changes that PSAK 71 brings might enhance the efficiency of the financial reporting process, minimizing costs and provide a great opportunity for balance sheet optimization. It is strongly believed that through the changes in the regulation, there will be an

improvement of the quality of the financial information provided. At the end, this will bring mutual benefits to the investors as they gain more trust towards the company.

This research is conducted to see the implementation of the new standard established, PSAK 71: Financial Instruments in convergence of IFRS 9, at PT X, a heavy equipment company dealer in Indonesia in 2019 that used the old accounting treatment for financial instruments standard, the PSAK 55 or IAS 39.

Therefore, the main objectives of this research are:

(1) To identify the financial impact towards the assets, liabilities and equity in the Statement of Financial Position if PT X had implemented PSAK 71 (IFRS 9) in year 2019 and analyzed the comparisons of the actual outcomes.

(2) To identify the financial impact towards the earnings before income tax (EBIT), Net Income and Other Comprehensive Income in the Income Statement if PT X had implemented PSAK 71 (IFRS 9) in year 2019 and analyze the comparisons of the actual outcomes.

(3) To identify the financial impact towards the Statement of Cash Flow if PT X had implemented PSAK 71 (IFRS 9) in year 2019 and analyze the comparisons of the actual outcomes.

II. LITERATURE REVIEW

A. PSAK 71: "Instrumen Keuangan" & IFRS 9: "Financial Instruments"

IFRS 9: Financial Instruments (equivalent to PSAK 71) is the replacement of IAS 39 "Financial Instruments: Recognition and Measurement" (equivalent to IAS 39). As an adaptation of the international accounting standard, the Indonesian Accountants Association's Standards Board created Indonesian Financial Accounting Standards (PSAK) 71, which is effective on January 1, 2020.

The purpose of PSAK 71 (IFRS 9) is to present useful and relevant financial information to the user so that they can make better assessment regarding the timing, monetary value and the uncertainty of entities' future cash flows especially to financial assets and liabilities (IASB, 2016, p. 5). Under PSAK 71, the impairment method requires entities to measure the loss allowance equal to lifetime expected credit losses (ECL) for all financial instruments with significant increases in credit risk have existed at the date of initial recognition.

B. Overview in Changes

One of the key changes in the accounting for financial instruments, refers to the shift in IAS 39 which was a rules-based standard to certain principles in IFRS 9 which is a principle-based standard and PSAK 71 is adapted to this change. PSAK No. 71 uses the expected loss method to establish provision for a possibility of change in credit risk estimation due to changes in conditions that will decline in the future (IAI, 2016). Therefore, PSAK 71 (IFRS 9) is made with an objective to establish principles to report financial assets and financial liabilities that will print useful and relevant information to financial statement users for the assessment of the entity's future cash flow. Any financial instrument that is in-line with PSAK 50 "Financial Instruments", PSAK 55 "Financial Instruments: Measurement and Recognition" and PSAK 60 "Financial Instruments: Disclosure" or as regulated in IAS 39 are included in the scope of PSAK 71 (IFRS 9). In general, the standard covers all types of financial instruments, including payables, receivables, investments both in bonds or shares, derivatives and certain purchase or sale contracts of non- financial assets that can be settled in cash or other types of financial instruments. (PricewaterhouseCoopers, 2018).

In summary, the overview of comparison between PSAK 55 (IAS 39) and PSAK 71 (IFRS 9) can be seen on the table below:

Table 2.1: Differences between PSAK 55 (IAS 39) and PSAK 71 (IFRS 9).

Source: Huian (2012).

Category	PSAK 55 (IAS 39)	PSAK 71 (IFRS 9)
The purpose of the standard	The change will apply to all financial assets with a few exceptions	Same treatment applied.
Initial assets recognition	Happen at the time when an organization becomes a party to the contractual provisions	Same treatment applied.
Initial measurement	The fair value including transaction costs (not held for trading purposes)	Same treatment applied.

Subsequent Measurement	The fair value. The amortized cost value. Costs	Amortized Cost, Fair Value Through Other Comprehensive Income (FVOCI), Fair Value Through Profit & Loss (FVPL)
Types of Classification	Fair value through profit loss (FVTPL), Held-to-Maturity, Loans and Receivables, Available for Sale	Amortized Cost, Fair Value Through Other Comprehensive Income (FVOCI), Fair Value Through Profit & Loss (FVPL)
Equity Instruments	All equity instruments available for sale, are classified at “fair value through other comprehensive income”.	The fair value of the instrument for trading purposes. The irrevocable choice for the category through other comprehensive income.
Impairment	Several models of impairment. Model incurred losses	A unified model of impairment, which applies to all financial instruments. The model of expected credit loss.

a. Classification and Measurement

PSAK 71 (IFRS 9) introduces a two-step approach in classifications of all types of financial assets, which are either measured at fair value or amortized cost depending on the “business model test” and the “contractual cash flow test” to determine whether these financial instruments are measured at fair value or amortized cost. Financial assets are held in order to collect contractual cash flows. The business model of an entity is determined based on how a group of financial assets is managed together to

achieve a business goal. In accordance with PSAK 71 (IFRS 9), there is a necessary condition in classifying loans or receivables at Amortized Cost or FVOCI. This can be done by determining whether the financial asset is a part of a group or portfolio that is held by the management which the objective can differ whether to collect contractual cash flows only or to collect contractual cash flows and to sell. The classification between these objectives vary; the financial assets that are held to provide contractual cash flows is measured at Amortized Cost, whereas if the financial assets are held to both provide contractual cash flows and to sell is measured at FVOCI. If neither, it will be measured at FVPL.

The 3 main measurement categories for financial assets are:

Amortized Cost

According to PSAK 71 (IFRS 9); Financial asset is measured at amortized cost if the financial asset is held with an objective to collect the contractual cash flows ("hold-to-collect") and the terms of the contractual financial asset can give rise to cash flow that are solely payment of the interest and principal on the outstanding principal amount, based on the SPPI criterion. In addition, the amortized cost category is subjected to impairment and its gain or loss measured at amortized cost should be recognized when the instrument is derecognized or reclassified.

Fair Value through Profit or Loss (FVPL)

According to PSAK 71(IFRS 9); Financial asset is measured at Fair Value through Profit or Loss (FVPL) if the financial asset is not measured at amortized cost nor Fair Value through Other Comprehensive Income (FVOCI). Additionally, companies may also designate FVTPL financial assets under the fair value option to reduce accounting mismatch from liabilities measurement and recognition.

Fair Value through Other Comprehensive Income (FVOCI)

According to PSAK 71 (IFRS 9); Financial asset is measured at fair value through other comprehensive income (FVOCI) if the financial asset is held with an objective to collect the contractual cash flows and selling financial

b. Impairment

Impairment rules has to be one of the topics that received most criticisms in financial instruments. The current accounting model is considered too slow in recognizing

potential losses that may arise as it only recognized the provision after the events had occurred. The new standard requires "reasonable and supportable" forward-looking information to consider and take into consideration. Namely under PSAK 71 (IFRS 9), the recognition of impairment losses in the financial statement should be made on the more complete information basis (PricewaterhouseCoopers, 2019).

Expected Credit Loss

In accordance with PSAK 71 (IFRS 9), expected credit losses are defined as a probability-weighted estimated amount of cash shortfall on the financial instrument. Expected credit loss model is prepared due to the fact that every loan and receivable has some risk of defaulting in the future and must be recognized from the moment of the acquisition of the assets/liabilities itself. This method contains a new impairment model resulting in earlier recognition of losses, known as expected credit loss model (PricewaterhouseCoopers, 2014).

Table 2.2 Comparison of PSAK 55 (IAS 39) and PSAK 71 (IFRS 9): Incurred vs Expected Credit Loss. Source: PT Ernst & Young Indonesia (2019)

	Probability of Default (PD)	Exposure at Default (EAD)	Loss Given Default (LGD)
PSAK 55 (IAS 39) Incurred Loss	Portfolio Allowances	Balance Sheet Exposure	DCF & Collateral
	What is the probability that a counterparty has defaulted?	What is our exposure today?	How much of this are we likely to lose?
PSAK 71 (IFRS 9) Expected Credit Loss	Future Loss	Future Performance	DCF & Collateral
	What is the probability that a counterparty will default?	What will be our exposure at this point of time?	How much of this will we likely to lose?

In this case, PSAK 71 (IFRS 9) uses where the institution's loan book is reserved for using three phases of credit deterioration which is majorly known as the 'three-bucket' model.

Table 2.3 Three-bucket Model Source: PricewaterhouseCoopers (2014)

Change in Credit Quality Since Initial Recognition		
Recognition of expected Credit losses		
12 month ECLs	Lifetime ECLs	Lifetime ECLs
Interest Revenue		
Effective Interest/Profit on Gross Carrying Amount	Effective Interest/Profit on Gross Carrying Amount	Effective Interest/Profit on Amortised Cost Carrying Amount (ex. net of credit allowance)
Stage 1	Stage 2	Stage 3
Performing (Initial Recognition)	Under Performing (Significant increase in credit risk since initial recognition)	Non-performing (Credit impaired assets)

C. Hedge Accounting

Hedge accounting is defined as rules that were set to prevent entities that use hedging instruments from unjustifiable financial or economic variances in earning volatilities (Bernhardt, Erlanger and Unterrainer, 2014). The application of hedge accounting is an optional alternative as the previous regulation. The overall structures and requirements regulated in PSAK 71 (IFRS 9) is adapted from PSAK 55 (IAS 39). However, PSAK 71 allows the application of hedge accounting in more circumstances compared to the old regulation. Additionally, based on Ernst & Young (2014), PSAK 71 requires the external parties to participate in the financial instruments, this means that it is allowable for entities to recognize additional hedging items, such as: assets or liabilities, firm commitments that are unrecognized and highly probable forecast transactions and net investments in foreign operations.

III. RESEARCH METHOD

This research will be conducted specifically at a company in Jakarta that runs a business in a heavy equipment industry. The company used PSAK 55 (IAS 39) accounting standards for financial instruments. The reason for choosing this company is due to the availability of information and the company criteria is in accordance with the concept of the case study. The sample that will be taken for this research is PT X's company financial data, including Statements of Financial Positions, Income Statement and Statement of Cash Flow of the year 2019.

As mentioned previously, the independent variable of this search is PSAK 71 (IFRS 9) - Financial Instruments, whereas the dependent variables are the Income Statement, Statement of Cash Flow, and Statement of Financial Position from the year 2019. The dependent variables mentioned will be the main outcome to make the conclusion of the research.

There are 3 hypotheses mentioned:

- H1: The implementation of PSAK 71 (IFRS 9) will make significant changes towards the Statement of Financial Position of PT X in comparison to the company's current method.
- H2: The implementation of PSAK 71 (IFRS 9) will make significant changes towards the Income Statement of PT X in comparison to the company's current method.
- H3: The implementation of PSAK 71 (IFRS 9) will make significant changes towards the Statement of Cash Flow of PT X in comparison to the company's current method.

IV. RESULT & ANALYSIS

A. Implementation of PSAK 71 (IFRS 9)

To begin with, PT X adapted PSAK no. 50 (revised in 2014) "Financial Instrument: Presentation", PSAK no. 55 (revised in 2014) "Financial Instrument: Recognition and Measurement" and PSAK no. 60 (revised in 2014) "Financial Instruments: Disclosure" for their financial statements in 2019. The classification of financial instruments can be categorized as financial assets and financial liabilities.

a. Scope and Gap Analysis

Based on PT X's statement of financial position for the year ended 2019, the accounts that are regarded as financial assets are net account receivables which include third-party and related parties receivables, other receivables which include third-party and related parties receivables, marketable securities, short term investments, cash and cash equivalent namely the deposits held and marketable securities. There will be some significant changes towards the listed financial assets in PT X financial statements, especially in the way the entity classifies their financial assets and the calculation method of impairment of financial assets.

Whereas for Gap Analysis, inquiry of the management of PT X is conducted. Moreover, the financial assets of PTX are classified based on management intention. The financial asset provision is made with an incurred loss method, where the provision will be created when the financial assets value has declined. The financial asset provision is made with the expected credit loss method, where the provision is made for the lifetime of the financial asset. The life of financial assets will begin at the initial recognition date and as long as the asset is held by the company.

In conclusion, PT X is required to update its accounting policy for Financial Instruments to PSAK 71 (in equivalent to IFRS 9).

b. SPPI and Business Model Test

After conducting both SPPI and Business Model Test on PT X's Financial Assets, conclusions on classification and measurement as regulated in PSAK 71 (IFRS 9) can be explained as below:

Cash & cash equivalents: The financial asset classified in the cash & cash equivalent account is the time deposit owned from the DBS Bank Ltd and Sumitomo Mitsui Banking Corporation. Based on the inquiry and the discussion with the management, this type of time deposit is held to collect contractual cash flow in the form of interest revenue. The contract of the time deposit cannot be sold until the maturity period. For that reason, the time deposit that PT X owned will be classified and measured in amortized cost.

Accounts Receivables: The financial asset classified in accounts receivable account arises from the sales orders issued by the sales team. Based on the inquiry and the discussion with the management, the on-account sales will

provide future cash inflow to PT X in the form of future payment received from the customers. Additionally, the internal policy of PT X prefers not to factor the outstanding accounts receivables so they will not be sold. For that reason, the accounts receivables that PT X owned will be classified and measured in amortized cost.

Other receivables: The financial asset classified in other receivables accounts arises from the sales orders issued by the sales team but not classified as accounts receivables. Based on the inquiry and the discussion with the management, the on account sales will provide future cash inflow to PT X in form of future payment received from the customers. Additionally, the internal policy of PT X prefers not to factor the outstanding other receivables so they will not be sold. For that reason, other receivables accounts that PT X owned will be classified and measured in amortized cost.

Long-term Receivables from related party: The financial asset classified as Long-term receivables account arises from the sales orders issued by the sales team that comes from PT X's subsidiaries or affiliates that will due in more than one accounting period. Based on the inquiry and the discussion with the management, the on account sales will provide future cash inflow to PT X in form of future payment received from PT X's subsidiaries and affiliates. Additionally, the internal policy of PT X prefers not to factor the outstanding other receivables so they will not be sold. For that reason, Long-term Receivables from related party accounts that PT X owned will be classified and measured in amortized cost.

Other Non-current Asset (refundable deposit): The financial asset classified as other receivables account arises from the General Affairs department in PT X from the building deposit. This deposit will provide future cash inflow to PT X when the contractual agreement has ended, in this case it is the usage of the building. For that reason, Other Non-current Assets that arise from a refundable deposit account that PT X owns will be classified and measured in amortized cost.

Marketable Securities - Bonds: The financial asset classified as marketable securities arises from the purchase of PT Chandra Sakti Utama Leasing (CSUL) bonds through Bahana Securities. This type of bond owned by PT X provides cash inflow in form of coupon payment and principal payment at the maturity date. Additionally, it is available to be sold even before the maturity

date therefore it is tradable in the market. For that reason, Marketable Securities - Bonds of PT CSUL accounts that PT X owned will be classified and measured in FVTOCI.

Investments in stock: The financial asset classified as marketable securities arises from the purchase of stocks of PT Mahadana Dasha Utama for 0.02%. This type of stock owned by PT X will increase the income of PT X in the form of unrealized gain or loss and will be realized when the stocks held are sold, without being said, the stocks held are tradable in the market. For that reason, Investments in stock that PT X owns will be classified and measured in FVTOCI.

i. Impairment

To begin with, there are 4 stages that need to be performed in calculating provisions for Receivable reserve. The first step will be to review the business segmentation. PT X classifies its business into 2 business segments, which are Retails (dealership) and Services (leases). In retail business, the estimation is unlikely to be done at individual borrower level, rather being incorporated in a collective assessment. Up to the present time, PT X supervises the collectability of the receivables, including long-term receivables and other receivables through collective assessment due to the similarity of credit risk characteristics.

Calculation of Receivable Provision and Receivable Provision Modelling

Cash & Cash Equivalents: Time Deposit

As of December 31 2019, PT X has 3 time deposits in DBS Bank Ltd for USD 2,730,000 with 1.7% interest rate which will be due on January 3rd 2020, USD 3,900,000 with 1.75% rate and USD 7,150,000 with 1.71% rate both will be due on January 21st 2020. According to Pefindo, DBS Bank Ltd is rated at idA. Additionally, PT X has a time deposit in Sumitomo Mitsui Banking Corporation for USD 1,950,000 with a 1.72% interest rate which will be due on January 21st 2020.

The Vasicek model to determine the Bank's Probability of Default (PD) is calculated with macroeconomic assumptions, in this case it is made using the historical data of Indonesian GDP for 10 years and Standardized Macroeconomic Factor (SMEF). From the Pefindo rating and the macroeconomic factors used, according to the model, it is found that the PD for the time deposits in DBS Bank Ltd is 13%. Whereas for the Loss Given Default (LGD) is set at 45% for senior claim. The formula to calculate the ECL for time deposits in DBS Bank Ltd is as below:

$$ECL_{it} = PD_{it} * LGD_{it} * EAD_{it}$$

$$ECL_1 = [1 - [(1 - 0.0013)^{\frac{360}{12}}]] * 0.45 * 2,730,000 ECL_1 = 13$$

Therefore, ECL for Time Deposit amounting USD 2,730,000 in DBS Bank Ltd is USD 13. ECL for Time Deposit amounting USD 3,900,000 in DBS Bank Ltd is USD 130, and ECL for Time Deposit amounting USD 7,150,000 in DBS Bank Ltd is USD 238 and for Sumitomo Mitsui is USD 65.

Table 4.1 Summary of PT X's Time Deposit ECLs

	Principal	PD	LGD	ECL
DBS Bank Ltd	2,730,000	0.13%	45%	13
DBS Bank Ltd	3,900,000	0.13%	45%	130
DBS Bank Ltd	7,150,000	0.13%	45%	238
DBS (total)	13,780,000			380
Sumitomo	1,950,000	0.13%	45%	65
Subtotal	15,730,000			445

2. Marketable Securities

As of December 31 2019, PT X has 1 bond of Chandra Sakti Utama Leasing (CSUL) for USD 2,847,132 with 10.5% interest rate due on July 11th 2020. According to Pefindo, CSUL bond is rated at idA. The Vasicek model to determine CSUL Probability of Default

(PD) is calculated with macroeconomic assumptions, in this case it is made using the historical data of Indonesian GDP for 10 years and Standardized Macroeconomic Factor (SMEF). From the Pefindo rating and the macroeconomic factors used, according to the model, it is found that the PD for the time deposits in CSUL is 13%. Whereas for the Loss Given Default (LGD) is set at 45% for senior claim.

$$ECL_6 = [1 - [(1 - 0.0013)^{\frac{193}{360}}]] * 0,45 * 2,847,132$$

$$ECL_6 = 870$$

Therefore, ECL for CSUL's bond held by PT X with the principal amount of USD 2,847,132 is USD 870.

3. Accounts Receivable: Trade Receivable

The calculation of the AR Provision roll rate or collection rate in the average of ongoing 2 years in specific terms of every aging bucket. For the receivables that are more than 1 year, the PD will be allocated 100%, but the LGD is not 100%. a 24 months historical timeline of trade AR Aging bucket will be chosen to calculate the roll rate and the average of uncollected receivables will be found. From the calculation conducted out of the total USD 185,821,578 population, the provision calculated based on PSAK 55 (IAS 39) is USD 11,596,319 whereas the provision calculated based on PSAK 71 (IFRS 9) is USD 11,570,838. The provision takes 6.2% part of the Trade AR population.

PSAK 71 (IFRS 9) Receivable Assessment

Summary of PT X Trade AR Provision	
PSAK 55	11,596,319
PSAK 71	11,570,838
	25,481
	USD

4. Accounts Receivable: Related-party Receivable

As of May 31st 2015, PT X has receivables amounting USD 15,125,422 from completion of service and maintenance and delivery of products to PT SS, which is one of PT X's subsidiaries. The mentioned amount consists of: Principal receivable for USD 13,782,600 and deferred late-payment fine for USD 1,342,822. These receivables are agreed to be

paid quarterly by PT SS. IFRS 9 requires PT X to create multiple scenarios to produce probability-weighted lifetime expected credit losses of financial assets that is determined by evaluating a range of possible outcomes, including the upside and downside economic scenarios and potential threats. Additionally, as of Q4 2019, As of Q1 2019, the principal of the outstanding receivable is USD 14,813,460.

The scenarios that PT X made are:

1. If the receivable is paid 100% according to the agreed schedule, the payment period will be carried on and will end in Q1 2024, with USD 3,832,805 provision.
2. If the receivable of PT SS is carried over and adjusted to be paid in 9 quarters starting from Q1 2020 - Q1 2022; the evidence used to support this opinion is that PT SS has failed to repay its debt for 6 quarters in 2017-2018, with USD 1,825,039 provision.
3. If the receivable of PT SS is carried over and rescheduled to be paid starting from Q4 2019 - Q3 2025, with USD 4,264,985 provision.

The weight given shows the likelihood of each scenario to happen. After conducting discussion with the management, it is more likely for scenario 1 to happen. From the explanation given above, PT X chose the first scenario and therefore the recorded amount the provision that needs to be recorded for PSAK 71 (IFRS 9) implementation is USD 3,832,805. This provision amount will be adjusted at the end of the reporting period.

Additionally PT X also has receivable in Indonesian currency. As of May 31st 2015, PT X has receivables amounting IDR 458,878,379,721 with these possible scenarios that PT X made:

1. If the receivable is paid fully according to the schedule, with IDR 44,775,110,265 provision.
2. If the receivable is extended to additional 6 quarters due to failure of payment in the first 6 quarters, with IDR 64,011,992,100 provision.
3. If the receivable is paid according to the schedule but not paid in full (PT SS defaulted), with IDR 77,786,375,324 provision.

From the explanation given above, PT X chose the first scenario and therefore the recorded amount for PSAK 71 (IFRS 9) implementation is IDR 44,475,110,265 or in equivalent to USD 3,199,418. This provision amount will be adjusted at the end of the reporting period.

The summary of PT X's provision of PT SS's individual assessment in USD is as below:

PSAK 71 (IFRS 9) Receivable Assessment

Summary of PT X Assessment for PT SS Provision	
IDR	3,199,418
USD	3,832,805
	7,033,233
	USD

5. Other Receivables (non trade)

The treatment to calculate PT X's non trade receivable is similar to calculating the trade AR. Firstly, 24 months historical timeline of non trade AR Aging bucket will be chosen to calculate the roll rate and the average of uncollected receivables will be found. Secondly, the macroeconomic factors that are taken into consideration are IDR to USD currency exchange, inflation rate of Indonesia, Bank Indonesia's interest rate, coal price, oil lifting and crude oil price for the past 2 years and 1 projected year. The macroeconomic factors will be used in calculating the provision rate as well.

From the calculation conducted out of the total USD 2,179,720 population, the provision calculated based on PSAK 55 (IAS 39) is USD 75,399 whereas the provision calculated based on PSAK 71 (IFRS 9) is USD 75,505. The provision takes 3.5% part of the Non Trade AR population.

The summary of PT X's provision of PT SS's individual assessment in IDR is as below:

PSAK 71 (IFRS 9) Receivable Assessment

Summary of PT X Non Trade AR Provision	
PSAK 55	75.399
PSAK 71	75.505
	-106 US D

6. Investment in Stock

The investment in Stock of has the amount of USD 5,006 and takes 0,0004% part of Total Asset. Therefore it is considered as immaterial and provision for the investment does not need to be calculated.

In summary, the amount of provision calculated from each financial instruments accounts of PT X is presented below:

Table 4.6 Provision for PT X's Financial Instruments

Financial Instruments	Provision
Cash & Cash Equivalent	445
Marketable Securities	870
Accounts Receivable	18,603,062
Other Receivables	75,505
Investment in Stock	0
Other Non-current Asset	0
Total	18,679,882

- Identifying and calculating the impact of PSAK 71 (IFRS 9) towards Receivable Provisions

To see the accounts impacted by the change in regulation, firstly the adjusting journal should be made based on the additional provision written on the table in order to record the unrecorded provision. The journal will be separated as below:

1. Cash & Cash Equivalents

From the outstanding balance amounting USD 126,806,093, the provision calculated for time deposits is USD 445. Therefore, the adjusting entries that should be made for the cash & cash equivalent accounts are:

Loan Expense Other	445
Allowance for Doubtful Account - TD	44
	5

PT X will debit Loan Expense Other account for the amount USD 445 and credit Allowance for Doubtful Account for the same amount. The Loan Expense Other account will then be accumulated in the Income (Expense) on7 Operation in the Profit & Loss, whereas Allowance for Doubtful Account is a contra asset account which will deduct the Accounts Receivable.

2. Marketable Securities

From the outstanding balance amounting USD 2,841,838, the provision calculated for bonds is USD 870. Therefore, the adjusting entries that should be made for the Marketable Securities accounts are:

Gain (Loss) On Sale	870
Available-for-Sale Financial Asset	
Allowance of Doubtful Account - MS	870

PT X will debit Gain (Loss) On Sale Available-for-Sale Financial Asset account for the amount USD 870 and credit Allowance for Doubtful Account for the same amount. Gain (Loss) On Sale Available-for-Sale Financial Asset account will then be accumulated in the Other Comprehensive Income, whereas Allowance for Doubtful Account is a contra asset account which will deduct the Marketable Securities valuation.

3. Accounts Receivable: Trade Receivable (third & related party)

From the outstanding balance amounting USD 221,180,450, the provision calculated for trade receivable (third & related party) is USD 18,603,062 which takes 8.4% part of the

outstanding amount. Therefore, the adjusting entries that should be made for the Accounts Receivable account are:

Overhead Bad Debt Expense	18,603,062
Allowance of Doubtful Account - AR	18,603,062

PT X will debit Overhead Bad Debt Expense account for the amount USD 18,603,062 and credit Allowance for Doubtful Account for the same amount. Overhead Bad Debt Expense account will then be accumulated in the Income (Expense) on Operation in the Profit & Loss, whereas Allowance for Doubtful Account is a contra asset account which will deduct the Accounts Receivable.

4. Accounts Receivable: Non-trade Receivable

From the outstanding balance amounting USD 2,179,720, the provision calculated for non-trade receivable is USD 75,505, which takes 3.5% part of the outstanding amount. Therefore, the adjusting entries that should be made for the Accounts Receivable account are:

Overhead Bad Debt Expense	75,505
Allowance of Doubtful Account - Other Receivable	75,505

PT X will debit Overhead Bad Debt Expense account for the amount USD 75,505 and credit Allowance for Doubtful Account for the same amount. Overhead Bad Debt Expense account will then be accumulated in the Income (Expense) on Operation in the Profit & Loss, whereas Allowance for Doubtful Account is a contra asset account which will deduct the Other Receivable.

5. Investment in Stock

Provision is not made for this account due to an immaterial amount outstanding (only 0,0004% of Total Asset) and the management has decided not to make any provision.

In summary, the amount of provision calculated from each financial instruments accounts of PT X is presented below:

Table 4.1 Summary of Financial Impacts towards PT X Financial Statements

Account	Before PSAK 71	After PSAK 71
Total Assets	11,315,035,788	11,296,355,906
Total Liabilities	5,569,972,226	5,569,972,226
Total Equity	5,745,063,562	5,726,383,680
EBIT	882,963,759	864,284,747
Net Income	661,637,575	642,958,563
Other Comprehensive Income	605,192,846	605,191,976
Operating Cash Flow	1,417,275,203.5	1,398,596,637
Investing Cash Flow	64,620,238	64,620,238
Financing Cash Flow	(772,091,112)	(772,091,112)

B. Hypothesis Test

There are some changes in PT X's financial statements (Income Statement, Statement of Financial Position, and Statement of Cash Flow) caused by adjustments made in accordance to PSAK 71 (IFRS 9). These changes will then be compared with the financial statements data that used PSAK 55 (IAS 39) by using the t-test method in order to determine the significance of the impact.

a. Hypothesis 1

H1: The implementation of PSAK 71 (IFRS 9) will make significant changes towards the Statement of Financial Position of PT X in comparison to the company's current method

The result of the t-test conducted shows that the significant difference is at 0.235 and for that reason, from the statistical test it can be concluded that the difference shown in the test is not significant. To prove the t-test result, a calculation of the effect of implementing PSAK 71 (IFRS 9) towards the Statement of Financial Position will be shown below:

$$\begin{aligned} \text{Total Asset} &= \frac{(11,296,355,906 - 11,315,035,788)}{11,315,035,788} \\ (\%) & \end{aligned}$$

$$= -0.17\%$$

After conducting further horizontal analysis, it is found that the implementation of PSAK 71 (IFRS 9) resulted in 0.17% decrease towards PT X's Total Asset compared to the previous standard PSAK 55 (IAS 39). The reduction in total asset comes from a decrease in Accounts Receivable with the amount of USD 18,678,567, decrease in Marketable Securities with the amount of USD 870 and a decrease in Cash & Cash Equivalent with the amount of USD 445 as the allowances for these accounts raise. Therefore, it can be concluded that the implementation of PSAK 71 (IFRS 9) is insignificant towards PT X's total asset.

$$\begin{aligned} \text{Total Liabilities} &= \frac{(5,569,972,226 - 5,569,972,226)}{5,569,972,226} \times 100\% \\ (\%) & \end{aligned}$$

$$= 0.00\%$$

After conducting further horizontal analysis, there is no change in PT X's total liabilities. Therefore, it can be concluded that the implementation of PSAK 71 (IFRS 9) has no effect towards PT X's total liabilities.

$$\begin{aligned} \text{Total Equity} &= \frac{(5,726,383,680 - 5,745,063,562)}{5,745,063,562} \times 100\% \\ (\%) & \end{aligned}$$

$$= -0.33\%$$

After conducting further horizontal analysis, it is found that the implementation of PSAK 71 (IFRS 9) resulted in 0,33% decrease towards PT X's total equity compared to the previous standard PSAK 55 (IAS 39). The reduction in total equity comes from a decrease in retained earnings as the bad debt expenses incurred from the allowances of the financial instruments amounting USD 18,679,012 and an increase in other comprehensive loss amounting USD 870 as the measurement amount of marketable securities available-for-sale decreases. Therefore, it can be concluded that the implementation of PSAK 71 (IFRS 9) is insignificant towards PT X's total equity.

b. Hypothesis 2

H2: The implementation of PSAK 71 (IFRS 9) will make significant changes towards the Income Statement of PT X in comparison to the company's current method.

The result of the t-test conducted shows that the significant difference is at 0.184 and for that reason, from the statistical test it can be concluded that the difference shown in the test is not significant.

$$\begin{aligned} \text{EBIT} &= \frac{(864,284,747 - 882,963,759)}{882,963,759} \times 100\% \\ (\%) &= -2.12\% \end{aligned}$$

After conducting further horizontal analysis, it is found that the implementation of PSAK 71 (IFRS 9) resulted in 2.12% decrease towards PT X's Earning Before Income Tax (EBIT) compared to the previous standard PSAK 55 (IAS 39). The reduction in EBIT comes from an increase in Other Operating Expenses as the bad debt expenses with the amount of USD 18,678,567 and other loan expenses with the amount of USD 445 occurred. The bad debt expense arises from the allowances of PT X's receivables, whereas the other loan expenses arised from expected credit losses of PT X's time deposits. Therefore, it can be concluded that the implementation of PSAK 71 (IFRS 9) is insignificant towards PT X's EBIT.

$$\begin{aligned}
 \text{Net Income (\%)} &= \frac{(642,958,563 - 661,637,575)}{661,637,575} \times 100\% \\
 &= -2,82\%
 \end{aligned}$$

After conducting further horizontal analysis, it is found that the implementation of PSAK 71 (IFRS 9) resulted in 2.82% decrease towards PT X's Net Income compared to the previous standard PSAK 55 (IAS 39). Therefore, it can be concluded that the implementation of PSAK 71 (IFRS 9) is insignificant towards PT X's Net Income.

$$\begin{aligned}
 \text{OCI (\%)} &= \frac{(605,191,976 - 605,192,846)}{605,192,846} \times 100\% \\
 &= -0,00022\%
 \end{aligned}$$

After conducting further horizontal analysis, it is found that the implementation of PSAK 71 (IFRS 9) resulted in 0.00022% decrease towards PT X's Other Comprehensive Income (OCI) compared to the previous standard PSAK 55 (IAS 39). Therefore, it can be concluded that the implementation of PSAK 71 (IFRS 9) is insignificant towards PT X's OCI.

c. Hypothesis 3

H3: The implementation of PSAK 71 (IFRS 9) will make significant changes towards the Statement of Cash Flow of PT X in comparison to the company's current method.

The result of the t-test conducted shows that the significant difference is at 0.396 and for that reason, from the statistical test it can be concluded that the difference shown in the test is not significant.

$$\text{OCF} = \frac{(1,398,596,637 - 1,417,275,203)}{\quad} \times 100\%$$

(%) 1,417,275,203

= -1,32%

After conducting further horizontal analysis, it is found that the implementation of PSAK 71 (IFRS 9) resulted in 1.32% decrease towards PT X's cash generated from operating cash flow compared to the previous standard PSAK 55 (IAS 39). The reduction in operating cash flow comes from a decrease in the receivables with the amount of USD 18,678,567. This reduction in receivables is due to an increase in its allowances for the receivables, arising from the PSAK 71 (IFRS 9) expected credit loss method. Therefore, it can be concluded that the implementation of PSAK 71 (IFRS 9) is insignificant towards PT X's operating cash flow.

IC	(64,620,238 - 64,620,238)	x
F	<u>64,620,238</u>	100%
(
%		
)		
		0,00%

After conducting further horizontal analysis, there is no change in PT X's cash flow from investing activities. Therefore, it can be concluded that the implementation of PSAK 71 (IFRS 9) has no effect towards PT X's cash flow from investing activities.

F	(-772,091,112 -	x
C	(-772,091,112))	100
F	<u>-772,091,112</u>	%
(
%		
)		
		0,00%

After conducting further horizontal analysis, there is no change in PT X's cash flow from financing activities. Therefore, it can be concluded that the implementation of PSAK 71 (IFRS 9) has no effect towards PT X's cash flow from financing activities.

V. CONCLUSION & RECOMMENDATION

A. Conclusion

Indonesian Accounting Standard board issued PSAK 71 as the adaptation of IASB's IFRS 9 to replace the old accounting standard for Financial Instruments. The inaccurate provision calculation and minimum anticipation of loan losses at the end are the reason why PSAK 55 (IAS 39) is replaced with PSAK 71 (IFRS 9) that introduced the forward-looking method in recording allowances. The change in regulation has affected all companies that have financial instruments, including the financial assets or financial liabilities within.

For the first hypothesis, the implementation of PSAK 71 (IFRS 9) did not make a significant difference towards the Statement of Financial Position of PT X compared to the previous audited Statement of Financial Position using PSAK 55 (IAS 39). The amount of the outstanding financial instruments balance only takes 3,26% of total assets in total. Considering that, the implementation of PSAK 71 (IFRS 9) resulted in change for USD 18,679,882 only accounted for 0,17% of the total asset amount, which is USD 11,315,035,788 under PSAK 55 (IAS 39). In summary, the amount of difference in Statement of Financial Position after implementation of PSAK 71 (IFRS 9) is -0,17% for total assets, 0% for total liabilities and -0,33% for total equity.

For the second hypothesis, the implementation of PSAK 71 (IFRS 9) did not make a significant difference towards the Income Statement of PT X compared to the previous audited Statement of Financial Position using PSAK 55 (IAS 39). The implementation of PSAK 71 (IFRS 9) resulted in a change for USD 18,679,882 decrease in EBIT and Net Income, and USD 870 decrease in OCI compared to the amount under PSAK 55 (IAS 39). In summary, the amount of difference in Income Statement after implementation of PSAK 71 (IFRS 9) is -2,12% for EBIT, -2,82% for Net Income and -1,32% for OCI.

For the third hypothesis, the implementation of PSAK 71 (IFRS 9) did not make a significant difference towards the Statement of Cash Flow of PT X compared to the previous audited Statement of Financial Position using PSAK 55 (IAS 39). The implementation of PSAK

71 (IFRS 9) resulted in a change for USD 18,678,567 decrease in cash generated from operating cash flow compared to the amount under PSAK 55 (IAS 39). In summary, the amount of difference in the Statement of Cash Flow after implementation of PSAK 71 (IFRS 9) is -1,32% in operating cash flow, there is no change in cash flow from investing and financing activities.

B. Recommendation

Based on the findings above, there are several notable recommendations, which are:

1. PT X must start to implement PSAK 71 (IFRS 9) this year. As it may be known, there are many complications and challenges arises from the standard transition and therefore early adaptation will allow PT X to have more time to gain comprehension about the standard and to complete the necessary data for the implementation. The insignificant change will benefit PT X for the compliance reason. PT X is still required to record adjustment entries despite of the immaterial changes yet it will not harm PT X's Financial Statements too much. Financial reports must be presented fairly and in accordance to the national financial reporting framework and in this case, PT X must comply to the Indonesian Accounting Standard (SAK). Additionally, PT X is also required to disclose the change in accounting policies topic on the Notes to Financial Statement and the impacts of the change affecting its financial statements.

2. The key point of implementation of PSAK 71 (IFRS 9) is the forward-looking impairment method. The increasing uncertainties arise in the current economic era also increases the likelihood of risk exposure in the industries, including in the heavy equipment industry. This is considered as systematic risk which unfortunately cannot be avoided. Moreover, these macroeconomic considerations must be taken into the PSAK 71 (IFRS 9) calculations and estimations. For this reason, PT X should draw their focus to maintain the Accounts Receivables data as the implementation of PSAK 71 (IFRS 9) will decrease their total asset due to the rise of the allowances for financial instruments. Not only that, the allowances made also have the effects to PT X's income statement as it also increases the Other Operating Loss through the Bad Debt Expense. If the allowances are not maintained properly, the income of PT X will most likely to keep decreasing. Conclusively, though the change effect is not material at the moment, it may keep reducing PT X's income and Assets.

3. For the future researchers, it is recommended to conduct research about implementation of PSAK 71 (IFRS 9) in similar and other industries apart from the banking and heavy equipment industries. The result can be compared to see whether the change in accounting standards bring similar impact or not.

REFERENCES

- [1] "IFRS 9 & KEY CHANGES WITH IAS 39." IFRS 9 & KEY CHANGES WITH IAS 39, July 2017,
https://www2.deloitte.com/content/dam/Deloitte/al/Documents/audit/TKB-REVISTA-11_ENG_PRINT.pdf.
- [2] Acca. "What Is a Financial Instrument?" ACCA Qualification | Students | ACCA Global, www.accaglobal.com/in/en/student/exam-support-resources/fundamentals-exams-study-resources/f7/technical-articles/what-financial-instrument.html.
- [3] Admin. "IAS Plus." IAS 39 - Financial Instruments: Recognition and Measurement, 31 July 2012, www.iasplus.com/en/standards/ias/ias39..
- [4] Deloitte. "April, 13IFRS 9: Financial Instruments –High Level Summary." April, 13IFRS 9: Financial Instruments –High Level Summary, 13 Apr. 2019,
<https://www2.deloitte.com/content/dam/Deloitte/ru/Documents/audit/ifrs-9-financial-instruments-en.pdf>.
- [5] Financial Instruments (IFRS 9). (2015). Understanding IFRS Fundamentals, 369–381. doi: 10.1002/9781119197690.ch40
- [6] Huian, Maria Carmen. "Accounting for Financial Assets and Financial Liabilities According to IFRS 9." *Annals of the Alexandru Ioan Cuza University - Economics*, vol. 59, no. 1, Jan. 2012, doi:10.2478/v10316-012-0002-0.
- [7] Mojca, Gornjak. "ANALYSIS OF THE REPLACEMENT OF INTERNATIONAL FINANCIAL REPORTING STANDARD FOR FINANCIAL INSTRUMENTS: IAS 39 VERSUS IFRS 9." ANALYSIS OF THE REPLACEMENT OF INTERNATIONAL FINANCIAL REPORTING STANDARD FOR FINANCIAL INSTRUMENTS: IAS 39 VERSUS IFRS 9, 16 May 2018,
<http://www.toknowpress.net/ISBN/978-961-6914-23-9/papers/ML2018-029.pdf>.
- [8] Sekaran, U. and Bougie, R., 2016. *Research Methods For Business: A Skill Building Approach* Seventh Edition. John Wiley & Sons.
- [9] United States, Congress, "IFRS 9, Financial Instruments: Understanding the Basics." IFRS 9, Financial Instruments: Understanding the Basics.

-
- [10] United States, Congress, Hashim, Noor, et al. "Expected-Loss-Based Accounting for the Impairment of Financial Instruments: the FASB and IASB IFRS 9 Approaches." Expected-Loss-Based

The Effect of Capital Structure on Firms' Profitability: a Case Study of Indonesian Firms

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Abstract

The purpose of this research is to seek the impact of capital structure towards firms' profitability on Indonesian firms listed in LQ45 using panel data of five consecutive years (2013 to 2017). The data obtained are from audited financial statements of 24 constantly listed in LQ45 . This study used the linear regression to analyze the connection between total debt to represent capital structure and firms' profitability of Return on Assets. This study includes growth opportunity, firm size, tangibility, liquidity and non-debt tax shield as controlled variables. The research resulted in a significant positive relationship between firms' profitability and capital structure. Only liquidity provides a negative significant impact on profitability. In addition to that growth opportunity and size have insignificant negative influence, while tangibility and non debt tax shields have insignificant positive influence toward profitability.

Keywords: Profitability, Capital Structure, Total Debt Ratio, Return on Asset, Indonesian Firms.

I. INTRODUCTION

A. Background of Study

Investigation of the relationship between capital structure has been an important research topic for decades[1]. A firm's profitability is affected by multiple factors, especially by capital structure. Any company's financial decisions are essential to the company's management. A critical determination comes from an optimal capital structure[2]. Capital, the external source, becomes a sign of a company's financial debts. Capital structure plays an essential role in company operation. It is a critical and common determinant to measure the firm's profitability for many researchers and managers. The capital structure choice decision is crucial to any companies' development. Capital structure consists of debt and equity, and its combination of debt and equity used for financial analysis purposes. The managers always use two ways to get the capital: one is from debt including bonds issuance, and loaning from creditors, and the other one is from equity that includes issuing stocks to investors [3].

The most popular capital structure theories are theory of pecking order, static trade-off theory and agency cost theory. Although, both financing by debt and equity have their own strengths and weaknesses. The strengths of debt finance are tax-shield, regular paying off and cheapest sources of finance, while default risks and cost of bankruptcy are its weaknesses. The equity financing benefit is likely to occur in low cost bankruptcy, while lack of tax advantage, expensive and controlling free cash flow difficulty are its drawbacks [4].

The capital structure choice is crucial for the firm's financial decision makers. It is because it affects Earnings before Interest and Tax. It is in turn to change the market value of the firm and share value. Nevertheless, The optimal capital structure to increase firm's profitability through capital cost reduction has not been formulated by corporate finance academicians and practitioners [3].

The main research aim was to look into the connection between capital structure (total debt ratio) and profitability of LQ45 publicly listed companies in Indonesian Stock Exchange(IDX). Furthermore, this review will look for any consequences between control variables included and profitability. The control variables are growth opportunity, firm size, tangibility, liquidity and non debt tax shield. The reason is to clarify the variations in profitability that cannot entirely be explained by leverage.

II.LITERATURE REVIEW

A. Theories of Capital Structure

Theory of Static Trade-off: In order to get a good company value is to form an attractive target debt ratio prediction. It is due to the debt costs issuance and repayment issue. The best combination may be achieved when there is an offsets between the payback marginal value linked with debt concerns and the raise in the present value of the costs corresponding by handing out more debt [5]. The interest payment tax deduction is the main advantage of debt. This is in favors of the debt application[6]. The other of debt finance concerns how to control the conflict of interest between managers and shareholders. The misuse of free cash flow opportunity is possessed by corporate managers on ineffective and perquisites investment decisions. The use of debt allows the limited free cash flow available to managers and improves control of firms. The costs related to debt issuance are the cost of financial distress[7] and the firm's cost to resolve the conflicts between shareholders and debtors[8].

Pecking Order Theory. Myers and Majluf [9] and Myers[10] advise the extra cost on issuing new external funds due to the asymmetric information among managers and investors overwhelms the other costs and benefits mentioned in the trade-off model. Thus, the risk, transaction costs and asymmetric information linked with issuing new securities guides firms of their financing choice priority by: first internally through retained earnings then cash balance reduction or marketable securities liquidation, second externally by debt saving then the issuing equity as a last resort. Consequently, it is difficult to form an optimal capital structure posited by the pecking order theory[32]. Shyam-Sunder and Myers [32] suggest that based this theory, the debt proportion should be quantitatively matched by the internal financial deficit. However, they have documented that the assumption of information asymmetry invalidates the sole effect of the financial deficit on capital structure. Similarly, Frank and Goyal [33] assert that financial deficit is not the only explanatory factor of pecking order behavior. Instead, much of its influences are derived from conventional factors that are related to the requirements of external finance and facts of the way firms use it.

Agency costs Theory. The separation of ownership and control and conflicts of interest between managers and shareholders are agency costs representation. The free cash flow is one of the conflict motives between managers and shareholders. Jensen [8] as quoted in Saleyi & Biglar [11] defines a regular repayment of debt to secure that managers give prepossession to create wealth of the equity-holders. The managers' own interest can be

reduced by increasing debt, using high cash flow and profitable companies. This is done until no wasted company's resources as their individual interest consequences. The other complication is that managers may not receive all the benefits of their activities. This is acknowledged by low manager's share in company ownership. To overcome this when manager's increase stock is high[11].

B. Empirical Evidence

The examination done by Alimi et al. [12] reviewed a sample of 115 Nigerian companies from 1998 to 2012 to examine the interaction between capital structure and profitability. The finding is the performance is negatively related to capital structure.

According to Negasa [4] studied 32 large private manufacturing firms in Ethiopia from 2006 to 2010. The outcome showed a positive connection between debt and profitability. There was a significantly positive relationship between firm's size and profitability as well as firms' growth and profitability.

Agha[13] investigated the analysis of capital structure determinants and their relationship in the cement companies in Pakistan. The effect shows profitability is negatively and significantly tied in debt ratio. She did a review in the financial information of the cement industry and lower debt structure to increase profit and maximize the shareholders wealth.

Yegon et al. [14] examined the association of capital structure and the firm's profitability. They used data from 2004-2012. The sample is from the banking industry listed on Nairobi Stock Exchange, Kenya. The result indicated that there is an unfavorable link between the long-term debt and profitability. And the relationship of short-term debt and profitability are positive.

The inspection done by Akinyomi [15] on capital structure connection with financial performance in Nigeria. The data is selected from three companies from 2007 to 2011 in the food and beverage industries. The results found that there is a significant relationship between capital structure(long debt capital to capital, debt to capital, debt to common equity and short term debt to total debt and age) and corporate financial performance(ROA and ROE). All capital structure measures except long term debt to capital are positive and significant toward ROE and ROA. However, long term debt to capital is significantly and negatively related with ROA and ROE.

The analysis by Khalaf [16] depicted a relationship between capital performance (ROA) and capital structure(total debt ratio and profit margin) by using data from 2005-2009 and 45 selected manufacturing firms listed in Amman Stock Exchange. It is found that total debt is positively related to return on assets.

In accordance with Zeitun and Tian[17] inquired the capital structure and corporate performance impact in 167 Jordanian listed firms. The results showed a firm's total debt ratio had a significant negative impact on the firm's performance measures, in both the market's and accounting measures. Furthermore, the variable growth and size have a positive and significant effect on the firm's profitability. The assets tangibility is negatively interconnected with firm's performance

The research conducted by Wu Quibing[3] regarding capital structure and profitability (return on asset and return on invested capital) on 15 manufacturing companies in the U.S for ten-year period (2009-2018). The findings revealed that the total debt to tangible assets and total debt to equity ratios demonstrate a negative relationship with profitability and significant at 1% confidence level. In addition to that, Firm size is positively related to profitability.

Furthermore, Ashraf,Ameen & Shahzadi [18] explored the impact of capital structure on firms' profitability of 18 listed cement companies in Pakistan. It is found that short term debt has significantly positive correlations with ROA and ROE. While debt ratio and long term debt ratio have significantly negative on return on asset (ROA) and return on equity (ROE). This would assist to predict optimal capital structure.

C. Conceptual Framework

Profitability

:

ROA

TDR proxy Capital

Structure

Controlling Variable:

GROW, SIZE, TANG,

LIQU,NDTS

SIZE

TANG

LIQU

NDTS

The following graphic is our conceptual framework



Fig. 1: Research Framework

D. Hypothesis

Based on the research problems and conceptual framework above therefore the hypotheses of this research are as follows:

1. There is a positive significant relationship between total debt ratio and profitability.
2. There is a positive significant relationship between growth opportunity and profitability.
3. There is a positive significant relationship between firm size and profitability.
4. There is a positive significant relationship between tangibility and profitability.
5. There is negative significant relationship between liquidity and profitability,
6. There is a positive significant relationship between non debt tax shield and profitability.

III. METHODOLOGY

A. Population and Sampling

The population sampling companies are from LQ45 listed in Indonesian Stock Exchange (IDX). The period is from 2013 to 2017. The criteria used to select the sample are as follows. There are 580 companies listed in IDX and constantly published its financial statement in IDX from 2013 to 2017. There are 29 companies that are those constantly listed in index LQ45 including 5 banks and financial institutions. The 24 chosen companies exclude the banks and financial institutions. Based on the above selection criteria, there are a total of 24 firms as our sample with 5 years observation period. Thus we have a total of 120 observations.

B. Data Analysis

The Data is analyzed by using multiple linear regression analysis on panel data samples of firms from the period of 2013-2017. The regression has been used to analyze the relationship between dependent variable (ROA) and independent variables (debt ratio, growth rate, firm size, assets tangibility, liquidity and non-debt tax shield) as presented at table 1 below.

Table 1. Variable Measurement

Variable	Formula	Previous Research
Profitability(ROA)	Net Income/Total Assets	[19] [20]

Total Debt(TDR)	Total Debt/Total Assets	[21] [22]
Growth opportunity (GROW)	Liabilities plus market value of equity to total assets	[23] [4] [24]
Size(SIZE)	Natural Log of Total Assets	[25] [26] [27]
Tangibility(TANG)	Fixed Assets/Total Assets	[21] [22] [28]
Liquidity(LIQU)	Curr.Assets/Current.Liability	[29] [30] [31]
Non Debt Tax Shield (NDTS)	Depreciation/Total.Assets	[27] [28]

C. Model Specification

The regression equations tested are as follows:

$$ROA_{i,t} = \alpha_{i,t} + \beta_1 TDR_{i,t} + \beta_2 GROW_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 TANG_{i,t} + \beta_5 LIQU_{i,t} + \beta_6 NDTS_{i,t} + \epsilon_{i,t}(1)$$

Where: β_1 is the coefficient for total debt ratio, β_2 is the coefficient for growth rate β_3 is the coefficient for firms' size, β_4 is the coefficient for tangibility, β_5 is the coefficient of firms, liquidity, β_6 is the coefficient of nod debt tax-shield, $\epsilon_{i,t}$ is error terms.

Linear regression analysis methods should meet the statistical requirements through classical assumption tests. The requirements on the classic assumption test include: normally distributed residual value (normality test) ; no linear relationship between independent variables (test of multicollinearity) ; no correlation between the residues in period t with residue in period t-1 (test of autocorrelation) ; similarity residual variance from one observation to another observation (test of heteroscedasticity).

Research Question:

Do debt ratio, growth opportunity, firm size, assets tangibility, liquidity and non-debt tax shields have influence on firm's capital structures?

IV. RESULTS AND DISCUSSIONS

A. Analytical Framework

The Descriptive Statistics, Correlation and Regressions results summarized on the following tables:

Table 2. Descriptive Statistic

	N	Min	Max.	Mean	Std. Deviation
ROA	120	-.007	.643	.103	.092
TDR	120	.047	.768	.412	.159
GROW	120	.637	23.286	2.665	3.561
SIZE	120	13.436	26.412	23.044	3.110
TANG	120	.000	1.000	.610	.216
LIQU	120	.450	12.117	2.442	1.816
NDTS	120	.025	.949	.241	.195

From the descriptive table above, it is concluded that the variables of capital structure(TDR) mean and maximum values are greater than return on asset (ROA). non debt tax shield(NDTS), liquidity(LIQU), tangibility(TANG), firm size(SIZE), Growth opportunity (GROW), mean and maximum value is high but return on asset (ROA) mean and maximum values are low. This clarifies that Indonesian firms listed in LQ45 use more debt than equity because of this firms maintaining low profitability. In addition, the classical assumption tests pass normality and multicollinearity, but do not pass heteroscedasticity and autocorrelation Therefore, this data is only valid for this research.

Table 3. Correlation between variables

	ROA	TDR	GRO W	SIZE	TAN G	LIQ U	NDT S
ROA	1						
TDR	.215*	1					
GRO W	-.072	.050	1				
SIZE	.438	.590		1			
TAN G					1		
LIQ U						1	
NDT S							1

SIZE	-.153	-.042	.064	1			
	.086	.651	.488				
TANG	.001	.450**	-.010	.057	1		
	.990	.000	.914	.537			
LIQU	-.219*	-.123	.189*	-.136	-.066	1	
	.017	.182	.039	.139	.477		
NDTS	.129	.023	.320**	.141	.067	-.054	1
	.192	.820	.001	.105	.497	.581	

From table 3 reflects the correlation between profitability and capital structure variables. The total debt ratio, and liquidity are positively and negatively correlated at 5% confidence level respectively. The growth and size are found negatively correlated toward profitability but not significant. Then tangibility and non debt tax shields are positive and insignificant correlated with profitability This is in line with the theory of capital structure [7]. The theory states that the debt to lower the cost of capital and maximize the firm's value are used by firms. This is also consistent with the previous research findings such as Gill, Nahum and Neil [36], Ayad and Mustofa [37], Tiny and Lean[38]. Whereas it contradicts with the studies made by Zeitun and Tian[17], Ashraf, Ameen & Shahzadi[18], Alimi et.al[12] and Agha[13].

The growth opportunity(GROW) has a negative insignificant effect on firms' profitability. It is depicted by correlation coefficient value of 0.948 from table 4. The result is inconsistent with Zeitun and Tain[17], Negasa[4].

The variable firm's size and ROA showed a negative relationship with a coefficient of 78.572. It means that it gains higher profit as the firms' become smaller, and vice versa. This follows Yazdanfar and Ohman[39] reviews. This finding differs from previous studies, which found a positive relationship conducted by Negasa [4], Zeitun and Tian[17], Wu Quibing[3].

A positive coefficient of 0.887 is experienced by the tangibility(TANG) variable, but insignificant. This displays that profitability of Indonesian' firms is affected by having larger fixed assets. This in compliance with the research conducted by Negasa [4] but as opposed to Wu Quibing[3]

Moreover, the liquidity (LIQU) has a significant negative impact on ROA at 5% significance level. This goes after agency cost theory states that debt finance as a disciplinary tool as consequences of managers discretion to use large amounts of free cash flow leading to company's profitability reduction. This is similar with Negasa [4], and Bagchi[34].

The positive regression result illustrated relation non debt tax shield (NDTS) and profitability but insignificant confirmed by a coefficient of correlation value of 0.550. This is consistent with Negasa[4] and Zeitun and Tian[17]. This is because a firm having lower non debt tax shield is more sensitive to use higher leverage than a firm having higher non debt tax shield[35].

Table 4 Regression Result

Variable	Coefficient	T-statistic	Sig.
C	28516.958	2.717	.008
TDR	.089	1.529	.120
GROW	-.948	-.192	.848
SIZE	-78.572	-2.584	.011
TANG	.887	2.028	.045
LIQU	-2.961	-2.272	.025
NDTS	.550	.770	.443
Rsquared	0.564		
F-statistic	24.380		
Sig.	<u>0.000</u>		

Form table 4 illustrates that the value of R-squared 0.564 means that 56.4% of profitability variation is described by capital structure. Total debt ratio (TDR) has a positive significant impact on return on asset (ROA). The same results found by Yegon et al. [14] but inconsistent with Agha[13]

B. Data

The FDI data used in this study are Outward FDI from China to the 10 host countries from ASEAN, which are Brunei, Cambodia, Thailand, Singapore, Vietnam, Malaysia, Myanmar, Laos, Philippines and Indonesia. For the dependent variable, the study uses the annual FDI outward from 2003 to 2018, collected from World Bank Database. For the independent variables are collected from World Bank Database, The Statistical Bulletin of China's Outward Foreign Direct Investment, International Monetary Fund, UNCTAD Database, China Banking Regulatory Commission, China Insurance Regulatory Commission, People's

Bank of China, China State Administration of Foreign Exchange, the geographic distance are obtained from the website (www.indo.com/distance).

V. CONCLUSION AND RECOMMENDATIONS

A. Conclusion

1. The investigation of capital structure approached by total debt ratio and profitability is positively correlated with profitability at 5% confidence level. It means higher degrees of leverage have higher profitability. As less expected bankruptcy costs will be experienced by high performance firms. Therefore, hypothesis one is accepted

2. The relationship between growth opportunity and size are insignificant negatively correlated with profitability. As growth depends on the size of the firm. All firms are not relying on internal financing so they have the ability to consider issuing external equity to stay in control. The larger firms generally are more profitable. Therefore, hypothesis two and three are rejected.

3. The relationship between non debt tax shields and tangibility are positively insignificant correlated with profitability. This indicates that tangibility has a negative influence on profitability. In addition, the non debt tax shield goes the same direction as profitability increases. Companies with low non debt tax shields tend to use high leverage. Therefore hypothesis four and six are rejected.

4. The relationship between liquidity is a negative significantly correlated with profitability. This implies that a unit change in liquidity will decrease the profitability by 296 percent. Therefore hypothesis five is accepted.

B. Recommendation

This study was only focused on Indonesian LQ45 companies and the outcome may not represent all other sectors in Indonesia. Moreover, it would be advisable to add variables for instance short term debt ratio, long term debt ratio, debt to equity ratio and other profitability measurement such as return on equity, earning per share, operating margin and profit margin. The research did not include macroeconomics variables such as inflation and interest rate for further study examination.

REFERENCES

- [1] Biswas, B: Impact of capital structure on profitability: A comparative study on some select public and private fertilizer companies in India. *Sankalpa*, 8(1), 40 (2018).
- [2] Naseem, M. A., Malik, F., & Zhang, H.: Capital structure and corporate governance. *Journal of Developing Areas*, 51(1) (2017).
- [3] Wu Quibing: The Relationship between capital structure and profitability of U.S manufacturing companies: An empirical analysis. Master of Science thesis Morehead State University p.2, 48-49 (2019).
- [4] Negasa, T. : Effect of capital structure on firms' Profitability (Evidenced from Ethiopian).Doi.10.20944/preprint.201607.00013.v.1,p1-9(2016)
- [5] Myer, S. C: Capital structure. *The Journal of Economic Perspectives*, 15(2), 81-102 (2001)
- [6] Rasiyah, D., & Kim, P. K.: A theoretical review on the use of the static trade off theory, the pecking order theory and the agency cost theory of capital structure.*International Research Journal of Finance and Economics*, 63, 150-159(2011).
- [7] Modigliani, F., & Miller, M.: Corporate income taxes and the cost of capital: A correction. *American Economic Review*, 53(3), 443-453(1963).
- [8] Jensen, M., & Meckling, W.:Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360(1976).
- [9] Myers, S. C., & Majluf, N. S.: Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 12, 187-221(1984).
- [10] Myers, S. C.:The capital structure puzzle. *Journal of Finance*, 39, 575-592(1984).
- [11] Saleyi, M., & Biglar, K.:Study of the relationship between capital structure measures and performance: Evidence from Iran. *International Journal of Business and Management*, 4(2), 97–103(2009).
- [12] Alimi, O. Y., Yinusa, O. G., Akintoye, I. R., & Aworinde, O. B. Macroeconomics effects of fiscal policy changes in Nigeria. *Journal of Accounting and Management*, 5(3), 85-94(2016).
- [13] Agha, H.:Determinants of capital structure of cement sector in pakistan. *European Scientific Journal*, 11(13)(2015).
- [14] Yegon, Charles, Cheruiyot, Joseph, Sang, J, & Cheruiyot, P.:The Effects of Capital Structure on Firm" s Profitability: Evidence from Kenya" s Banking Sector. *Research Journal of Finance and Accounting*, 5 (9), 152-159(2014).

-
- [15] Akinyomi, O. J.:Effect of Capital Structure on Firms Performance: Evidence From Nigerian Manufacturing Company. *International Journal of Innovative Research and Studies*, 2 (9), 2319-9725(2013).
- [16] Khalaf Al-Taani.: The relationship between capital structure and firm performance: evidence from Jordan. *Journal of Finance and Accounting*,1, (3), 41-45(2013).
- [17] Zeitun, R. &Tian, G. G.: Capital structure and corporate performance: evidence from Jordan. *Australasian Accounting Business and Finance Journal*. V, I (2007).
- [18] Ashraf, Ameen & Shahzadi, : The impact of capital structure on firms' profitability: A case of cement industry in Pakistan, *International Journal of Business and Social Science*,Vol,8 No.4 pp.140-147, ISSN:2219-1933(print) 2219-6021(online)(2017).
- [19] Esch, Rachel Van and Erick von Schedvin.: "The differences in capital structure between the G-7 countries and the E-7 countries". *International Business Administration* (2011)
- [20] Nyamita, et al.: "How Debt Financing Decisions Relate with Financial Performance of State-Owned Corporation in Kenya. *International Business & Economics Research* Vo.14. No.4(2015)
- [21] Dereeper, Sebastien and Quoc Dat Trinh.:Trade Off Theory or Pecking Order Theory with a State Ownership Structure: Vietnam Case". *International Review of Business Research Papers*. Vol. 11, No.1. pp 114–132(2015).
- [22] Moyo,et al.: Trade-off or Pecking Order: Evidence from South African Manufacturing, Mining, and Retail Firms". *International Business & Economics Research Journal*. Vol.12, No.8 (2013).
- [23] Abor, J.:he effect of capital structure on profitability: an empirical analysis of listed firms in Ghana. *The journal of risk finance*, 6(5), 438-445 (2005).
- [24] Gill, A, Biger, N., & Mathur, N.: The effect of capital structure on profitability: Evidence from the United States. *International Journal of Management*, 28(4), 3-15(2011).
- [25] Zou,H. & Xiao.J.Z.: The Financing behaviour of listed Chinese firms. *British Accounting Review*,38(3),239-258. Doi:10.1016/j.bar.2006.04.008
- [26] Jong et al.: Capital structure around the world: The role of firm and country specific determinants. *Journal of Banking and Finance* 32(9):1954-1969 doi:10.1016/j.jbankfin.2007.12.034(2008).
- [27] Batrakdaruglu,A.et al.: A panel data analysis of capital structure determinants:Empirical results from Turkish capital market. *International Journal of Economics and Finance*. Vol.5, No.4(2013)

- [28] Sayilgan, G., Karabacak, H., Kucukkocaoglu, G.: The Firm-Specific Determinants of Corporate Capital Structure: Evidence from Turkish Panel Data, *Investment Management and Financial Innovations*, 3, 125-137(2006).
- [29] Viviani, J.-L., :Capital structure determinants: an empirical study of French companies in the wine industry. *International Journal of Wine Business Research*,20(2): p. 171-194(2008).
- [30] Ata,H.A., &Ag,A.G.Y.:Firma karakteristiginin sermaye yapisiuzerindeki etkisinin analizi. *Ekonometri ve Istatistik e-Dergisi*, <http://dergipark.gov.tr/iuekois/issue/8984/112081>(2010)
- [31] Mazur, K.: The determinants of capital structure choice: evidence from Polish companies. *International Advances in Economics Research*,13(4), 495-514, <http://doi.org/10.1007/s11294-007-0114-y>(2007)
- [32] Shyam-Sunder, L., Myers, S.C. Testing Tradeoff against Pecking Order Models of Capital Structure, *Journal of Financial Economics*, 51, 219-244(1999).
- [33] Frank, M. Z. & Goyal, V. K.: Corporate leverage: How much do managers really matter? Working paper. University of Minnesota(2007).
- [34] Bagchi,B,: Liquidity-profitability relationship: empirical evidence from Indian fast moving consumer goods firms, *International Journal of Applied Management Science*, 5(4), 355-377(2013)
- [35] MacKie-Mason J.K.: Do taxes affect corporate financing decisions?, *The Journal Journal of Finance*, 45, 1471-1493(1990).
- [36] Gill,A, Nahum,B. & Neil,A.M.: The effect of capital structure on profitability : Evidence from United States, Vol.28, No.4 Part 1(2011)
- [37] Ayad, S., & Mustafa, H. M.:The Effect of capital structure on profitability: an empirical analysis of listed firms in Iraq. *European Journal of Accounting, Auditing and Finance Research*, 3(2), 61-78(2015).
- [38] Ting, I. W. K., & Lean, H. H.: Capital structure of government-linked companies in Malaysia. *Asian Academy of Management Journal of Accounting & Finance*, 1, 137-56(2011).
- [39] Yazdanfar, D.: Profitability determinants among micro firms: evidence from Swedish data. *International Journal of Managerial Finance*, 9(2), 151-160(2013)

The Effect of Environmental Accounting on the Increase in Firm Value

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Abstract

This study aims to analyze the factors of environmental accounting which consist of material inputs, non-product output, compliance aspects, transportation aspects, other aspects, supplier assessment, and environmental complaints mechanisms to increase firm value. The sample in this study was 71 respondents from companies in Banten which were determined based on the purposive sampling method. Then the data were analyzed using multiple linear regression methods. The results showed that environmental accounting which is proxied by non-product output, other aspects, and environmental complaints mechanisms have a significant positive effect on increasing firm value. Furthermore, it was found that there was a significant negative effect between material input and supplier assessment on the increase in firm value. Also, it was found that the compliance aspect had a positive and insignificant effect on the increase in firm value and the transportation aspect had a negative and insignificant effect on the increase in firm value. Finally, the results of this study found that environmental accounting simultaneously has a significant effect on firm value.

Keywords: firm value, environmental accounting, Banten.

I. INTRODUCTION

This research is based on several facts regarding the low awareness of companies in Indonesia in carrying out environmental management responsibilities, especially manufacturing companies in Banten Province. Environmental damage in Banten continues to increase until now, especially damage to agricultural land, destruction of mountains, environmental pollution, destruction of food sources to climate change. This is evident among others in the case of PT. Sentra Usahatama Jaya (SUJ) and the reclamation of Pantai Pulorida in Cilegon, pollution of the Sungai Ciujung, sand mining in the Lebak area, and the potential threat of sea sand mining on the North Coast of Banten [1].

In addition, there was a phenomenon of 418 industries in Tangerang Regency, Banten during the 2014-2018 period which were sanctioned by the Dinas Lingkungan Hidup dan Kebersihan regarding waste pollution. As for the waste pollution carried out by the industry, such as not having a liquid waste permit, chimneys that have an environmental impact and are not treated so that they do not have a TPS (Temporary Storage) [2]. Furthermore, the phenomenon of pollution of the Sungai Ciujung in Serang Regency, whose condition is getting worse with the blackening of the river, is caused by PT. Indah Kiat Pulp & Paper, which made Wahidin Halim (Governor of Banten) impose sanctions and report violations of the Law as of July 10, 2019, to be tried in court [3].

Sustainability, shifting the company's paradigm is no longer about profit, but about the company's going concern. Companies must focus on so that the operations carried out are beneficial to the community around the company (people), the environment around the company (planet), and finally the profit expected by the company (profit). This concept is known as the triple bottom line [4]. Especially for environmental aspects, it can be realized through the application of environmental accounting.

Besides, the application of environmental accounting can identify environmental costs that are often hidden in the accounting system in general [5]. The application of environmental accounting by a company will have a positive impact on the company itself in increasing company profits and value in the eyes of the community. Environmental accounting provides a more comprehensive approach than conventional accounting, this can be seen from the attention to non-reciprocal transactions such as pollution, environmental damage, or negative things from company activities [6]. The company's value is marked by a good image and image for the surrounding community so that the community can give legitimacy to support the company's operational activities. The company has a long-term goal to increase the value of

the company by increasing the prosperity of its owners or shareholders [7]. Firm value is investors' perception of value, which is often related to the company's stock price. Firm value also describes the financial performance carried out by management in managing their finances [8].

Accounting research regarding corporate environmental accounting is still relatively rare, especially in Indonesia, existing research only measures environmental accounting based on secondary data sourced from company annual reports, such as [9], [10], [11], [12]. But unfortunately, the research conducted is not deep, it only focuses on items that are disclosed in the company's annual report without showing how much the company's environmental performance has been carried out.

Therefore, a more in-depth research is needed with direct observation and interview approaches and questionnaires related to the application of environmental accounting using indicators adopted from derivatives of the Global Reporting Initiative (GRI) version 4.0 using 7 variables consisting of 12 dimensions with 17 indicators. and refer to research [13]. The seven variables are material input, non-product output, compliance aspects, transportation aspects, other aspects, supplier assessment, and environmental complaint mechanisms. Thus, a common thread can be found between environmental accounting and the increase in firm value in Banten.

This research was conducted to answer the formulation of the problems found, namely:

1. Does environmental accounting which is proxied by material input affect the increase in firm value ?;
2. Does environmental accounting which is proxied by non-product output affect the increase in firm value ?;
3. Does environmental accounting, which is proxied by the aspect of compliance affect the increase in firm value ?;
4. Does environmental accounting which is proxied by the transportation aspect have an effect on the increase in firm value ?;
5. Does environmental accounting which is proxied by other aspects affect the increase in firm value ?;
6. Does environmental accounting which is proxied by supplier assessment have an effect on the increase in firm value ?;
7. Does environmental accounting, which is proxied by the environmental complaint mechanism affect the increase in firm value ?;

8. Does environmental accounting which consists of material input, non-product output, compliance aspects, transportation aspects, other aspects, supplier assessment, and environmental complaint mechanisms simultaneously affect the increase in company value?.

The research literature which is the basis of reference for the use of this research variable is as follows [13], [14]. Based on previous research and the discussion that has been submitted, the researcher draws the following hypothesis:

- H1. Input material influences the increase of firm value;
- H2. Non-product output influences the increase of firm value;
- H3. The compliance aspect influences the increase of firm value;
- H4. The transportation aspect influences the increase of firm value;
- H5. Other aspects influence the increase of firm value;
- H6. Supplier assessment influences the increase of firm value;
- H7. The environmental complaint mechanism influences the increase of firm value;
- H8. Environmental accounting which consists of material input, non-product output, compliance aspects, transportation aspects, other aspects, supplier assessment, and environmental complaint mechanisms simultaneously influences the increase of firm value.

II. RESEARCH METHOD

The population in this study were all manufacturing companies located in Banten for the 2016-2018 period, totaling 1,695 companies. Based on the purposive sampling method that has been determined previously, obtained a sample of 71 respondents from 5 companies that have been determined as follows: PT. Polychem Indonesia, Tbk. (ADMG), PT. Japfa Comfeed Indonesia, Tbk. (JPFA), PT. Malindo Feedmill, Tbk. (MAIN), PT. Charoen Pokphand Indonesia, Tbk. (CPIN) and PT. Gajah Tunggal, Tbk. (GJTL).

The types of data used in this study are primary data obtained through surveys, direct interviews and questionnaires, and secondary data obtained through financial reports and company annual reports for the 2016-2018 period. Furthermore, testing the data using the SPSS (Statistical Package for Social Science) software version 26.0. Reference in processing research data using sources from [15], [16], [17], [18], [19]. Analysis of research data using multiple linear regression analysis by the following equation:

$$FV_{it} = \alpha_0 + \alpha_1 MAI_{it} + \alpha_2 NPO_{it} + \alpha_3 KEP_{it} + \alpha_4 TRA_{it} + \alpha_5 LAI_{it} + \alpha_6 PEM_{it} + \alpha_7 MPL_{it} + E_{it}$$

Keterangan:

FV	: Firm Value (Nilai Perusahaan)
α_0	: Constant
$\alpha_1, \alpha_2, \alpha_3, \alpha_4, \alpha_5, \alpha_6, \alpha_7$: Coefficient
MAI	: Input Material
NPO	: Non-Product Output
KEP	: Compliance
TRA	: Transportation
LAI	: Others
PEM	: Supplier Assessment
MPL	: Environmental complaint mechanism
E	: Standard Error

III. RESULT AND DISCUSSION

After all samples were processed using the analysis method mentioned above, the following results were obtained:

Table 3.1 Results of the Research Instrument Validity Test

Question	t-count	t-table	N	Description
Question 1	0,625	0,234	71	Valid
Question 2	0,624	0,234	71	Valid
Question 3	0,633	0,234	71	Valid
Question 4	0,620	0,234	71	Valid
Question 5	0,778	0,234	71	Valid
Question 6	0,790	0,234	71	Valid
Question 7	0,710	0,234	71	Valid
Question 8	0,757	0,234	71	Valid
Question 9	0,772	0,234	71	Valid
Question 10	0,795	0,234	71	Valid
Question	0,697	0,234	71	Valid

11				
Question 12	0,747	0,234	71	Valid
Question 13	0,671	0,234	71	Valid
Question 14	0,718	0,234	71	Valid
Question 15	0,708	0,234	71	Valid
Question 16	0,738	0,234	71	Valid
Question 17	0,641	0,234	71	Valid

Based on the results of running the research instrument validity test in Table 3.1 above, it can be seen that the values in the Corrected Item-Total Correlation (r-count) column are all greater than the r-table value, namely, 0.234 obtained from the equation value ($df = n - 2$), it is known that for a total sample (n) of 71, $df = 71 - 2 = 69$ is obtained. Based on the value in the r-table for df 69 with a significance level for the two-way test of 5% of 0.234. Therefore, it can be concluded that all the data used are valid.

Table 3.2 Reliability Test Results

Reliability Statistics

<i>Cronbach's Alpha</i>	<i>N of Items</i>
.948	17

Based on Table 3.2 above, the reliability test that has been carried out in this study is the alpha Cronbach's value of 0.948. To find out this reliability test, we refer to the book [16] which groups the scale into 5 (five). Cronbach's alpha value of 0.948 is included on a scale of 5, namely Cronbach's alpha value of 0.81 to 1.00, which means that this study is very reliable.

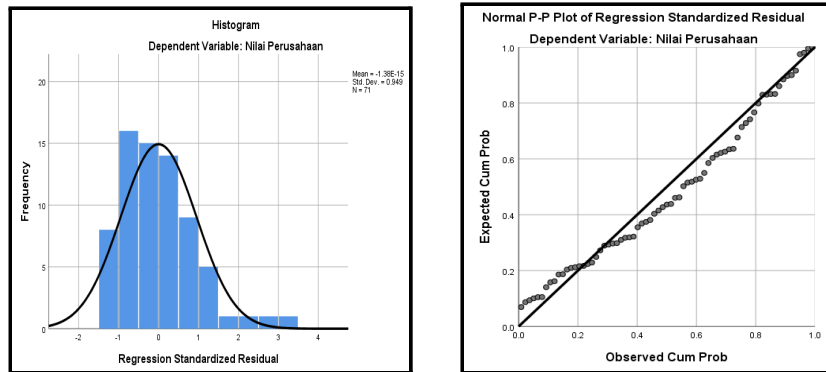


Figure 3.1 Normality Test Results

Based on the results of running research data, the normality test results were obtained in the analysis of the normal histogram and p-plot graph test as shown in Figure 3.1 above. The histogram graph test has a graph like a bell shape or does not experience skewness to the left or right. Furthermore, the p-plot graph test analysis shows that the dots spread around the diagonal line, and the distribution follows the direction of the diagonal line. This regression model is feasible to be used to predict firm value based on the input of material input variables, non-product output, compliance, transportation, other aspects, supplier assessment, and environmental complaint mechanisms as a proxy for the application of environmental accounting. Thus, this regression model fulfills the normality assumption.

Table 3.3 Data Normality Test Results
One-Sample Kolmogorov-Smirnov Test

		<i>Unstandardize d Residual</i>
<i>N</i>		71
<i>Normal Parameters^{a,b}</i>	<i>Mean</i>	.0000000
	<i>Std. Deviation</i>	.57780318
<i>Most Extreme Differences</i>	<i>Absolute</i>	.089
	<i>Positive</i>	.089
	<i>Negative</i>	-.062
<i>Test Statistics</i>		.089
<i>Asymp. Sig. (2-tailed)</i>		.200 ^{c,d}

The results of the normality test using the Kolmogrov-Smirnov statistical test are by looking at the Kolmogrov-Smirnov value and the significance of the processed data. From Table 3.3 above, it can be seen that the magnitude of the Kolmogrov-Smirnov value (statistical test) is 0.089 and significant at 0.200 or 20.0%, this means that the residual data is normally distributed because the significance is above 0.05 or 5%.

Next, Table 3.4 below describes the results of the multicollinearity test with the tolerance test results showing that no independent variable has a tolerance value of less than 0.10 (10%). The results of the Variance Inflation Factor (VIF) calculation also show that there is no one independent variable that has a Variance Inflation Factor (VIF) value of more than 10. Therefore, it can be concluded that there is no multicollinearity between variables in the regression model.

Table 3.4 Multicollinearity Test Results

Model		Tolerance	VIF
1	(Constant)		
	MAI	.271	3.696
	NPO	.216	4.621
	KEP	.482	2.075
	TRA	.397	2.517
	LAI	.423	2.367
	PEM	.401	2.493
	MPL	.509	1.967

The results of the heteroscedasticity test of this study can be seen in Figure 3.2 as follows:

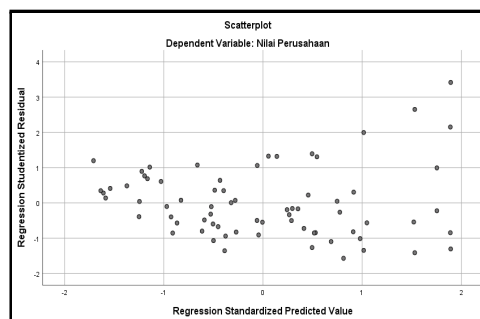


Figure 3.2 Heteroscedasticity Test Results

Based on Figure 3.2 above, it can be seen that there is no clear pattern, and the dots spread above and below the 0 on the Y-axis. Therefore, it can be concluded that there is no heteroscedasticity between the variables in the regression model.

Table 3.5 T-Test Result

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficient	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.727	.585		2.951	.004
Input Material	-2.187	.554	-1.116	-3.949	.000
Non Product Output	.961	.536	.598	1.793	.078
Compliance	.014	.254	.011	.056	.956
Transportation	-.182	.289	-.104	-.630	.531
Others	1.74	.416	.895	4.179	.000
Supplier Assessment	0	.283	-.548	-3.146	.003
Environmental Complaint Mechanism	-.891	.176	.268	1.940	.057

a. Dependent Variable: Nilai Perusahaan

Based on Table 3.5 above, it can be seen that the variable non-product output (NPO), others (LAI), and environmental complaint mechanism (MPL) have a significance level of 0.078, 0.000; and 0.057 is less than 10% (<0.10) which indicates Hypothesis 2, Hypothesis 5, and Hypothesis 7 are ACCEPTED. This means that the application of environmental accounting through non-product output, etc., and environmental complaint mechanisms can be proven to have a significant positive effect on firm value. In addition, it was found that the input material variables (MAI) and supplier assessment (PEM) had a significance level of 0.000 and 0.003 <0.10 which indicated that Hypothesis 1 and Hypothesis 6 were ACCEPTED. These results indicate that the application of environmental accounting through material input and supplier

assessment can be proven to have a significant negative effect on firm value. However, the compliance variable (KEP) has a significant level of $0.956 > 0.10$ which means that Hypothesis 3 is DENIED, meaning that the application of environmental accounting through the compliance aspect has a positive but insignificant effect on firm value and the transportation variable (TRA) has a significant level of $0.531 > 0, 10$ which means that Hypothesis 4 is DENIED, meaning that the application of environmental accounting through the transportation aspect has a negative but insignificant effect on the increase in firm value.

Table 3.6
F-Test Result
ANOVA^a

	<i>Model</i>	<i>Sum of Square</i>	<i>Df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
1	<i>Regression</i>	24.771	7	3.539	9.540	.000 ^b
	<i>Residual</i>	23.370	63	.371		
	<i>Total</i>	48.141	70			

- a. Dependent Variable: Nilai Perusahaan
b. Predictors: (Constant), Material Input, Non Product Output, Kepatuhan, Transportasi, Lain-lain, Asesmen Pemasok, Mekanisme Pengaduan Lingkungan

Based on Table 3.6 above, it can be seen that the application of environmental accounting through variable material input (MAI), non-product output (NPO), compliance (KEP), transportation (TRA), others (LAI), supplier assessment (PEM), and the environmental complaint mechanism (MPL) simultaneously has a significant effect on increasing firm value so that Hypothesis 8 is ACCEPTED. This is evidenced by the test results in Table 3.6 above, where the significance level of 0.000 is smaller at $\alpha = 0.05 (<0.05)$. Thus, the application of environmental accounting which consists of material inputs, non-product output, compliance, transportation, etc., supplier assessment, and environmental complaint mechanisms jointly affect the increase in firm value.

IV. CONCLUSION

Input material and supplier assessment have a significant negative effect on the increase in firm value. Non-product output aspects, other aspects, and environmental complaint mechanism aspects have a significant positive effect on increasing firm value. In contrast, the compliance and transportation aspects have a positive and negative effect but not significant. Furthermore, based on the results of simultaneous testing (F test), it can be concluded that the application of environmental accounting through the material input aspects, non-product output aspects, compliance aspects, transportation aspects, other aspects, supplier assessment aspects, and environmental complaint mechanism aspects simultaneously have significant influence towards increasing firm value.

The application of environmental accounting is measured through direct surveys, interviews and distributing questionnaires which become novelty / renewable and answer gaps related to the application of environmental accounting, which so far is mostly measured from secondary data (company annual reports). The level of success and quality of the company's environmental accounting application is not only measured by the presentation in the company's annual report but can also be measured from the opinions of stakeholders (employees) as reflected in the answers to questionnaires and the results of surveys and direct interviews.

REFERENCES

- [1] Admin: Pemerintah Didesak Atasi Persoalan Kerusakan Lingkungan di Banten. Fakta Banten. [diakses 09 Agustus 2020]. <http://faktabanten.co.id/pemerintah-didesak-atasi-persoalan-kerusakan-lingkungan-di-banten/> (2017)
- [2] Irfan, A: 418 industri di Tangerang disanksi terkait pencemaran limbah. Antara Banten. [diakses 09 Agustus 2020]. <https://banten.antaranews.com/berita/37601/418-industri-di-tangerang-disanksi-terkait-pencemaran-limbah> (2019)
- [3] Mahyadi: Sungai Ciujung Tercemar, Gubernur Banten Minta Industri Diseret ke Pengadilan. Banten Hits. [diakses 09 Agustus 2020]. <https://bantenhits.com/2019/07/11/sungai-ciujung-tercemar-gubernur-banten-minta-industri-diseret-ke-pengadilan/> (2019)
- [4] Elkington, J: Cannibals with Forks : The Triple Bottom Line of 21st Century Business. Oxford: Capstone Publishing Ltd (1997)

-
- [5] Ikhsan, A: Akuntansi Lingkungan dan Pengungkapannya. Yogyakarta : Graha Ilmu (2008).
- [6] Rustika, N: Analisis Pengaruh Penerapan Akuntansi Manajemen Lingkungan dan Strategi terhadap Inovasi Perusahaan-Studi Empiris pada Perusahaan Manufaktur yang Terdapat di Jawa Tengah. Semarang: Universitas Diponegoro (2011)
- [7] Wahidahwati: Kepemilikan Manajerial dan Kepemilikan Intitusal pada Kebijakan Hutang Perusahaan ; Sebuah Perspektif Theory Agency. Simposium Nasional Akuntansi (SNA) IV (2002)
- [8] Suroto, S: Pengaruh Keputusan Investasi, Keputusan Pendanaan, dan Kebijakan Dividen terhadap Nilai Perusahaan. Vol. 4 (3) (2015)
- [9] Anjarwasana: Pengaruh Environmental Management Accounting (EMA) terhadap Nilai Perusahaan dengan Kinerja Keuangan sebagai Variabel Intervening. Universitas Katolik Widya Mandala (2018)
- [10] Ningsih, W.F. & Rachmawati: Implementasi Green Accounting dalam Meningkatkan Kinerja Perusahaan. Journal of Applied Business and Economics, 4(2). pp. 149-158 (2017)
- [11] Wailanduw & Handayani: Pengaruh Mediasi Pengungkapan Lingkungan pada Pengaruh Akuntansi Lingkungan dan Kinerja Lingkungan terhadap Nilai Perusahaan. Universitas Negeri Surabaya (2016)
- [12] Suka: Efektivitas Akuntansi Lingkungan dalam Meningkatkan Nilai Perusahaan. Universitas Muhammadiyah Yogyakarta (2015)

The Effect of Working Capital Financing to the Corporate Performance and the Impact of Financial Constraints in Indonesia Manufacturing Industry

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Abstract

The aim of this research is to gain empirical evidence about the effect of Working Capital Financing to the Corporate Performance of the firms in Jakarta Composite Index (JCI) during the years 2010 – 2018 directly and under the impact of the moderator variable. The moderator variable used Financial Constraints. The Corporate Performance as the dependent variable was calculated by using Return on Assets (ROA) and Tobin's Q (Q), the Working Capital Financing was calculated by using certain WCF formula, while the Financial Constraints was calculated by using dummy variable that involve some criterias which comprise Firm Size, Cash Flow, and Interest Coverage Ratio. The object of the study is the firms available in JCI in 9 consecutive years and then according to certain aspects. The number of samples should have reliable and qualified financial reports from year 2010 to 2018. Eventually, according to the data analysis and hypothesis testing, this research represented the following results : Working Capital Financing has no significant effect to the Corporate Performance, Working Capital Financing has no significant effect to the Corporate Performance under the Impact of Financial Constraints, Firm Size, Firm Leverage and Firm Growth has significant effect to the Corporate Performance, then Current Ratio has no significant effect to the Corporate Performance.

Keywords: Working Capital Financing, Financial Constraints, Firm Size, Firm Leverage, Firm Growth, Current Ratio, ROA, Tobin's Q.

I. INTRODUCTION

Denis (2019) describes that generally shareholder value maximization still remains the primary objective among business people and academic experts. The goal of corporations is to serve the interest of shareholders. The management challenges for business exist, in terms of to reorganize the production, diversification, and business activities adjustment. In an attempt to have a great unique selling point, managers should realize the key issues of corporate finance and working capital financing.

In recent times, Van et al (2019) states one of the most essential factors in financial settlement is working capital management. Every sector has a distinctive characteristic of working capital. In practical terms, the manufacturing sector has more complicated elements of working capital than the others. It is because the manufacturing industry experiences the workflow from producing raw materials into intermediary goods then converted into finished goods. The studies on Working Capital has been conducted by several researchers and academicians.

Gracia (2018) states that working capital management that has relation to cash flow is one of the objections especially in manufacturing companies. Normally, working capital explains recent circumstances, whereas cash flow is the method of measuring whether the firm is able to generate cash over a certain given time period. In the computation, working capital is derived from the differences between current assets and current liabilities, then also equals net working capital. In case of negative working capital (asset is lesser than debt), then the short term cash flow will be affected. Caballero et al (2016) states in regard to optimal level of working capital, it mostly depends on the firm financial situation. That financial situation is portrayed by financial constraints. The optimal level of working capital with no financial constraints is higher than the other one that has financial constraints.

Caballero et al (2016) also furtherly explain the factors involving the financial constraints are cash flow, size, leverage, and Z-score. It is clear that firms which are encountering financial constraints have dramatically scale down the frequency of adopting credit compared to growing firms. According to Altaf & Ahmad (2019), the differences of current assets and current liabilities is called Working Capital. The management of the company needs to compare the values and make the decision whether the firm needs to finance its working capital requirements in case the values of current assets are higher than

current liabilities. Generally there are 2 ways of generating working capital strategy. The first one is in regard to conservative working capital management strategy.

When the company allocates a bigger budget on current assets which are financed by using litter percentage of short term sources of funds. The benefit of using this strategy is to decrease both the financing and risk of interest while this approach might impose the company to bear the great level of expense of liquidity. On the other hand, the second one is about aggressive working capital management strategy by utilizing lower levels in current assets which are supported by using the big percentage of short term sources of funds. Therefore, the advantage of applying the second approach is lowering the financing cost and agency costs, whereas the strategy can force the company to bear the great expense of illiquidity.

Caballero et al (2016) examine the presence of the optimal level of working capital and confirm target behavior for more developed countries such as in ASEAN. According to our knowledge very small study has been conducted in this issue in the emerging market scenario for fairly enough data. Therefore, the author strives to fill the gap in this research. Altaf & Ahmad (2019) describes that the impact of Working Capital Financing to the Firm Performance can be interrupted by the Financial Constraints. However Altaf & Ahmad (2019) found the result that Working Capital Financing and Corporate Performance build inverted U-shape relationships. In addition, Caballero et al (2016) also conducted the research and the result has come out as relationships which form U-shape invertedly among financing activities of Working Capital and Firm Performance.

However, Laghari & Chengang (2019) conducted the study in Asian Region and the purpose is to explore the non linear relationship that occurred between Working Capital Management and Corporate Performance. The final result represents how can Working Capital affect the Corporate Performance in inverted U-Shape form. Kaushik & Chauhan (2019) implies how the role of financial constraints is able to interfere with the relationship between them. By conducting research for 9 years and using Net Trade Cycle, Accounts Payable Days, Accounts Receivable Days, and Inventory Days. The result is almost similar to the others which come up with inverted U-shape between Working Capital Management and Firm Performance. In Indonesia, very few studies have been conducted and available which evaluate the relationship between working capital management and firm profitability but none of the researchers analyze the impact of financial constraints on the working capital.

However, in short, this research reanalyze and resolve the association among investment in working capital and firm performance, then followed by the potential consequence of financial constraints on it.

II. THEORETICAL BASIS

A. Working Capital Financing and Corporate Performance

Altaf & Ahmad (2019) explains that it is clear about working capital which has to be financed. If the working capital requirement is higher, then means more capital needs to be financed. The companies are able to choose whether to support its working capital using short-term or long-term sources. There are some benefits and costs tradeoff on each. On the other hand, the finance manager has to know and decide about the level of investment involved, sometimes called working capital policy.

The aggressive working capital policy can be described as high risk and reward policy. In relation to that policy, it is suitable for companies in stable-generating income and operates in steady market conditions. The firms invest a tiny portion on current assets, but highly dependant on current liabilities. On the other side, if the firm utilizes a conservative one which is conservative working capital policy, or it can be called a low risk and reward profile.

Caballero et al (2016) declares about the trade off among the benefits and drawbacks of utilizing short-term credit. The proportion of working capital used in the short term. Then, Caballero et al (2016) informs that the impact of using short term credit might also carry some drawbacks to the corporate performance, the impact which is negative as the greater short term financing is the consequence of refinancing and interest risk. Logically, it has become hard for the companies to renew their short-term liabilities and might contribute greater interest rates payment on new credits. It is very essential for the managers to know the proportion given to the short-term credit in attempt to finance its working capital, in one side while a small proportion of working capital is supported by short term credit, the corporate performance might rise as the benefits dominate rather than costs, then bring a positive impact to the performance. Whereas, while a greater percentage of short-term loans is utilized to support working capital, the costs become dominant rather than benefits, then lead to negative impact to the performance.. Therefore, there should be an inverted U-Shape relationship between working capital financing and firm performance which is non-linear.

Panda & Nanda (2018) furtherly explains in case of firms using conservative strategy of working capital management by keeping more current assets might face large liquidity costs, besides, the conservative strategy of working capital management by keeping less current assets might take companies to meet great costs of illiquidity. These positive and negative impacts show tradeoff among costs and benefits of working capital investment. However, it is possible for the management to create working capital that reaches its optimum. Firms are able to rise profits with the support of efficient management of current assets and current liabilities with no liquidity issues.

B. Working Capital Financing to the Corporate Performance under the Impact of Financial Constraints

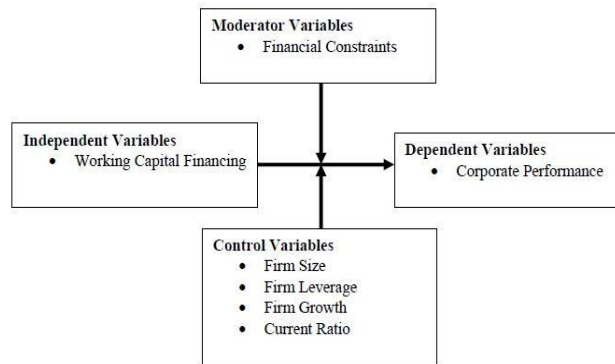


Fig. 1. Conceptual Framework.

Source : Author (2020)

As explained on Figure 1, Altaf & Ahmad (2019) also declares that the proportion of short term credit used will bring each cost and benefit and can be a determinant for the relationship among working capital management and corporate performance. In this case, it is necessary to know that the percentage of short term credit utilized to financially support working capital depends on the rate of financial constraints encountered by the company. Investment in working capital is more sensitive or susceptible to finance constraints rather than fixed capital investment. As explained by Caballero et al (2016) that companies that receive lesser financial constraints are in a good position to derive short term liabilities from bank or creditor on better terms, furthermore they can get smaller interest and risk of refinancing.

Cabarello et al (2016) agree about the existence of an optimal level of working capital investment, more or less likely firms will encounter financing constraints. That is the result of inverted U-shaped relation among working capital and firm performance. Even in recent times, businesses live in a frictionless world, obtaining external financing is still not easy as gain internal financial support, there are some factors that need to be considered. In relation to working capital financing, investment in working capital depends on the firm's financing situations. It also means that companies which have better internal financing capability and access to capital markets might get a greater level of working capital.

According to Cabarello et al (2016). There are some proxies in order to measure financial constraints which comprise:

1. Interest Coverage Ratio

Altaf & Ahmad (2019) states that Interest Coverage Ratio computes the degree of bankruptcy risk and also financial constraints. This kind of ratio is measured by dividing the ratio of earnings before interest and tax with financial costs (interest expenses). Literally, the greater the ratio will lead to lesser difficulty to repay its liabilities. In this case, less financially constrained companies are indicated by having interest coverage ratio over the sample medians and vice versa.

2. Cash Flow

Cabarello et al (2016) explains that the other aspect of financial constraints could help the managers to clearly analyze the role of cash flow to the relationship between working capital management and corporate performance. In this case, companies that come out with cash flow above the sample of median are categorized to be less likely to experience financial constraints.

Van et al (2019) also declares the utilization of cash flow to finance investment activities. Cash Flow Indicator (CFI) was established by the ratio of income before interest and tax plus depreciation, then divided by total assets. The firms which come with low levels of cash flow will tend to encounter financial constraints (DFC is indicated with 1) and vice versa.

3. Size

Based on Altaf & Ahmad (2019) size is used as an inverse approach of financial constraints. Smaller companies are indicated to be more financially constrained caused by information asymmetry and greater agency costs. Conversely, bigger companies will have greater access to capital markets, therefore they encounter smaller constraints of borrowing and smaller interest rates as external financing costs.

Less financially constrained firms are represented by the size above the sample median and vice versa.

Panda & Nanda (2018) explains that the firms with small financial constraints can use short-term funding sources to finance their working capital without affecting the profitability of the company and minimize the negative impact that can arise on working capital financing using short-term funding sources.

III. DATA AND METHOD

A. Data and Data Sources

In order to examine the effect of working capital financing on corporate performance and to analyze whether the company financing of working capital with short-term debt according to the tendency of the firm being constrained. In this research, the author utilized a set of panel data of 134 Indonesia Manufacturing Firms. Then, the financial information of these companies have been gathered for a 9 years period (2010 – 2018). Moreover, the firms shaping the part of the sample are index participants of the JCI (Jakarta Composite Index) as a benchmark of Indonesia Capital Market. The Jakarta Composite Index (JCI) comprises a total of hundreds firms across different industries. It is clear that JCI is the whole index of Indonesian economy expressing full market capitalization. Therefore, contributing image to entire industries and sectors in Indonesian economy.

The authors utilize a sample selection method which is classified as a non-probability method, the technique is purposive sampling. The authors pursue systematic sorting in an attempt to obtain an effective final sample. There are some criterias which are used by the author to sort the data that consist of manufacturing sector firms listed on Indonesian Stock Exchange from 2010 until 2018, the firms which have sufficient financial statements issued on 31 December 2010 – 2018, then the firms which have sufficient data to compute the research variables. The final sample of the research has been selected by terminating some undercapitalized firms and incomplete financial data firms. Hence, this elimination left us with a final number of samples of 90 firms.

B. Research Models and Variables

In regard to analyzing the effect of working capital financing on corporate performance and to find whether the company's financing of working capital with short-term debt according to the possibility of the company being constrained. In this study, the authors utilize two proximities of performance, the first one is accounting based and the second one is market based. The first one which is accounting based performance is calculated by Return on Assets. In addition, market based performance is computed by Tobin's Q. Furthermore, Working Capital Financing (WCF) variable is used for measuring proportion of short term debt in order to finance working capital.

For measuring non linear relationship among WCF and corporate performance, the authors utilize WCF² as the variable on the models. As stated by Cabarello et al (2016), especially for those who show positive working capital, it is necessary to be funded. In addition, for diminishing the bias which could be occurred on account of eliminated variables,

the author controls for other company attributes by involving firm size, firm leverage, firm growth and current ratio as the control variables.

C. Baseline Specification

According to the research literature, it is necessary to know the reasonable cause of the non monotonic relationship between working capital financing and corporate performance. The authors conduct the regression analysis for the corporate performance variables against the WCF variable accompanied by its square of WCF. The purpose of this action is to test positive and negative effects of WCF to the corporate performance. Moreover, the control variables are also employed in the model, therefore the model can be estimated as below :

$$ROA_{i,t} = \beta_0 + \beta_1 WCF_{i,t} + \beta_2 WCF^2_{i,t} + \beta_3 Size_{i,t} + \beta_4 Levi_{i,t} + \beta_5 Growth_{i,t} + \beta_6 CRI_{i,t} + \gamma_t + \delta_i + \epsilon_{i,t} \quad (1)$$

Then, the second model comprises similar kind of independent variables, in this case, the dependent variable use market based performance which is Q (Tobin's Q), therefore the model is estimated as below :

$$Q_{i,t} = \beta_0 + \beta_1 WCF_{i,t} + \beta_2 WCF^2_{i,t} + \beta_3 Size_{i,t} + \beta_4 Levi_{i,t} + \beta_5 Growth_{i,t} + \beta_6 CRI_{i,t} + \gamma_t + \delta_i + \epsilon_{i,t} \quad (2)$$

The measured variables in the model are expressed in Table 1 :

Table 1. Summary of Variables Measurement.

Variable	Acronym	Definition
<i>Dependent Variables :</i>		
Return on Assets	ROA	Net Income / Total Assets
Tobin's Q	Q	(Market Value + Total Liabilities) / Total Assets
<i>Independent Variables :</i>		
Working Capital Financing	WCF	Short Term Liabilities / (Current Assets – Current Liabilities)
Working Capital Financing Squared	WCF ²	Square of WCF

<i>Control Variables :</i>		
Firm Size	Size	Ln (Total Assets)
Firm Leverage	Lev	Total Debt / Total Assets
Firm Growth	Growth	(Current Sales / Previous Sales) – 1
Current Ratio	CR	Total Current Assets / Total Current Liabilities

Source : Author (2020)

The equation 1 consists of variables which are the same as presented in Table 1. The variable γ_t can be explained as time dummy variable, δ_i shows each company's unobservable individual effects, then $\epsilon_{i,t}$ represents random disturbances.

As stated in the previous section, using the smaller proportion of short term debt to fund working capital, corporate performance might increase as a result of the benefits greater than expenses. Interestingly, outside a certain level, exploiting short term debt might bring damage as a result of expenses greater than benefits. In this study, the authors expect positive coefficient to the WCF and negative coefficient to WCF². In addition, break even point (inflection point) outside where the short term loan financing contains the negative effect to the corporate performance is represented by this following formula : $-\beta_1 / 2 \beta_2$.

IV. RESEARCH RESULTS AND DISCUSSION

A. Descriptive Statistics and Correlation Analysis

The Figure 2 represents the descriptive statistics of the variables which are implemented in the research. The value of mean for ROA is 0.047, then followed by Q value by 0.839. In addition, the authors found the median of WCF is 0.711, meaning that Indonesian manufacturing firms finance 71.1 % of their working capital utilized from short-term debt in general. Interestingly, it is clear that working capital financing policy among firms are heterogeneous. Then, the size on average has a value of 28.341. The mean value of leverage is approximately 0.548. Furthermore, the mean liquidity ratio has a value of 2.412. These values are slightly different from previous studies which one of them has been conducted by Altaf & Ahmad (2019).

In this study, the authors also consider the possibility of multicollinearity occurrence. The common threshold is established at 0.80. According to Altaf & Ahmad (2019)

multicollinearity will not be the issue as long as correlation coefficients on the independent variables greater than 0.80 as threshold as expressed in Figure 3.

The descriptive statistics are provided as below :

	ROA	Q	WCF	Size	Lev	Growth	CR
Mean	0.047371	0.839035	6.004977	28.34138	0.548207	0.038359	2.411833
Median	0.035354	0.721901	0.711234	28.14286	0.500528	0.076873	1.536792
Maximum	0.920997	5.076499	573.9926	33.47373	4.350340	0.947864	85.40926
Minimum	-0.755766	0.128155	-74.84069	22.75774	0.039549	-3.703093	0.021358
Std. Dev.	0.114927	0.657285	40.90433	1.642094	0.424657	0.290831	3.628689
Skewness	0.286760	2.933490	8.680723	0.297047	3.720054	-5.038633	15.49641
Kurtosis	14.61666	13.55974	91.56036	3.210250	23.12587	52.96200	344.6984
Jarque-Bera	4503.557	4858.237	271139.2	13.22185	15327.67	86483.51	3919041
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	37.84950	670.3892	4797.977	22644.76	438.0171	30.64916	1927.055
Sum Sq. Dev.	10.54011	344.7553	1335185	2151.784	143.9060	67.49690	10507.57

Fig. 2. Descriptive Statistics.

Source : Author (2020)

Then, correlation coefficients among independent variables are provided as below :

	ROA	Q	WCF	Size	Lev	Growth	CR
ROA	1.000000	-0.422640	0.013247	0.207228	-0.284838	0.200872	0.101480
Q	-0.422640	1.000000	-0.021195	-0.310287	0.678584	-0.145089	-0.122339
WCF	0.013247	-0.021195	1.000000	0.007766	0.006336	0.025955	-0.050444
Size	0.207228	-0.310287	0.007766	1.000000	-0.137799	0.079329	-0.170036
Lev	-0.284838	0.678584	0.006336	-0.137799	1.000000	-0.078681	-0.218109
Growth	0.200872	-0.145089	0.025955	0.079329	-0.078681	1.000000	-0.011735
CR	0.101480	-0.122339	-0.050444	-0.170036	-0.218109	-0.011735	1.000000

Fig. 3. Correlation Matrix.

Source : Author (2020)

B. Multiple Regression Analysis

The Table 2 shows the value of coefficient of determination (Adjusted R²). According to the table, the results derived that the Adjusted R² in this research model is 0.139000 or 13.90%, this shows that the Corporate Performance (ROA) is able to be explained by 13.90% by Working Capital Financing (WCF & WCF²). Furthermore, the rest which amounting to

86.10% (100% - 13.90%) is explained by other variables beyond this model. According to the results in Table 2, it is clear that the F value is 22.47 accompanied by its significance value of $0.0000 < \alpha (0.10)$. Hence, the independent variable in this model which is Working Capital Financing (WCF & WCF²) has a significant effect on the dependent variable (ROA as corporate performance). Table 2 represents that the variable Working Capital Financing (WCF) has a regression coefficient value of -0.000161 with significance level of $0.487 > \alpha (0.10)$. In addition, the variable Working Capital Financing Squared (WCF²) has a regression coefficient value of 5.40 with significance level of $0.352 > \alpha (0.10)$. According to the regression coefficient value and the significance value, hence Working Capital Financing (WCF) has no direct significant effect to the Corporate Performance in Indonesia Manufacturing Industry. Table 2 shows that the variable Size has regression coefficient value of 0.012333 with significance level $0.0000 < \alpha (0.10)$. Based on the regression coefficient value and the significance value, hence Firm Size has a direct significant effect on the Corporate Performance in Indonesia Manufacturing Industry. Table 2 shows that the variable Leverage has regression coefficient value of -0.062250 with significance level $0.0000 < \alpha (0.10)$. Based on the regression coefficient value and the significance value, hence Firm Leverage have a direct significant effect on the Corporate Performance in Indonesia Manufacturing Industry. Table 2 shows that the variable Growth has regression coefficient value of 0.067135 with significance level $0.0000 < \alpha (0.10)$. Based on the regression coefficient value and the significance value, hence Firm Growth has a direct significant effect to the Corporate Performance in Indonesia Manufacturing Industry.

Table 2. The Effect of Working Capital Financing to the Corporate Performance.

	Dependent Variable : ROA	Dependent Variable : Q
	PLS	PLS
(1)	(2)	(3)
C	-0.276955 (0.0001)	2.827154 (0.0000)
W	-0.000161 (0.4872)	-0.001000 (0.3168)
CF		
W	5.40 (0.3516)	1.73 (0.4878)
CF		
z		
Siz	0.012333 (0.0000)	-0.088451 (0.0000)
e		

Lev	-0.062250 (0.0000)	0.981204 (0.0000)
Gr	0.067135 (0.0000)	-0.163217 (0.0027)
owt		
h		
CR	0.002644 (0.0156)	-0.004261 (0.3646)
Adj	0.139000	0.518281
ust		
ed		
R ²		
F-s	22.47159	144.2736
tati		
stic		
Pro	0.000000	0.000000
b		
(F-		
stat		
)		

Source : Author (2020)

The Table 2 expresses the value of coefficient of determination (Adjusted R²). According to the table, the results derived that the Adjusted R² in this research model is 0.518281 or 51.83%, this shows that the Corporate Performance (ROA) is able to be explained by 51.83% by Working Capital Financing (WCF & WCF²). Furthermore, the rest which amounting to 48.17% (100% - 51.83%) is explained by other variables beyond this model. According to the results in Table 2, it is clear that the F value is 144.274 accompanied by its significance value of 0.0000 < alpha (0.10). Hence, the independent variable in this model which is Working Capital Financing (WCF & WCF²) has a significant effect on the dependent variable (Tobin's Q as corporate performance). Table 2 represents that the variable Working Capital Financing (WCF) has a regression coefficient value of -0.001000 with significance level of 0.317 > alpha (0.10). In addition, the variable Working Capital Financing Squared (WCF²) has a regression coefficient value of 1.73 with significance level of 0.488 > alpha (0.10). According to the regression coefficient value and the significance value, hence Working Capital Financing have a no direct significant effect to the Corporate Performance in Indonesia Manufacturing Industry. Table 2 shows that the variable Size has regression coefficient value of -0.088451 with significance level 0.0000 < alpha (0.10). Based on the regression coefficient value and

the significance value, hence Firm Size has a direct significant effect on the Corporate Performance in Indonesia Manufacturing Industry. Table 2 shows that the variable Leverage has regression coefficient value of 0.981204 with significance level $0.0000 < \alpha (0.10)$. Based on the regression coefficient value and the significance value, hence Firm Leverage have a direct significant effect on the Corporate Performance in Indonesia Manufacturing Industry. Table 2 shows that the variable Growth has regression coefficient value of -0.163217 with significance level $0.0027 < \alpha (0.10)$. Based on the regression coefficient value and the significance value, hence Firm Growth has a direct significant effect on the Corporate Performance in Indonesia Manufacturing Industry.

C. The Impact of Financial Constraints on the Relationship between Working Capital Financing and Firm Performance

The authors furtherly analyze the possible impacts of financial constraints on the relationship between working capital financing to the corporate performance. The working capital investment activity is more sensitive compared to fixed capital. Obviously, getting approval of short term debt for financing and its better terms are beneficial for the companies who have lower financial constraints.

In an attempt to test whether the inflection point alters when the significance of financial constraints encountered by the firm, the authors categorize companies based on three measurements which are the firm size, cash flow indicator, and interest coverage ratio. In the previous section, equations at part 1 and 2 are elaborated by inserting the dummy variable which could be able to differ among more likely and less likely to experience financial constraints. In addition, DFC is the acronym for the degree of financial constraints, also means as a dummy variable that represents 1 for less financially constrained companies, whereas indicates 0 for more financially constrained companies. Therefore, the previous equations could be restructured as below :

$$ROA_{i,t} = \beta_0 + (\beta_1 + \varphi_1 DFC_{i,t}) WCF_{i,t} + (\beta_2 + \varphi_2 DFC_{i,t}) WCF^2_{i,t} + \beta_3 Size_{i,t} + \beta_4 Levi_{i,t} + \beta_5 Growth_{i,t} + \beta_6 CRI_{i,t} + \gamma_t + \delta_i + \epsilon_{i,t} \quad (3)$$

$$Q_{i,t} = \beta_0 + (\beta_1 + \varphi_1 DFC_{i,t}) WCF_{i,t} + (\beta_2 + \varphi_2 DFC_{i,t}) WCF^2_{i,t} + \beta_3 Size_{i,t} + \beta_4 Levi_{i,t} + \beta_5 Growth_{i,t} + \beta_6 CRI_{i,t} + \gamma_t + \delta_i + \epsilon_{i,t}$$

(4) The results are expressed on Table 3 below, where the controlling variables are also combined into the models in an attempt to support the relationship in each of the models, but

they are not the main purpose of this research. In regard to the regression analysis, there are nonlinear regressions that stand by itself and also nonlinear regressions that are affected by financial constraints. From all of the specifications, the author found that the WCF coefficient is not significant, then the WCF^2 is not significant. All of the models generally describe that inverted U-shape Relationship appears among WCF and corporate performance. In addition, the author also found that the Firm Size, Firm Leverage, and Firm Growth is significant. The results tend to be different especially when the regression analysis is affected by financial constraints. It should be admitted that certain levels of qualified firms obtain massive advantages, the managers are able to implement both conservative and aggressive working capital policy, including the usage of proportions in regard to short term loans from creditors.

V. CONCLUSIONS

Generally the relationship among working capital financing and firm performance is not too clear, then in Indonesia, this research is useful for improvement of understanding of working capital management by some of following ways. First, strengthen the knowledge of the effect of working capital financing on the corporate performance. Secondly, conducting a test of the impact of financial constraints to the relationship. Thirdly, utilizing the Panel Least Square to ensure the quality of data analysis. The authors expect reliable results in regard to the relationship of working capital financing and corporate performance.

In relation to the empirical evidence to estimate approach, the author concludes that working capital financing and firm performance is involved in inverted U-shape. Financing the working capital by a small proportion of short term debt leads to an increase of corporate performance, whereas financing the working capital by a huge proportion of short term debt leads to decrease of corporate performance.

However, according to the research, the author can state the conclusions as follows, working capital financing has no significant effect to the corporate performance, working capital financing has no significant effect to the corporate performance under the impact of financial constraints, firm size accompanied by firm leverage and firm growth has significant effect to the corporate performance, then current ratio has no significant effect to the corporate performance.

Table 3. The Effect of Working Capital Financing to the Corporate Performance under the Impact of Financial Constraints.

	Dependent Variable : ROA			Dependent Variable : Q		
	Firm Size Group	Cash Flow Indicator Group	Interest Coverage Group	Firm Size Group	Cash Flow Indicator Group	Interest Coverage Group
(1)	(2)	(3)	(4)	(5)	(6)	(7)
C	-0.28461 3 (0.0000)	-0.27548 8 (0.0001)	-0.27581 0 (0.0001)	2.866867 (0.0000)	2.823260 (0.0000)	2.825523 (0.0000)
WCF	-0.00045 1 (0.1591)	0.000133 (0.7474)	0.000713 (0.3271)	0.000266 (0.8467)	-0.00175 3 (0.3261)	-0.001555 (0.6196)
WCF x DFC	0.000749 (0.1295)	-0.00042 4 (0.3975)	-0.00098 1 (0.2012)	-0.00275 2 (0.1959)	0.001076 (0.6178)	0.000345 (0.9169)
WCF ²	1.19 (0.0996)	-3.05 (0.7994)	-2.55 (0.3717)	-6.49 (0.8340)	3.94 (0.4460)	7.84 (0.5232)
WCF ² x DFC	-2.00 (0.1304)	1.15 (0.4040)	3.33 (0.2535)	6.00 (0.2903)	-2.98 (0.6150)	-5.82 (0.6432)
Size	0.012592 (0.0000)	0.012270 (0.0000)	0.012272 (0.0000)	-0.08982 1 (0.0000)	-0.08828 5 (0.0000)	-0.088391 (0.0000)
Lev	-0.06160 8 (0.0000)	-0.06184 5 (0.0000)	-0.06209 5 (0.0000)	0.979262 (0.0000)	0.980177 (0.0000)	0.981335 (0.0000)
Growt h	0.067078 (0.0000)	0.067237 (0.0000)	0.066527 (0.0000)	-0.16326 8 (0.0027)	-0.16350 1 (0.0027)	-0.162262 (0.0029)

CR	0.002665 (0.0148)	0.002652 (0.0154)	0.002666 (0.0148)	-0.00436 2 (0.3535)	-0.00428 0 (0.3631)	-0.004247 (0.3666)
Adjusted R ²	0.139426	0.137630	0.138608	0.518157	0.517223	0.517553
F-statistic	17.16099	16.91958	17.05094	108.4020	108.0012	108.1426
Prob (F-stat)	0.000000	0.000000	0.0000	0.000000	0.000000	0.000000

Source : Author (2020)

There is no research without limitation including this study. In addition, a great amount of effort and attention has been made during the research, but some limitations occurred. This research has utilized the sample from Indonesian economy, where Indonesia is still part of a developing economy. To some extent, this concept can be applied to the markets with similar characteristics. It is essential for further study to dig deeper in regard to the relationship among working capital financing and corporate performance which might be different across various industries, measurement, financial system, countries, and time coverage.

REFERENCES

- [1] Altaf, N. and Ahmad, F. (2019) 'Working Capital Financing, Firm Performance and Financial Constraints : Empirical Evidence from India', International Journal of Managerial Finance, Available at : <http://www.emeraldinsight.com/1743-9132.htm>.
- [2] Cabarello, S., Teruel, P. and Solano, P. (2016) 'Financing of Working Capital Requirement, Financial Flexibility and SME Performance', Journal of Business Economics and Management, pp. 1189-1204.
- [3] Denis, D. (2019) 'Corporate Governance Counter-Narratives : On Corporate Purpose on Shareholder Value(s)', Journal of Applied Corporate Finance, pp. 81-82.

-
- [4] Gracia, E. (2018) 'Working Capital, Financial Constraints and Firm Value : Evidence of Indonesia Manufacturing Firms', *Journal of Economics and Business*, pp. 171-176.
- [5] Kaushik, N. and Chauhan, S. (2019) 'The Role of Financial Constraints in the Relationship between Working Capital Management and Firm Performance', *The IUP Journal of Applied Finance*, Available at : <https://www.researchgate.net/publication/332269079>.
- [7] Laghari, F. and Chengang, Y. (2019) 'Investment in Working Capital and Financial Constraints : Empirical Evidence on Corporate Performance', *International Journal of Managerial Finance*, Available at : <https://doi.org/10.1108/IJMF-10-2017-0236>.
- [9] Panda, A. and Nanda, S. (2018) 'Working Capital Financing and Corporate Profitability of Indian Manufacturing Firms', *Management Decision*, vol. 56 issue: 2, pp. 441-457.
- [10] Van, Ha Thi Thuy., et al. (2019) 'Managing Optimal Working Capital and Corporate Performance : Evidence from Vietnam', *Asian Economic and Financial Review*.

Analyzing the Influence of Dimensions of Customer Based Airline Brand Equity Toward Brand Trust. Case Study of Customer of Citilink

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Abstract

Indonesia's airline industry has rapidly grown from the past 10 years for both full-service carriers and low-cost carriers. Customers are faced by lots of LCC airlines; these airlines brand performance being independently surveyed by Frontier Research three times a year and awarded with "Top Brand Award". Therefore, the purpose of this research is to determine the factor that influences Citilink Indonesia brand trust in order to increase their position in Top Brand Award. The model used in this study incorporated Flight Service Quality, Brand Affect, Self-Congruence, Brand Awareness and Brand Association compatibility into Customer-Based Airline Brand Equity as a determinant of Brand Trust. The findings revealed that Flight Service Quality had a significant influence followed by Brand Awareness and Brand Association. However, neither Brand Affect nor Self-Congruence was found to have an influence on Brand Trust. These findings provided implications for management and recommendations to step their Brand Trust.

Keywords: Customer Based Airline Brand Equity, Brand Trust, Airline Industry, Low-Cost Carrier

I. INTRODUCTION

As it was included in the world fastest growing sector; tourism is the world's main economic sector (The World Tourism Organization, 2019). Global travel and tourism sector have recorded growth at 4% between January and March 2019 compared to the same period on 2018 (The World Tourism Organization, 2019) and tourism industry in 2018 has provide more than 319 million jobs to the world economy; this rise was higher than the growth rate of the world's GDP, which was also the second-highest development sector in the world for eight consecutive years (World Travel & Tourism Council, 2019). Despite the global economy is heading into recession, the tourism sector plays an important part in minimizing the effect of global economic recession (The World Bank, 2018). As a result, many countries depend on the profits of the travel and tourism industry in order to cover the budget deficit and support the country GDP growth (Mammadov, 2012).

In Indonesia, the tourism industry is booming. The data from Indonesia Ministry of Tourism (2020) shows that Indonesia received over 16 million foreign visitors in 2019, with more than 3 million increase of visitors compared to the previous year. This dramatic rise in the number of tourists is not simply the product of ambitious policy initiatives and attempts to fuel business growth (Guild, 2018). In 2018, Indonesia's travel and tourism growth increased by 7.8% twice as much as the global average growth rate; and it contributed as much as USD 62.6 billion as well as providing 13 million jobs in Indonesia (World Travel & Tourism Council, 2019).

Indonesia's aviation industry is currently facing a robust growth market which indicates from the increased passenger numbers, increased number of flights and new routes also the number of new planes purchased by the local airlines (Global Business Guide Indonesia, 2017). Indonesia airline business value and new aircraft order just beneath China which was in the first place; consequently, Indonesia aviation industry growth was the second fastest in the world after China (Global Business Guide Indonesia, 2017). In the next 20 years, The World Bank estimates that Indonesia air travel will grow from 130 million to more than 240 million people (Traveller, n.d.)

Top Brand Award is recognition of a certain brand that has been chosen by the consumers through the online survey with three parameters which are Top of Mind Share, Market Share and Commitment Share as based on the survey (Top Brand Award, n.d.). Citilink successfully reached the fourth position in 2015 after its first debut in 2012 and currently it was one of the top brands in the airline category in Indonesia for five consecutive years. However, Lion Air was still above Citilink and placed in 2nd place for 5 consecutive years despite all the cases and problems that happened in Lion Air. Therefore, this research

is necessary to be conducted to analyze the impact of Citilink Indonesia Customer Based Airline Brand Equity (CBABE) dimensions on its brand trust.

II. RESEARCH MODEL AND HYPOTHESIS

Brand equity is believed to add incremental value, utility, and primary capital for a large number of organizations. Resilient brands have capitalized by increasing the number customer service and product purchase, by understanding intangible factors that emboldens customer's trust (Keller, 2015; Chen & Chang, 2008). Both researchers and practitioners have discussed the importance of brand equity to the service industry in terms of marketing and business management. In addition, brand management is essential for an aviation sector. Nonetheless, brand equity research and literature on the airline industry is so scarce that more research is needed (Chen & Tseng, 2010).

Chen and Chang (2008) tackle the value of brand equity in the aviation sector. The correlation between purchase intention, brand preference and brand equity were examined on a customer-based brand equity basis. Their findings indicated a positive impact on the customer's buying intention and brand preference on brand equity. Furthermore, Chen and Tseng (2010) conveyed the importance of CBBE in the aviation sector and carried out further research using consumer perspective and operationalization, With four variables specifically: brand awareness, brand image, perceived quality, and brand loyalty. It has defined inter-relationships and their impact among these four dimensions.

Thakshak (2018) in his study developed a CBABE model with quality of flight service, brand effect, self-congruence, brand recognition and mark association as their element.

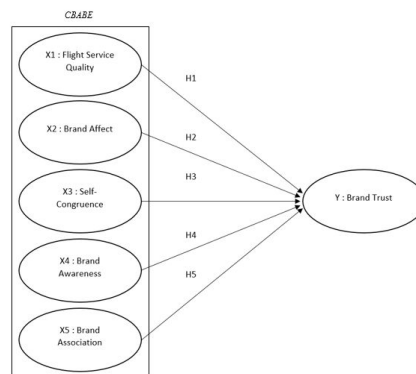


Figure 1. Research Model

Source: Author

2.1. Flight Service Quality and Brand Trust

Perceived quality is the consequence of features such as basic functions, characteristics, functionality, efficiency, economic life of the company product and actual quality of service of the company (Aaker, Managing Brand Equity, 1991) (Aaker, Measuring brand equity across products and markets, 1996). Customer's decision on brand service, overall service performance and service efficiency is known to be perceived quality. It is not, however, the only distinguishing characteristic of brand service and of actual service excellence (Bamert & Wehrli, 2005). The emotional stage of customer purchase activities consists of the image of the brand and perceived quality. This indicates the customer's assessment of the purchase experience and its association with the brand. Both intangible and tangible attributes of the brand have an impact on perceived quality. A positive service experience of the customer's quality leads to a positive image in the memory of the customer. Positive cognitive outcomes are derived from the customer's attitude towards the brand and the positive impact of the customer's actual observations. Consideration of purchase willingness and positive cognitive outcomes will enhance customer loyalty, recommendation and future repurchase (Chen & Tseng, 2010) (Taneja, 2016) (Keller K., 2015). Increased service quality in the airline brand focuses on flight safety, on in-flight services, on the aptitude of the airline cabin crew and on the staff, who build brand trust (Chen & Tseng, 2010) (Taneja, 2010) (Shaw, 2016). Marketing benefits and outcomes are derived from brand loyalty, leading to brand trust. This is due to the positive effect of brand marketing and, therefore, to the generation of brand trustworthiness (Delgado-Ballester & Munuera-Alemán, 2005). Therefore:

H1.0 : Flight service quality does not influence brand trust

H1.1 : Flight service quality influence brand trust

2.2. Brand Affect and Brand Trust

Positive brand effect directly triggers the intention of the consumer to purchase and strengthens customer loyalty (Oliver, Rust, & Varki, 1997). Researchers also recognized that positive word-of-mouth marketing impacts more on consumer loyalty than cognitive elements such as price and quality (Yu & Dean, 2001). It is considered that behavioral goals such as consumer loyalty and brand recommendation are driven by strong emotional satisfaction. Despite the fact, the brand's positive reputation is strengthened by fulfilling consumer needs and accommodating the consumer wants (Ladhari, 2009). Chaudhuri & Holbrook (2001) affirm that the hedonistic advertising appearance and the symbolic portrayal of the brand have no significant advantages. It creates a greater possibility for creating positive brand effects if the emotional elements are positive and superior to the brand product. Brand effect and brand trust was strongly affected by the personal loyalty of the consumer and by the quality of the

brand product. Brand improved performance factor indirectly relates brand effects to brand trust (Steven, Dong, & Dresner, 2011). Therefore:

H2.0 : Brand affect does not influence brand trust

H2.1 : Brand affect influence brand trust

2.3. Self-Congruence and Brand Trust

The self-concept of the customer is expressed by means of a symbolic consumption of service and product. Positive self-perception and self-congruity through brand experience and customer satisfaction have a positive impact on the customer's behavioral intentions (Hosany & Martin, 2012). Tourist customers revisiting tourism destinations, for example, are increasing when self-image and symbolic meanings match the image of a tourist destination. As well as tourism, hospitality and other services, the main factors affecting the revisiting of customers are mainly due to self-congruity (Ekinci, Sirakaya-Turk, & Preciado, 2013) (Aaker, 2011). According to the scholar Ekinci and Riley (2003) the reasons that consumer behavior has an impact on ideal self-congruence and actual self-congruence in the context of service evaluation. The study indicates a variable influence between ideal self-congruence and actual self-congruence. It is argued that the theory of self-congruity is relevant to the tourism industry, which is derived from the post-consumption assessment. Ideal self-congruence is more important than actual self-congruence, which is related to customer satisfaction (Hosany & Martin, 2012). Other literature has shown that the leading driver of brand equity and brand trust is supported by the brand loyalty component. On the other hand, customer satisfaction and brand recommendations are key characteristics of a high level of brand loyalty (Delgado-Ballester & Munuera-Alemán, 2005). Therefore:

H3.0 : Self-congruence does not influence brand trust

H3.1 : Self-congruence influence brand trust

2.4. Brand Awareness and Brand Trust

Brand recognition is a key prerequisite and deciding factor, whether or not the organization is involved in the customer's selection process. The appreciation of brand services arising from the awareness-raising impact is the first step towards the potential purchase and repurchase of brand offerings (Nakprasit & Mason, 2012). Scholar Aaker (1991) It argues that brand recognition is the capacity of the potential consumer to recognize and recollect a particular brand that is part of the association of other product groupings. Based on CBBE's point of view, marketing communication strategies boost brand value by growing awareness of the brand. These marketing activities bring together the brand by associating the brand image in the memory of the customer, fostering positive feelings, and helping their judgment to develop a strong customer brand connection (Keller, 2009). It can be understood that the various

dimensions of brand knowledge are intended to have an interactive impact. For example, good brand recognition, familiarity and brand knowledge are important for certain forms of emotional feelings, attitudes and thoughts (Keller, 2015). Brand recognition of marketing promotions, the growth of consumer relationships and the affirmation of reliability are positive indicators for brand loyalty (Delgado-Ballester E. , 2004). The current research posits that brand awareness has an influence on brand trust. Therefore:

H4.0 : Brand awareness does not influence brand trust

H4.1 : Brand awareness influence brand trust

2.5. Brand Association and Brand Trust

Keller (1993) classifies the association of brands into three major groups, namely behaviors, qualities, and benefits. The buying behavior of the customer has a direct impact on the interpretation of the brand's attitudes, which are defined by individuality, favorability, and power. The quality of the brand is the tendency of the consumer to remember specific features of the brand product. Given these facts, it is clear that the quality of the brand's goods will improve the brand's favorability, fulfill the customer's needs, and wishes. The performance of the brand is determined by the degree to which the reputation of the brand is preserved in the minds of the consumer (Gordon, et al., 2010). Positive brand identity establishes and creates positive brand trust and brand value through ads, product branding, brand logo and brand symbols (Pitta & Katsanis, 1995) (Kapferer, 2012). Customers with a higher level of loyalty are ultimately associated with a strong brand trust organization (Delgado-Ballester & Munuera-Alemán, 2005). It is believed that brand trust is largely motivated by the affiliation of brands predominantly in the service sector. It is due to the identity of the service provider of the company, which is capable of providing the commitment and guarantee of the company to consumers (Phan & Ghantous, 2013). Therefore:

H5.0 : Brand association does not influence brand trust

H5.1 : Brand association influence brand trust

III. METHODOLOGY

3.1. The Sample Data and Data Collection

This research will use a causal analysis to describe the causes and effects of variables (Cooper & Schindler, 2014). It also includes quantitative analysis by means of a case study and questionnaire. Therefore, the collected data are represented in numerical form. Non-probability sampling specifically the purposive judgmental sampling technique used in this study. As defined by Sekaran & Bougie (2016), non-probability sampling means a sampling

method where the subjects are picked by a subjective approach. With purposive judgmental sampling, the samples are chosen underlying the researcher's predetermined criteria and judgement (Saunders, Lewis, & Thornhill, 2016).

Respondent genders consist of 60% male or equivalent to 100 respondents. The remaining 40% or 67 respondents are females. Respondent age is dominated by those aged between 17-24 with amounts equal to 32% or 53 respondents. Followed by those aged 25-34 with a percentage of 27%, equaling to 46 respondents, aged ≥ 45 with a percentage of 23%, equaling to 38 respondents, and the rest 18% or equal to 30 respondents are those aged 35-44. The occupation of the respondents is dominated by employees with 37% or 62 respondents followed by students with 28% or 46 respondents, entrepreneurs with 24% or 40 respondents and the rest 11% or 19 respondents are unemployed or retired.

3.2. Measurements

Well-arranged questionnaires were drafted in a particular order and structure to engage with the participants encouraging them to complete all the survey questions. Most popular data collection method is the structured survey with the aid of questionnaire (Malhotra & Dash, 2008). The survey questionnaire had a predetermined set of responses with 5 – Likert scale, which was applied with alternative questionnaire patterns.

IV. FINDINGS

4.1. Validity and reliability of the measures

Prior testing the model, exploratory factor analysis was executed. The KMO value of Flight Service Quality 0.731; Brand Affect 0.747; Self-Congruence 0.500; Brand Awareness 0.857; Brand Association 0.668; Brand Trust; 0.703 exceeds the recommended value of 0.5 (Adam, 2018). Bartlett's Test of Sphericity illustrates statistical significance with ($p=0.000$). These values back the notion of factorability of the correlation matrix. The results obtained from factor analysis propose five factors solutions.

Cronbach's alpha value enabled to assess reliability of the scales, for each dimensional scale. Results from the data analysis, has revealed that Cronbach's alpha value for reliability of Flight Service Quality 0.773; Brand Affect 0.899; Self-Congruence 0.895; Brand Awareness 0.884; Brand Association 0.830; Brand Trust; 0.888, which is above the acceptable level of 0.70 (Hair et al.,2009).

One-Sample Kolmogorov-Smirnov Test		
Unstandardized Residual		
N		167
Normal	Mean	.0000000
Paramete	Std. Deviation	1.28912835
rs ^{a,b}		
Most	Absolute	.052
Extreme	Positive	.052
Differenc	Negative	-.044
es		
Test Statistic		.052
Asymp. Sig. (2-tailed)		.200 ^{c,d}
a. Test distribution is Normal. b. Calculated from data. c. Lilliefors Significance Correction. d. This is a lower bound of the true significance.		

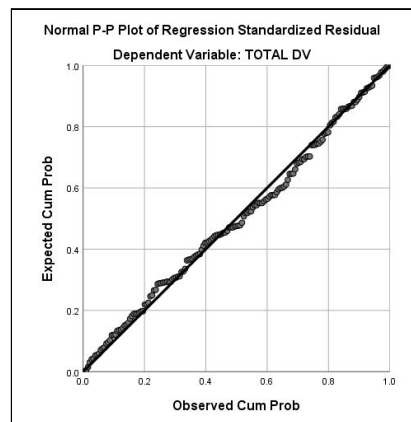
Table 1. Normality Test Result

Source: Author's from SPSS Output

The table above shows the value of Asymp. Sig as .200 which is higher than 0.05. This means that the data obtained is distributed normally.

Figure 2. P-Plot

Source: Author from SPSS Output



From the figure above, we can conclude that the data have a significant linear relationship because the data spread off around the line and it travels upward from bottom left to upper right corner.

Table 3. Multicollinearity Result
Source: Author's from SPSS Output

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.632	.673		2.425	.016		
	Flight Service Quality	.262	.061	.316	4.284	.000	.425	2.355
	Brand Affect	.184	.085	.192	2.154	.033	.290	3.445
	Self-Congruence	-.095	.093	-.075	-1.022	.308	.424	2.360
	Brand Awareness	.164	.044	.294	3.741	.000	.374	2.677
	Brand Association	.155	.069	.162	2.246	.026	.445	2.245

a. Dependent Variable: Brand Trust

From the data above we could see that the collinearity statistics based on tolerance of all variable results are all above 0.10 as well as the VIF score of all variables are all below 10.0. Therefore, there is no multicollinearity happening in the data and we can proceed to multiple regression processes.

4.2. Hypothesis testing

Table 4. ANOVA Result

Source: Author's from SPSS Output

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	464.672	5	92.934	54.238	.000 ^b
	Residual	275.867	161	1.713		
	Total	740.539	166			

a. Dependent Variable: Brand Trust
b. Predictors: (Constant), Brand Association, Self-Congruence, Flight Service Quality, Brand Awareness, Brand Affect

Table above shows that there was a simultaneous influence of the independent variables on the dependent variable since the f-count (54.238) was higher than the f-table (2.43). It also displays that the significance value (0.000) surpassed the α (0.05).

Table 5. Model Summary Result

Source: Author's from SPSS Output

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.632	.673		2.425	.016		
	Flight Service Quality	.262	.061	.316	4.284	.000	.425	2.355
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	Brand Association	.155	.069	.162	2.246	.026	.445	2.245

a. Dependent Variable: Brand Trust

From the model summary table above, the value of R is 0.792. which means that there is a strong relationship between the independent variables and the dependent variable (brand trust). The value or Adjusted R Square is 0.627 or 62.7% percent. This means that the independent variable as a whole contributes 61% in affecting the dependent variable while the rest (100% - 61% = 39%) is contributed by other factors that are not analyzed in this study.

Hypothesis	t-Test		F Test		Hypothesis Conclusion
	t-score > t-table (1.947)	Sig. < 0.05	F Score > F Table (2.43)	Sig. < 0.05	
H1 : FSQ - BT	4.284	0.000	65.17	0.000	Accepted
H2 : Baf - BT	2.154	0.033			Accepted
H3 : SC - BT	-1.022	0.308			Rejected
H4 : Baw - BT	3.741	0.000			Accepted
H5 : Bas - BT	2.246	0.026			Accepted

Table 6. Hypothesis Conclusion

Source: Author

4.2.1. First Hypothesis

H1.0 : Flight service quality does not influence brand trust

H1.1 : Flight service quality influence brand trust

Previous study (Thakshak, 2018) showed that 'flight service quality' has a negative impact on 'brand trust'. However, it was contrary to the result in this research where 'flight service quality' has a positive impact on 'brand trust' with a contribution of 31.6%. Nonetheless, the findings corroborate the study of Zehir, et al. (2011) and Parasuraman, et al. (1988)

4.2.2. Second Hypothesis

H2.0 : Brand affect does not influence brand trust

H2.1 : Brand affect influence brand trust

The study further revealed that 'brand affect' was found affecting 'brand trust' since Sig. value: $0.033 < 0.05$ and t-score : $2.154 > 1.947$. This result was similar to the result of Thakshak (2018). From the T-Test result, brand affect does influence brand trust as much as 19.2%.

4.2.3. Third Hypothesis

H3.0 : Self-congruence does not influence brand trust

H3.1 : Self-congruence influence brand trust

The study further revealed that 'self-congruence' has a negative effect on 'brand trust' since Sig. value: $0.874 > 0.05$ and t-score : $-0.159 < 1.947$. This result was contrary to the result of Thakshak (2018). However, these findings were in accordance with the study of Han, et al. (2015). This could be because customers see LCC as non-luxurious. Therefore, consumers that use Citilink Indonesia do not want to have congruence with other passengers who are in the same flight. Consumers flying with Citilink Indonesia as their functional value rather than symbolic value.

4.2.4. Fourth Hypothesis

H4.0 : Brand awareness does not influence brand trust

H4.1 : Brand awareness influence brand trust

Consistent with prior CBABE study (Thakshak, 2018), the result confirms that 'brand awareness' positively affects 'brand trust' (Sig. value $0.000 < 0.05$). In this study, it affects 'brand trust' by 29.4%. This explains that customer awareness of Citilink Indonesia brand should increase their trust in the brand.

4.2.5. Fifth Hypothesis

H5.0 : Brand association does not influence brand trust

H5.1 : Brand association influence brand trust

Regarding H5, this study reveals that 'brand association' has a positive effect on 'brand trust' (Sig. value $0.009 < 0.05$) with 16.2% contribution. However, this result was in contrast with previous study by Thakshak (2018) which showed that 'brand association' has a negative effect on 'brand trust'. However, these findings were in accordance with the study of Han, et al. (2015). This could be because of the positive association of Citilink Indonesia brand in its customer and society. Citilink Indonesia customers trust the Citilink brand because of the positive association of the brand.

V. CONCLUSION

This research wishes to find out the impact of different variables of CBABE toward brand trust with a case study of Citilink Indonesia. This research uses customer-based airline brand equity variables which are flight service quality, brand affect, self-congruence, brand awareness and brand association.

This study gathers questionnaires from previous study to be distributed to respondents and a total of 167 data are obtained and was used to find the results presented in chapter 4. Multiple linear regression was used to analyze the data gathered. Following the data gathered and presented in chapter 4, the following conclusions can be made:

1. The CBABE confirmed to have an effect on brand trust on Citilink Indonesia.
2. Four hypotheses named flight service quality, brand affect, brand awareness and brand association are accepted as they all have a significant effect towards brand trust. Flight service quality has the highest value in affecting the brand equity as much as 31.6% followed by brand awareness with 29.4%, brand affect with 19.2% and brand association with 16.2%.
3. Hypothesis 3 which is self-congruence is rejected as it has no effect on brand trust from the t-test result
4. All independent variables influenced the brand trust on Citilink Indonesia by 88.9%

VI. RECOMMENDATION

First, Citilink Indonesia expected to make more publication or advertising in digital advertising platforms such as social media advertising (Facebook, Instagram, etc), Google Display Ads as well as traditional platforms such as television or newspaper for their outstanding flight safety record with zero accident and high on-time performance record. By means of this publication, Citilink Indonesia able to get public interest and awareness of Citilink flight safety and on-time performance which according to Delgado-Ballester (2005) the positive effect of brand marketing generating more brand trust as well as flight safety and on-time performance able to escalate brand trust (Chen & Tseng, 2010).

Second, Citilink Indonesia expected to create a better organization culture which would increase employee engagement and empowerment. These organization culture used by The Ritz-Carlton by giving each of their employee a "Credo Card" which describes the core elements of their organization culture which include six aspects: Credo, Twelve Service Values, Mystique, Three Steps of Service, Motto, and Employee Promise. By these

organization cultures The Ritz Carlton is able to increase their customer experience (Borzykowski, 2018). Increasing customer experience can be done as simple as sending a reminder email or text message to customers a week or 3-days prior to their departure. Giving the empowerment for flight attendant to give a small gift for kids that fly with Citilink Indonesia also play an important role in building brand loyalty which lead to brand trust; according to Kurniawan and Haryanto (2011) children are easy to memorize small things that memorable for them and able to influence their family. Last but not least, assisting disable people start from the check-in process up to the boarding process which have been done in Garuda Indonesia and other flight attendants and ground staff aptitude and attitude was important to increase brand trust of Citilink Indonesia.

Third, from the picture above, some Citilink Indonesia passengers make a report on social media and online travel agents such as Traveloka and TripAdvisor that Citilink Indonesia failed to respond to their complaint and problem in a timely manner. For these reasons, it is important for Citilink Indonesia to improve their customer service skill, knowledge, and ability to handle customers that would like to make any complaints or assistance regarding their flight. Citilink Indonesia customer services also expected to be able to provide more information regarding refund policy and flight cancellation in order to prevent customers from making any negative publication into social media or online travel agent reviews that could decrease customer satisfaction and affect Citilink Indonesia brand trust.

Fourth, people are more aware of the capability of mobile application in this case was Citilink mobile app called "BetterFly Citilink", where people are able to do an online booking, online check-in up to online boarding pass and online customer services. Therefore, it is important for Citilink Indonesia to make any significant improvement on their "BetterFly Citilink" mobile app both in Google Play Store and App Store. From the picture above we are able to see that from both Google Play Store and App Store customer review, BetterFly Citylink gets 3.5 out of 5 rating, most customers that using BetterFly Citylink app are complaining about the reliability of the application. It is important that Citilink Indonesia make more significant improvements on their mobile application which could increase customer satisfaction, time efficiency as well as reducing the number of ground staff in the future.

Fifth, it is important for Citilink Indonesia to provide an additional or more premium services for their customer since from the data of this research it shows that more than 35% of the respondent having monthly income more than 10 million rupiah and almost 10% of the respondent are flying with Citilink Indonesia with more than 7 times a year. This indicates

that most of Citilink Indonesia customers are in wealthy condition and with the possibility of customers that their ticket was purchased by the company. Citilink Indonesia is able to provide additional services with additional cost such as pre-purchase course menu for in-flight meals such as full-service airlines or a premium line such as Sky Priority in SkyTeam group. This additional package could attract business passengers that their ticket was provided by the company, therefore they could spend more of their money on additional services that they can experience such as in full-service carriers. Citilink Indonesia also able to provide a newspaper as well as light snack such as bread with mineral water to all of their passenger as a competitive advantage compared to their competitor in LCC airline in Indonesia, this could lead to the higher customer satisfaction which according to Delgado-Ballester (2005) will increase brand loyalty and leading to brand trust; just by giving a light snack, customer are expected to perceived this attention as something that even Citilink was a LCC, Citilink Indonesia do pay attention to their customer basic needs.

REFERENCES

- [1] Aaker, D. A. (1991). *Managing Brand Equity*. New York: The Free Press.
- [2] Aaker, D. A. (1996). Measuring brand equity across products and markets. *California Management Review*, 38(3), 102-120.
- [3] Aaker, D. A. (2011). *Brand relevance: Making competitors irrelevant* (4 ed.). London: Jossey-Bass.
- [4] Bamert, T., & Wehrl, H. (2005). Service quality as an important dimension of brand equity in Swiss services industries. *Managing Service Quality: An International Journal*, 15(2), 132-141.
- [5] Borzykowski, B. (2018, May 7). How The Ritz-Carlton Leadership Center Uses Employee Engagement To Drive Customer Experience. Retrieved from Forbes: <https://www.forbes.com/sites/ritz-carltonleadershipcenter/2018/05/07/how-the-ritz-carlton-leadership-center-uses-employee-engagement-to-drive-customer-experience/#79f5c2fd23c3>
- [6] Chaudhuri, A., & Holbrook, M. (2001). The Chain of Effects from Brand Trust and Brand Affect to Brand Performance: The Role of Brand Loyalty. *Journal of Marketing*, 65(2), 81–93.

-
- [7] Chen, C., & Tseng, W. (2010). Exploring Customer-based Airline Brand Equity: Evidence from Taiwan. *Transportation Journal*. Retrieved from <https://www.jstor.org/stable/40904819?seq=1>
- [8] Chen, C.-F., & Chang, Y.-Y. (2008). Airline brand equity, brand preference, and purchase intentions—The moderating effects of switching costs. *Journal of Air Transport Management*.
- [9] Cooper, D. R., & Schindler, P. S. (2014). *Business Research Methods* (12th Edition ed.). New York: McGraw-Hill Higher Education.
- [10] Delgado-Ballester, E. (2004). Applicability of a brand trust scale across product categories: A multigroup invariance analysis. *European Journal of Marketing*, 38(5), 573-592.
- [11] Delgado-Ballester, E., & Munuera-Alemán, J. (2005). Does brand trust matter to brand equity? *Journal of Product & Brand Management*, 14(3), 187-196.
- [12] Ekinci, Y., & Riley, M. (2003). An investigation of self-concept: actual and ideal self-congruence compared in the context of service evaluation. *Journal of Retailing and Consumer Services*, 201-214.
- [13] Ekinci, Y., Sirakaya-Turk, E., & Preciado, S. (2013). Symbolic consumption of tourism destination brands. *Journal of Business Research*, 66(6), 711-718.
- [14] Global Business Guide Indonesia. (2017). Indonesia's Aviation Industry: Flying High. Retrieved from Global Business Guide Indonesia: http://www.gbgingonesia.com/en/services/article/2017/indonesia_s_aviation_industry_flying_high_11719.php
- [15] Gordon, B. S., James, J. D., Cronin, J. J., McClung, S., Mondello, M. J., Department of Sport Management, & Florida State University. (2010). Impact of Brand Equity Drivers on Consumer-Based Brand Resonance in Multiple Product Settings. Tallahassee, Florida: FSU Digital Library. Retrieved from <http://fsu.digital.flvc.org/islandora/object/fsu%3A182310>
- [16] Guild, J. (2018, June 7). Indonesia's Booming Tourism Industry. Retrieved from THE DIPLOMAT: <https://thediplomat.com/2018/06/indonesias-booming-tourism-industry/>
- [17] Han, S. H., Nguyen, B., & Lee, T. J. (2015). Consumer-based chain restaurant brand equity, brand reputation, and brand trust. *International Journal of Hospitality Management*, 50, 84–93.
- [18] Hosany, S., & Martin, D. (2012). Self-image congruence in consumer behavior. *Journal of Business Research*, 65(5), 685-691.

-
- [19] Kapferer, J.-N. (2012). *The New Strategic Brand Management: Creating and Sustaining Brand Equity Long Term* (5th ed.). London, United Kingdom: Kogan Page. Retrieved from https://books.google.co.id/books?hl=id&lr=&id=8PoItiB7bicC&oi=fnd&pg=PR5&dq=+J.N.+Kapferer&ots=ey0c3EoKVz&sig=K1VFgbhWslqlePcF_X2JMaJ3p7M&redir_esc=y#v=onepage&q=J.N.%20Kapferer&f=false
- [20] Keller, K. (2015). *Strategic brand management: Building, measuring, and managing brand equity*. Boston, MA: Peason Education.
- [21] Kementerian Pariwisata dan Ekonomi Kreatif. (2020, February 10). *Data Kunjungan Wisatawan Mancanegara Bulanan Tahun 2019*. Retrieved from Kementerian Pariwisata dan Ekonomi Kreatif Republik Indonesia: <https://www.kemenpar.go.id/post/data-kunjungan-wisatawan-mancanegara-bulanan-tahun-2019>
- [22] Kurniawan, S., & Haryanto, J. O. (2011). Kids as future market: the role of autobiographical memory in building brand loyalty. *Journal of Arts, Science & Commerce*, 77-90.
- [23] Ladhari, R. (2009). Service quality, emotional satisfaction, and behavioural intentions: A study in the hotel industry. *Managing Service Quality: An International Journal*, 19(3), 308-331.
- [24] Mammadov, R. (2012). *The Importance of Transportation in Tourism Sector*. 7th Silk Road International Conference "Challenges and Opportunities of Sustainable Economic Development in Eurasian Countries".
- [25] Nakprasit, A., & Mason, K. J. (2012). A mixed method study of airline brand equity. [Online] Available at: <http://dspace.lib.cranfield.ac.uk/handle/1826/7868>, Accessed 28 01 2016.
- [26] Oliver, R., Rust, R., & Varki, S. (1997). Customer delight: Foundations, findings, and managerial insight. *Journal of Retailing*, 73(3), 311-336.
- [27] Parasuraman, A., Zeithaml, Valarie Al, & Berry Leonard L. (1988). Servqual; A Multiple-Item Scale For Measuring. *Journal of Retailing*, (64) 12-40 .
- [28] Phan, K. N., & Ghantous, N. (2013). Managing brand association to drive customers trust and loyalty in Vietnamese banking. *International Journal of Bank Marketing*: 31(6), 456-480.
- [29] Pitta, D. A., & Katsanis, L. P. (1995). Understanding brand equity for successful brand extention. *Journal of Consumer Marketing*, 12(4), 51-64.
- [30] Saunders, M. N., Lewis, P., & Thornhill, A. (2016). *Research Methods For Business Syudents* (7th Edition ed.). Harlow: Pearson Education Limited.

-
- [31] Sekaran, U., & Bougie, R. (2016). *Research Methods for Business: A Skill-Building Approach* (7th Edition ed.). Chichester: John Wiley & Sons.
- [32] Shaw, S. (2016). *Airline Marketing and Management*. New York: Routledge.
- [33] Steven, A., Dong, Y., & Dresner, M. (2011). Linkages between customer service, customer satisfaction and performance in the airline industry: Investigation of non-linearities and moderating effects. *Transportation Research Part E: Logistics and Transportation Review*, 48(4), 743-754.
- [34] Taneja, N. (2010). *Looking beyond runway: Airline innovating with best practices while facing realities*. New York: Routledge.
- [35] Taneja, N. (2016). *Airline industry: Poised for disruptive information?* New York: Routledge.
- [36] Thakshak. (2018). Analysing customer based airline brand equity: Perspective from. *Future Business Journal*.
- [37] Thakshak. (2018). Analysing customer based airline brand equity: Perspective from Taiwan. *Future Business Journal* (2018) 4(2) 233-245.
- [38] The World Bank. (2018, September 15). *Digital Platforms and the Future of Tourism*. Retrieved from The World Bank: <https://www.worldbank.org/en/news/feature/2018/09/25/digital-platforms-and-the-future-of-tourism-a-world-tourism-celebration>
- [39] The World Tourism Organization. (2019). *Tourism – an economic and social phenomenon*. Retrieved from WORLD TOURISM ORGANIZATION: <https://www.unwto.org/why-tourism>
- [40] Top Brand Award. (n.d.). *Metodologi Survey*. Retrieved from Top Brand Award: <https://www.topbrand-award.com/metodologi-survei/>
- [41] Traveller. (n.d.). *Indonesian airlines booming, but are they safe?* Retrieved from TRAVELLER: <https://www.traveller.com.au/indonesian-airlines-booming-but-are-they-safe-23p23>
- [42] World Travel & Tourism Council. (2019, March 20). *Indonesian Travel & Tourism growing twice as fast as global average*. Retrieved from World Travel & Tourism Council: <https://www.wttc.org/about/media-centre/press-releases/press-releases/2019/indonesian-travel-and-tourism-growing-twice-as-fast-as-global-average/>
- [43] World Travel & Tourism Council. (2019, 2 27). *Travel & Tourism continues strong growth above global GDP*. Retrieved from World Travel & Tourism Council: <https://www.wttc.org/about/media-centre/press-releases/press-releases/2019/travel-tourism-continues-strong-growth-above-global-gdp/>

-
- [44] Yu, Y., & Dean, A. (2001). The contribution of emotional satisfaction to consumer loyalty. *International Journal of Service Industry Management*, 12(2), 234-250.
- [45] Zehir, C., Şahin, A., Kitapçı, H., & Özşahin, M. (2011). The Effects of Brand Communication and Service Quality In Building Brand. *Procedia Social and Behavioral Sciences*, 1218–1231.

Beauty Standard for New Normal: What Indonesian Beauty Advertising Tell us?

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Abstract

This paper aims to examine how beauty product brand advertisements adapt to new habits due to the Covid-19 pandemic. A brand list of 295 brands was compiled. The keyword "ad + 2020 + (brand name)" is used for the Google Images search engine. This study found that the majority of beauty advertisements in Indonesia did not respond to the Covid-19 pandemic at all. This research also found that beauty advertisements in Indonesia that responded to the Covid-19 pandemic did so in five ways, namely campaigning to fight the Covid-19 pandemic, providing discounts and free shipping, providing protection for consumers outside the home, campaigning for CSR, and further promoting the products. This research is limited to beauty product brands in Indonesia. Overall, this study provides a new picture of how beauty product advertisements were run in Indonesia during the Covid-19 era.

Keywords: Covid-19, beauty products, business opportunities, new habits era, beauty advertisements

I. INTRODUCTION

Since the determination of the Covid-19 outbreak as a pandemic on March 12, 2020, the government and private sector have mobilized many resources to reduce and eliminate the spread of Covid-19 in their countries as quickly as possible [1]. The community is also asked to take various preventive measures such as social distancing and the use of masks to cover their faces. The use of masks is recommended because it is scientifically proven to reduce the spread of Covid-19 through the air [2].

The beauty industry is one of the industries that has been severely affected by Covid-19 infection [3], [4]. The use of masks, however, covers a vital part of the main component of the beauty industry, namely the face. So far, beauty advertisements have encouraged a focus on the face as the most obvious and easy part of individual identity to apply beauty products to the public. The habit in society to cover their faces using masks causes problems for the beauty industry to show the realization of the aspects of facial beauty for the needs of society.

However, there is no real prohibition on the beauty industry from issuing ads that do not show faces. With the hope that the pandemic will end soon, beauty advertisements can continue to show facial images to audiences for various reasons. Reasons that can be raised are for example regarding beauty in the home, beauty during video conferencing or video calls, or simply ignoring the pandemic by assuming nothing happened. But rationalization of faceless beauty can also be made, for example by adhering to the recommendation to use masks, the virtue of sharia in Islamic teachings which have long advocated the use of the veil, or simply creating a new trend in society related to the image of beauty. There is a space of opportunity in the Covid-19 pandemic for beauty products to reduce skin damage due to the long-term use of masks [5].

Lately, the beauty trend has indeed begun to shift from the informal standard that a beautiful face is light-skinned. Miss World for the first time won dark-skinned women and beauty events in various countries have won dark-skinned women for the first time, even though demographically their population is generally light-skinned [6]. Likewise, models no longer have to be slender to become endorsers of beauty advertisements. The beauty industry, which was initially accused of being colorist, ageist, and sizeist (prioritizing certain body shapes) has responded to the attention of the public and has begun to change their trend [7].

In the context of the Covid-19 pandemic, the question arises whether a similar trend has emerged. Given that the pandemic has only recently occurred and not yet a year, these changes may be too brief. However, some responsive brands may view this as an opportunity,

rather than an obstacle to their business growth. This can be risky but can lead to uniqueness which is the basis for competitive advantage in resource-based view theory [8]. Unfortunately, currently, there is very little research that focuses on the beauty industry during a pandemic [9]. This creates a research gap that can be filled with current research.

We report the response of the beauty advertising industry in Indonesia to the use of face masks during the pandemic and the new normal. We review facial beauty advertisements published in the mass media with a special focus on themes related to new habits in society in the new normal era.

II. THEORY

Crisis communication theory states that it is very important to focus on the emotions of the stakeholders to maintain the bond [10]. Emotions determine the attribution of stakeholder responsibility and intention to behave [11]. This also applies to the relationship between companies and consumers. Advertising can be seen as an efficient survival strategy if it is accompanied by emotions attached to the current crisis [12]. Awareness of the challenges that the community has received over the Covid-19 pandemic has become part of business strategies such as through brand activism to build consumer engagement [13].

The beauty industry is an industry that is closely related to consumer emotions [14]. Therefore, the beauty industry needs to build strong bonds with consumers during the Covid-19 pandemic. Such strong ties allow both consumer retention and consumer acquisition which is difficult to achieve when there are so many competitors in the market.

Although the concept of beauty is very flexible [15] and is closely related to non-physical aspects [16], the beauty industry marketing strategy is very stereotypical. They almost always feature young women, with open faces, a certain weight, with a certain skin tone. Even promotion to groups that are not included in this group is directed to become that group with an image that this group is the ideal [17]. This makes it difficult for the beauty industry to adapt to a changing environment. This raises ambiguity about whether the beauty industry can produce a marketing strategy that adopts a crisis communication approach by building togetherness with consumers in dealing with problems, or simply maintaining stereotypes that in certain aspects, for example opening their faces and being in a crowd, are not empathy in social distancing situations and new habits due to the pandemic.

III. METHODS

To get a list of beauty brands in Indonesia, we checked the brand list of e-commerce sites in Indonesia. We found that Priceprice.com has the most comprehensive list of beauty product brands in Indonesia. This site lists 295 beauty product brands [18]. For this reason, all of these brands are used as keywords on the Google image search engine. The search was carried out with the keyword "ad + 2020 + (brand name)". The image that comes out is only observed on the first page. Researchers noted the brands that represent the Covid-19 campaign in their promotions. Campaign types are grouped by campaign type and discussed as research findings. The list of brands studied is shown in Table 1 below. The reason for using this method is because the use of the Google Images search engine is an online image database. The use of Google Image can reveal visual themes found in the geographic range covered by the language used, in this case, Indonesia. The use of Google Image is recommended as a source for academic research [19]. Several studies in the advertising and health sector use Google Image as a data source [20]–[22].

Table 1. Beauty Product Brands Studied.

N o.	Brand	N o.	Brand	N o.	Brand
		10		20	
1	Wardah	1	Love Beauty and Planet	1	Soap & Glory
		10		20	
2	Emina	2	3CE	2	Dear, Klairs
		10		20	
3	Garnier	3	Nameera	3	Jellys
		10		20	
4	The Body Shop	4	Fanbo	4	Mad for Makeup
		10		20	
5	Viva	5	Ciptadent	5	BrunBrun Paris
		10		20	
6	Nivea	6	Jafra	6	Kojie San
		10		20	
7	Pond's	7	Inez Cosmetics	7	Calvin Klein
		10		20	
8	Somebymi	8	Naturie	8	Gillette

	10		20
9 Pixy	9 Hanasui		9 Banana Boat
	11		21
10 Maybelline	0 Dear Me Beauty		0 Rose All Day
	11		21
11 Safi	1 Ovale		1 Neutrogena
	11		21
12 Clean and Clear	2 Clio Professional		2 Apotcare
	11		21
13 Make Over	3 Nu Skin		3 La Roche-Posay
	11		21
14 YOU Makeups	4 Sensodyne		4 Too Cool For School
	11		21
15 L'Oreal Paris	5 elf Cosmetics		5 L'Occitane
	11		21
16 Image	6 Aqua skin		6 Leivy
	11		21
17 Vaseline	7 Clinique		7 House of Elites
	11		21
18 Innisfree	8 Mirabella		8 Jacquelle
	11		21
19 The Ordinary	9 Glamglow		9 Caring Colors
	12		22
20 Mustika Ratu	0 Simple Skincare		0 JustMiss Cosmetics
	12		22
21 Sariayu	1 City Color		1 Palmolive
	12		22
22 Laneige	2 April Skin		2 Vonvon
	12		22
23 Dove	3 Sebamed		3 Freeman Beauty
	12		22
24 Focallure	4 Burberry		4 Living Proof
	12		22
25 Pantene	5 Shu Uemura		5 Purivera Botanicals

	12		22
26 NYX Cosmetics	6	TONYMOLY	6 Black Swallow
	12		22
27 Madame Gie	7	COVER FX	7 Collection
	12		22
28 Nature Republic	8	AVENE	8 Bali Ratih
	12		22
29 COSRX	9	CATHY DOLL	9 Goban Cosmetics
	13		23
30 La Tulipe	0	MISSHA	0 Banila Co.
	13		23
31 Natur-E	1	PAC	1 Gulaco
	13		23
32 Hada Labo	2	NUXE	2 Kailijumei
	13		23
33 Purbasari	3	SELSUN	3 OPI
	13		23
34 Mineral Botanica	4	THE SAEM	4 Acwell
	13		23
35 Olay	5	HAPLE	5 Mamaya
	13		23
36 Benefit cosmetics	6	SARANGE	6 SAUCE
	13		23
37 Dettol	7	ESQA	7 Carex
	13		23
38 Cetaphil	8	ANASTASIA BEVERLY HILLS	8 Maska
	13		23
39 SK II	9	STILA	9 Novexpert
	14		24
40 Sephora Collection	0	KRYOLAN	0 Lucas Papaw
	14		24
41 Revlon	1	LISTERINE	1 Dazzling White
	14		24
42 Rexona	2	PERIPERA	2 Aiken

	14	Rudy Hadisuwarno	24	
43 Etude House	3	Cosmetics	3	Kose
	14		24	
44 Pepsodent	4	Sis2Sis	4	Shannen
	14		24	
45 Make up for ever	5	Dewi Sri Spa	5	Hourglass Cosmetics
	14		24	
46 Sunsilk	6	Giorgio Armani	6	Wink and Kiss
	14		24	
47 Veet	7	By Lizzie Parra (BLP)	7	Klavuu
	14		24	
48 Lifebuoy	8	Mane 'n Tail	8	It's Skin
	14		24	
49 Everwhite	9	Pigeon	9	Acnol
	15		25	
50 Ellips	0	Dior	0	Evete Naturals
	15		25	
51 LT Pro	1	My Beauty Story	1	Masami Shouko
	15		25	
52 Pinkberry	2	Mediheal	2	The Bath Box
	15		25	
53 Nacific	3	My Raiku	3	Bio-Essence
	15		25	
54 Silkygirl	4	Rejoice	4	LA Colors
	15		25	
55 Sensatia Botanicals	5	Playboy	5	Evian
	15		25	
56 Lakme	6	Wak Doyok	6	She.Her.Hers.
	15		25	
57 Makarizo	7	Luxcrime	7	BoHo
	15		25	
58 Too Faced	8	Heimish	8	Herbivore
	15		25	
59 St. Ives	9	SASC	9	Kleveru Organics

	16		26
60 Wet n Wild	0	Glossier	0 Polka
	16		26
61 Ultima II	1	Beautyblender	1 Scentio
	16		26
62 LA Girl	2	Adidas	2 Rovectin
	16		26
63 Urban decay	3	Rollover Reaction	3 Sukin
	16		26
64 Oriflame	4	Canmake	4 Votre Peau
	16		26
65 Kao	5	Shiseido	5 TROPE Cosmetics
	16		26
66 Head & Shoulders	6	Beauty Box	6 Babyliss PRO
	16		26
67 Herborist	7	Pulchra	7 Good Virtues Co.
	16		26
68 Pixi	8	Aliver	8 I'm From
	16		26
69 Natur	9	Brasov	9 By Whishtrend
	17		27
70 Axe	0	Lavie Lash	0 Egyptian Magic
	17		27
71 Zoya Cosmetics	1	ColourPop	1 INNERTRUE
	17		27
72 Somethinc	2	Tutti Frutti	2 O'2Nails
	17		27
73 Lux	3	For Skin's Sake	3 Utama Spice
	17		27
74 Bioderma	4	Skinfood	4 LuLuLun
	17		27
75 CLEAR	5	Kat Von D	5 The Browgal
	17		27
76 Marcks'	6	Inglot	6 Denta Secret

	17		27
77 Lancome	7	Catrice	7 Bio Oil
	17		27
78 Hugo Boss	8	Miranda	8 Himalayan Herbals
	17		27
79 Red-A	9	MAC Cosmetics	9 Nourish
	18		28
80 Bourjois	0	Kiehl's	0 Original Source
	18		28
81 Foreo	1	Metal Fortis	1 Philosophy
	18		28
82 Marina	2	Organic Supply Co.	2 Yves Rocher
	18		28
83 Holika Holika	3	Antis	3 Cottages
	18		28
84 theBalm	4	Indoganic	4 Per-Fekt
	18		28
85 Verile	5	Kerastase	5 Azaleas
	18		28
86 Implora	6	Mavala	6 Neogen
Fenty Beauty by	18		28
87 Rihanna	7	Chanel	7 Armando Caruso
	18		28
88 Tresemme	8	Davines Davines	8 Klei & Clay
	18		28
89 The Face Shop	9	Nuvo	9 Sigma Beauty
	19		29
90 Moko Moko	0	Marc Jacobs Beauty	0 Trilogy
	19		29
91 Estee Lauder	1	Boscia	1 HERA
	19		29
92 Sulwhasoo	2	Rom&nd	2 J.Cat Beauty
	19		29
93 Marshwillow	3	Tropical Studio	3 Palmer's

		19		29
94	Formula	4	DHC	4 Color Me
		19		29
95	Bioaqua	5	Lush	5 FANCL
		19		
96	BECCA	6	Avoskin Beauty	
		19		
97	Mizzu	7	CHAMPION	
		19		
98	Senka	8	Laura Mercier	
		19		
99	Mentholatum Acnes	9	Vienna	
		10		20
0	Dr.Jart +	0	Jedar Cosmetic	

IV. RESULTS

The following table shows the themes raised by the brands studied. We found very few brands. The minimum response to the Covid-19 pandemic is surprising because it contrasts with the large number of cosmetic brands circulating in Indonesia. However, it should also be recognized that many of these brands are sold locally and have limited distribution. Of course, however, Google Images has the power to capture images of these products, and data about them can still be obtained. Some may also not advertise at all in 2020 and the images that appear are images from the previous year. In this case, the same findings will also be obtained, namely that there is no real response regarding the Covid-19 pandemic on the brand.

Table 2. Themes and Brands using it.

Theme	Brand	Total	Frequency
Campaigning for the public to fight the Covid-19 pandemic	Wardah, Nuvo, Neutrogena	3	1%
Provide discounts and free shipping for product orders at home	The Body Shop, Mineral Botanica, Sephora Collection, Pinkberry,	13	4 %

	Dewi Sri Spa, Rollover Reaction, Avoskin Beauty, The Bath Box, Klavuu, BrunBrun Paris, Etude House, Innisfree, Somebyme		
Providing services and protection for consumers who are outside the home	Nature Republic, Lifebuoy	2	1%
Campaigning for CSR with the theme of Covid-19	Herborist, Inez Cosmetics	2	1%
Promote the product further because Covid-19 is an opportunity for these products to stand out even more	Axe, Antis	2	1%
Total		15	7 %

The majority of the strategies taken by beauty product brands that respond to Covid-19 are to provide discounts and discounts. This is manifested in the campaign "You are #dirumahaja", "comfort package #dirumahaja", "#dirumahaja", "#dirumahaja keep expressive", "#Spadirumahaja", "more productive at home", and "#stay at home. deals ". Meanwhile, brands trying to raise morale against the pandemic carry messages such as "# always be happy" and "face the attack of viruses and germs". Brands that provide services and protection for consumers outside the home carry the "#pegipeginyalebihaman" campaign, and "the virus is everywhere". CSR is also a component of the marketing strategy with the headline "action to prevent corona". Perfume and hand sanitizer products can further accentuate their products by taking advantage of the momentum of Covid-19 as a means of focusing attention on the non-face or hands.

V. DISCUSSION

The Covid-19 pandemic and new habits can be considered very early because it hasn't been going on for a year. Changes in the marketing of beauty products are still very traditional. Only 7% included the Covid-19 campaign as part of their product marketing efforts. Only about 1% of beauty product brands use the pandemic as a component of CSR (Corporate Social Responsibility) that is published to the public (and therefore, as a marketing component) [23], [24]. This is a good action because research results have found that the public believes that the private sector can play a major role in helping to overcome the Covid-19 crisis [25]. The private sector can help in creating a new standard of beauty in the new normal era rather than maintaining the old beauty standards which are colorist, ageist, and sizeist [26]. But this is not observed in our sample, showing that beauty standards do not change at the industry level, although at the public level there is at least a change in fashion taste [27], [28]. If a brand can create a positive consumer voice regarding new types of beauty, there can be changes in social norms in attitudes to behavior in society [29].

At a strategic level, efforts to capitalize on Covid-19 for beauty products are indeed quite risky. If a brand markets a beauty product that smoothes facial skin after wearing a mask, does this mean that wearing a mask can harm skin health? Can this make a segment of society who is very concerned about facial beauty reluctant to wear masks? This can create controversy and allow negative word-of-mouth to occur [30]. If a brand markets beauty products that create a beautiful image for mask wearers, does this mean that it is against social norms in Muslim society that the purpose of wearing the veil is to cover beauty?

Not to mention the technical challenges for beauty products to create an 'aura' of beauty in mask users. Psychological studies show that the use of masks has the impression of being a barrier to interpersonal communication. It removes the ability to express and perceive the facial expressions of the interlocutor because it divides the face into two parts: the open part on top and the closed part below [31]. Researchers offer the use of botulinum toxin (botox) to reduce negative emotions and promote the well-being of mask wearers and people who communicate with mask wearers because it suppresses the glabellar line and a person's ability to wrinkle [31]. In Indonesia, Botox is an off label drug, which is a drug that is not officially registered for a specific therapeutic purpose, but in practice, it is used for that therapy. On-label, Botox is used to treat strabismus and hemifacial spasms and blepharospasm, but on the off-label, it is used as an eye cosmetics [32].

Perhaps the biggest challenge facing the beauty industry today is not developing new standards of beauty, but surviving a drastic decline in sales. In this situation, the risk perception is very high. Prospect theory emphasizes that humans are more willing to take low-risk actions even though they provide little benefit, rather than taking high-risk actions even though they can provide large benefits [33]. Without considering the right marketing strategy to communicate brands that capitalize on Covid-19, there is a big risk for beauty brands to market their products with a pandemic theme [34]. This explains why the vast majority of beauty brands in Indonesia do not respond at all to the pandemic situation. Products that are meant to treat eye beauty and some hand sanitizer products also do not promote themselves as highly relevant products in the Covid-19 era.

The commodification of pandemics in Indonesia is indeed observable and gives more hope to the industries that are being affected. They become a kind of disaster capitalist [35] who use Covid-19 pandemic as part of the opportunity component in the SWOT analysis, rather than the threat component. Industries like this try to open up new markets and develop new commodities that are consumed by the public using the themes of preparation, safety, protection, and care [36]. The beauty industry can be part of a capitalist catastrophe, but is it ethical, and is it just a moment of the flare-up, maybe say "the year of stay at home"?

Our analysis shows that the marketing of beauty product brands in Indonesia that responds to the Covid-19 pandemic takes five forms. First, campaigning for the public to fight the Covid-19 pandemic. This follows a general trend globally and is the most common form of response among businesses [37]. They do not claim that their products can be used in the home, when wearing masks, or in other new behavioral conditions, but simply to encourage people to stay healthy. This is intended to create an emotional bond between brands and consumers so that they can lead to positive brand attitudes from society [11], [38]. Even so, this strategy may still be too shallow to provide consumer engagement because it has not touched other dimensions such as spiritualism, existence, and humanity [39].

Second, providing discounts and free shipping for ordering products at home. This category is the most widely adopted as a marketing strategy for cosmetic products. Brands keep people at home while emphasizing that this behavior does not limit them from being beautiful and expressive. This strategy is also rational to take to keep encouraging purchases, even though it must provide various discounts. Marketers feel free to use endorsers without masks because their products are used at home, not in public spaces.

Third, providing services and protection for consumers who are outside the home. This has even led to exaggerated claims that their product can eliminate the Covid-19 virus. Some others carry out public activities as if without a pandemic situation at all as if giving the impression that by using their products, the public will be safe in crowded public spaces. This strategy can be seen as quite courageous and risks creating controversy if it becomes part of a public narrative.

Fourth, campaigning for CSR with the theme of Covid-19. This step is a wise step in taking growth opportunities for brands in the Covid-19 era [40]. Marketers do not seem to market their products by taking the opportunity of public emergencies but providing real support for public health efforts, of course by continuing to carry their brand. This is the best way to accommodate public aspirations and enable the acquisition of new consumers, even for those who are not familiar with the product at all. Meanwhile, old consumers are increasingly loyal to their brands because they get an added value due to the impression that they too, as consumers, are participating in pandemic prevention efforts.

Fifth, promoting further products because Covid-19 is an opportunity for these products to stand out even more. This step is fairly thorough in weighing the situation and can only apply to certain products. Perfume products, for example, will greatly benefit because the sense of sight is minimized through masks, allowing the sense of smell to stand out. Perfume brands are one type of brand that has the opportunity to grow because of Covid-19 [40]. This step requires a fairly high level of self-confidence because many other perfume industries have instead changed their business to selling hand sanitizer products [41]–[43].

New habits can provide fresh hope for the beauty industry by opening up new markets. Beauty is very simple [44] and allows a high degree of flexibility to generate ad differentiation in the market. In recent decades, we have witnessed a major shift in beauty standards [15]. Globalization and the progress of non-western developing countries have shifted beauty standards from prioritizing light skin to prioritizing diversity of colors. We also witness how information and communication technology shifts beauty standards from prioritizing natural faces to prioritizing edited faces [45]. The Covid-19 pandemic can lead to a shift in new beauty standards as well, related to cleanliness or behavior in public spaces. This provides a lot of opportunities for beauty product marketers in a new habit, rather than sticking to old beauty standards. Beauty products in Indonesia have succeeded in developing new beauty standards in this decade by introducing the hijab as a beauty component, considering that the majority of their consumers are Muslim [46]. They can also succeed in a new era of habits in the present and the future.

As a result, as the period of new habits is getting longer, there is a growing understanding in society that beauty is in everyone and the task of the beauty industry is to bring out that beauty individually and healthily [47]. The culture and social environment situation in society determine the agreed beauty standards [48], [49] and the era of new habits can be environmental factors that encourage the universality of beauty. In this case, the beauty industry can not only increase product differentiation, but can also penetrate new segments that were untouched before, such as dark-skinned people, old age, high body weight, and so on.

It has also been shown that beauty in the new era of habits, regardless of what private companies advertise, can emerge from a variety of situations. Public concern for cleanliness and health leads to more natural beauty than the perceptual beauty that facial editing applications bring [50]. Self-care at home is increasingly common and has consequences on the priority of self-created beauty, rather than resulting from professional services [3]. This has led to a new standard of beauty in a new habit era which is still very wide open and untapped by the beauty industry in Indonesia.

VI. CONCLUSION

In conclusion, beauty brands in Indonesia have not been able to meet beauty standards in the new habit era. Also, research is needed to fully understand how industry and consumer factors are integrated into shaping beauty product advertising decisions. If we are asked to state our research results as tips for beauty companies in the era of the Covid-19 pandemic, then the tips are, "if you want to win the competition in the beauty industry in Indonesia, try to be different and create new beauty standards."

REFERENCES

- [1] M. É. Czeisler et al., "Public Attitudes , Behaviors , and Beliefs Related to COVID-19 , Stay-at-Home Orders , Nonessential Business Closures , and Public Health Guidance — United States , New York City , and Los Angeles , May 5 – 12 , 2020," *Morb. Mortal. Wkly. Rep.*, vol. 69, no. 24, pp. 751–758, 2020.
- [2] R. Zhang, Y. Li, A. L. Zhang, Y. Wang, and M. J. Molina, "Identifying airborne transmission as the dominant route for the spread of COVID-19," *PNAS*, vol. 10, no. 1073, pp. 1–7, 2020.

-
- [3] E. Gerstell, S. Marchessou, J. Schmidt, and E. Spagnuolo, "How COVID-19 is changing the world of beauty," 2020.
- [4] J. Priyanto and S. Suseno, "Cosmetic Companies Based On Seaweed in The Middle of The Covid-19 Outbreak (PT Rumah Rumput Laut , Bogor Districts)," *J. Pus. Inov. Masy.*, vol. 2, no. 5, pp. 860–868, 2020.
- [5] A. Gefen and K. Ousey, "Update to device-related pressure ulcers: SECURE prevention. COVID-19, face masks and skin damage," *J. Wound Care*, vol. 29, no. 5, pp. 245–254, 2020.
- [6] L. Naidoo, N. Khoza, and N. C. Dlova, "A Fairer Face , a Fairer Tomorrow ? A Review of Skin Lighteners," *Cosmetics*, vol. 3, no. 33, pp. 1–11, 2016.
- [7] A. Gopaldas and A. Siebert, "Women over 40 , foreigners of color , and other missing persons in globalizing mediascapes : understanding marketing images as mirrors of intersectionality," *Consum. Mark. Cult.*, vol. 21, no. 4, pp. 323–346, 2018.
- [8] J. Barney, "Firm Resources and Sustained Competitive Advantage," *J. Manage.*, vol. 17, no. 1, pp. 99–120, 1991.
- [9] A. Jimenez-Sanchez, V.-M. Margalina, and E. Vayas-Ruiz, "Governmental Communication and Brand Advertising During the COVID-19 Pandemic," *Tripodos*, vol. 2, no. 47, pp. 29–46, 2020.
- [10] W. T. Coombs, "Protecting Organization Reputations During a Crisis : The Development and Application of Situational Crisis Communication Theory," *Corp. Reput. Rev.*, vol. 10, no. 3, pp. 163–176, 2007.
- [11] H. Hang, L. Aroean, and Z. Chen, "Building emotional attaching during COVID-19," *Ann. Tour. Res.*, vol. 83, no. 103006, 2020.
- [12] J. Alves, T. Lok, Y. Luo, and W. Hao, "Crisis Management for Small Business during the COVID-19 Outbreak : Survival , Resilience and Renewal Strategies of Firms in Macau," *Res. Sq.*, pp. 1–29, 2020.
- [13] M. A. Camilleri, "Strategic dialogic communication through digital media during COVID-19 crisis," in *Strategic Corporate Communication in the Digital Age*, M. A. Camilleri, Ed. Bingley: Emerald Group Publishing Ltd., 2020, pp. 1–25.
- [14] P. Wu and C. Lee, "Impulse buying behaviour in cosmetics marketing activities," *Total Qual. Manag. Bus. Excell.*, vol. 27, no. 9–10, pp. 1091–1111, 2016.
- [15] M. B. C. Maymone, H. H. Neamah, E. A. Secemsky, R. V Kundu, D. Saade, and N. A. Vashi, "The Most Beautiful People: Evolving Standards of Beauty," *JAMA Dermatology*, vol. 153, no. 12, pp. 1327–1329, 2017.

-
- [16] K. M. Kniffin and D. Wilson, "The effect of nonphysical traits on the perception of physical attractiveness: Three naturalistic studies," *Evol. Hum. Behav.*, vol. 25, pp. 88–101, 2004.
- [17] C. Mair and S. Cili, "What middle-aged and older women really want!," in *British Psychological Society's 2016 Annual Conference*, 2016, pp. 3–4.
- [18] PricePrice, "Daftar Produk Kecantikan di Indonesia," *PricePrice.com*, 2020. [Online]. Available: <https://id.priceprice.com/kecantikan/>. [Accessed: 01-Sep-2020].
- [19] C. Brown, *Harnessing the Power of Google: What Every Researcher Should Know*. Santa Barbara, CA: Libraries Unlimited, 2017.
- [20] J. Porter and J. Collins, "Do images of dietitians on the Internet reflect the profession?," *J. Hum. Nutr. Diet.*, 2020.
- [21] G. Palmer et al., "A deep learning approach to identify unhealthy advertisements in street view images," *ArXiv Prepr.*, pp. 1–13, 2020.
- [22] Z. Wu, S. Wan, and M. Tan, "Discriminative Image Representation based on Multi-Cues for Computational Advertising," *Int. J. Perform. Eng.*, vol. 14, no. 7, pp. 1411–1420, 2018.
- [23] Y.-H. Lee and S.-L. Chen, "Effect of Green Attributes Transparency on WTA for Green Cosmetics : Mediating Effects of CSR and Green Brand Concepts," *Sustainability*, vol. 11, no. 5258, pp. 1–15, 2019.
- [24] H. He and L. Harris, "The impact of Covid-19 pandemic on corporate social responsibility and marketing philosophy," *J. Bus. Res.*, pp. 176–182, 2020.
- [25] C. R. Taylor, "Advertising and COVID-19," *Int. J. Advert.*, vol. 39, no. 5, pp. 587–589, 2020.
- [26] E. Inganji and N. Sharro, "'Subconsciously, beauty is white and skinny.' A qualitative study on colorism in makeup advertisements," *Malardalen University*, 2020.
- [27] Y. Choi and K. Lee, "Changes in consumer perception of fashion products in a pandemic - Effects of COVID-19 spread -," vol. 28, no. 3, pp. 285–298, 2020.
- [28] V. Larchenko, "A Fashionable Mask: Branded Value Proposition During the Coronavirus Pandemic," *Eur. J. Med. Nat. Sci.*, vol. 4, no. 2, pp. 42–50, 2020.
- [29] A. Martensen and L. Grønholdt, "The Effect of Word-Of-Mouth on Consumer Emotions and Choice : Findings from a Service Industry," *Int. J. Qual. Serv. Sci.*, vol. 8, no. 3, pp. 298–314, 2016.
- [30] B. Hamzulu, A. Gohary, S. G. Nia, and K. H. Hanzaae, "Does involvement shapes consumers ' response to product failure ?," *Asia Pacific J. Mark. Logist.*, vol. 29, pp. 283–304, 2017.

-
- [31] M. S. Nestor, D. Fischer, and D. Arnold, “ ‘ Masking ’ our emotions : Botulinum toxin , facial expression , and well-being in the age of COVID-19,” *J. Cosmet. Dermatol.*, vol. 19, no. 9, pp. 2154–2160, 2020.
- [32] Rusli, *Farmasi Klinik*. Jakarta: Kementerian Kesehatan RI, 2018.
- [33] D. Kahneman and A. Tversky, “Prospect Theory: An Analysis of Decision under Risk,” *Econometrica*, vol. 47, no. 2, pp. 263–292, 1979.
- [34] P. Seetharaman, “Business models shifts : Impact of Covid-19,” *Int. J. Inf. Manage.*, vol. 54, no. 102173, pp. 1–4, 2020.
- [35] N. Klein, *The Shock Doctrine: The Rise of Disaster Capitalism*. New York: Metropolitan Books, 2007.
- [36] S. Matthewman and K. Huppertz, “A sociology of Covid-19,” *J. Sociol.*, pp. 1–9, 2020.
- [37] F. Sobande, “ ‘ We ’ re all in this together ’ : Commodified notions of connection , care and community in brand responses to COVID-19,” *Eur. J. Cult. Stud.*, pp. 1–5, 2020.
- [38] M. Thomson, D. J. MacInnis, and C. W. Park, “The Ties That Bind : Measuring the Strength of Consumers ’ Emotional Attachments to Brands,” *J. Consum. Psychol.*, vol. 15, no. 1, pp. 77–91, 2005.
- [39] I. O. Karpen and J. Conduit, “Engaging in times of COVID-19 and beyond: theorizing customer engagement through different paradigmatic lenses,” *J. Serv. Manag.*, pp. 3–5, 2020.
- [40] J. Knowles, R. Ettenson, P. Lynch, and J. Dollens, “Growth Opportunities for Brands During the COVID-19 Crisis,” *Sloan Manage. Rev.*, p. 61423, 2020.
- [41] F. Tietze, P. Vimalnath, L. Aristodemou, and J. Molloy, “Crisis-Critical Intellectual Property : Findings from the COVID-19 Pandemic,” Cambridge, 2, 2020.
- [42] D. Pradhan, P. Biswasroy, K. Naik, G. Ghosh, and G. Rath, “A Review of Current Interventions for COVID-19 Prevention,” *Arch. Med. Res.*, vol. 51, pp. 363–374, 2020.
- [43] P. Cankurtaran and M. B. Beverland, “Using design thinking to respond to crises : B2B lessons from the 2020 COVID-19 pandemic,” *Ind. Mark. Manag.*, vol. 88, pp. 255–260, 2020.
- [44] A. A. Briemann and D. G. Pelli, “Aesthetics,” *Curr. Biol.*, vol. 28, pp. R859–R863, 2018.
- [45] S. Rajanala, M. Maymone, and N. A. Vashi, “Selfies — Living in the Era of Filtered Photographs,” *JAMA Facial Surg.*, vol. 20, no. 6, pp. 443–444, 2018.
- [46] V. Briliana and N. Mursito, “Exploring antecedents and consequences of Indonesian Muslim youths ’ attitude towards halal cosmetic products : A case study in Jakarta,” *Asia Pacific Manag. Rev.*, vol. 22, no. 4, pp. 176–184, 2017.

-
- [47] M. B. C. Maymone, M. Laughter, J. Dover, and N. Vashi, "The Malleability of Beauty: Perceptual Adaptation," *Clin. Dermatol.*, vol. 37, no. 5, pp. 592–596, 2019.
- [48] S. Herbanova, "Evolution of Beauty: Who Really Dictates Fashion," *Econ. Innov. Act. Enterp.*, pp. 469–470, 2018.
- [49] E. W. Cerrati and J. R. Thomas, "The multicultural evolution of beauty in facial surgery," *Braz. J. Otorhinolaryngol.*, vol. 83, no. 4, pp. 373–374, 2017.
- [50] A. Lim, "Derma and Natural Beauty Trends are Here to Stay Post Covid-19," *Cosmetics Design Asia*, 2020. [Online]. Available: <https://www.cosmeticsdesign-asia.com/Article/2020/08/18/Derma-and-natural-beauty-trends-are-here-to-stay-post-COVID-19-BASF>. [Accessed: 01-Sep-2020].

Factors Affecting University Selection During Pandemic : a Study on Indonesian High School Students

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Abstract

The purpose of this study is to find an important factor for high school students in selecting university. It is vital for university to have a significant amount of new students enrolled to ensure a strong financial capability for them. This research focuses on quality, reputation, spirituality value, economic and emotional value factors in relation with intention to enroll in university. The respondents are year 11 and 12 high school students from DKI and Banten Province. The sampling technique is convenience sampling due to a pandemic situation. Smart PLS is used to analyze the data. This study found that quality, spirituality value, reputation and emotional value has positive correlation on intention to enroll, whereas quality and economic have no positive correlation toward intention to enroll

Keywords: University selection, quality, reputation, intention to enroll

I. INTRODUCTION

In a normal state, the marketer of a university is most likely to emphasize on quality in order to attract new students. However, the covid-19 pandemic has a negative impact toward Indonesia's economy. When the President of Republic Indonesia said "Indonesia has the worst economic crisis in history due to the Covid-19 pandemic", it illustrated the seriousness of the current economic situation in Indonesia [1]. The Chairperson of the Association of Indonesian Private Higher Education (APTSI), Budi Djatmiko, complained that the number of new student applicants at Private Higher Education (PTS) has decreased this year due to the coronavirus (covid-19) pandemic [2]. Although, no available data yet for the number of new student applicants at public university, it can be assumed that the covid-19 has a negative impact toward it. Thus, the importance of quality variables toward intention to enroll will be verified in this research. Other variables, such as spirituality value, reputation, economic value and emotional value will be examined, in relation toward intention to enroll. In the current covid-19 situation, none or only a few papers discussed determinant factors for year 11 and 12 students in relation with intention to enroll in university. This research gap will be discussed further. Therefore, the purpose of this research is to find out : Does the quality influence reputation ? Does the quality influence intention to enroll ? Does spirituality value influence intention to enroll ? Does the reputation influence intention to enroll? Does the economic value influence intention to enroll ? Does the emotional value influence intention to enroll?

II. LITERATURE REVIEW AND HYPOTHESIS

Intention to enroll

The center of marketers is how to increase consumers' enthusiasm to purchase a product or a service [3]. Thus it is essential for marketers in knowing any variables that have influence toward intention to purchase. Intention itself refers to the possibility that an individual will purchase the product or service [4]. Moreover, intention to enroll can be defined as not only whether prospective students intend to enroll, but also whether they prepare themselves to investigate the chance of enrolling and question others about enrolling [5].

Quality

Quality can be defined as the consumer's judgment about a product's overall excellence or superiority [6]. Sweeney and Soutar [7] emphasized that quality is expected performance of the product. The study of Ngan and Khoi [8] was conducted to find the relationship between the service quality and university reputation. The result showed the service quality had a

relationship with university reputation. Furthermore, research by Caruana and Ewing [9] on online loyalty found the correlation between customer service quality toward reputation. On the FMCG (Fast Moving Consumer Goods) market, it was revealed that corporate reputation had a relationship with service quality too [10].

H1 : There is a positive correlation between Quality (QUA) and Reputation (REP)

Bujisic, Hutchinson and Parsa [11] found significant influence between quality and behavioral intention. Research on mobile banking adoption by Thye Goh, Mohd Suki and Fam [12] suggested quality influence positively toward behavioral intention. In the context of online shopping, offline perceived product quality has a positive impact on behavioral intentions [13]. Jung and Seock [14] found the positive correlation between quality and purchase intention. Quality has positive impact toward continuance of intention for mobile banking users of BCA Bank ([15].

H2: There is a positive correlation between Quality (QUA) and Intention to enroll (ITE)

Spirituality Value

The spirituality can be defined as the personal and subjective side of religious experience [16]. Furthermore, King and Crowther [17] wrote that spirituality is the individual quest for understanding answers to ultimate questions about life, about meaning, and about relationship to the sacred or transcendent, which may (or may not) lead to or arise from the development of religious rituals and the formation of community. Chairy [18] found that spirituality is a significant predictor among college students for green purchase intention. In another research, spirituality at the workplace has positive influence toward intention to stay for the employees [19]. In Aboobaker, Edward and K.A [20] spirituality also has an effect on employee intention to stay. Survey on around 3300 registered nurses in three public hospitals by Anvari, Barzaki, Amiri, Irum and Shapourabadi [21] found a negative relationship between spirituality value and intention to leave. Finally, the result on determinant factors of university choice found a positive relation , between spirituality value toward intention to enroll [22] .

H3 : There is a positive correlation between Spirituality Value (SV) and Intention to enroll (ITE)

Reputation

According to Ngan and Khoi [8] , reputation has unclear explanations and is subjective. However, reputation is an important matter for customers in choosing one company over the other [23]. Furthermore, it is seen as a substantial part of one organization and competitive advantage. It is important for university to develop a positive reputation [24]. Polat, Guncavdi and Arslan [25] found the reputation influence positively toward intention to enroll in the

university program. Research by Tsou, Liu and Hsu [26] at Watsons in Taiwan found that reputation positively affects buyer purchase intention. Reputation is one of the important determinants for online repurchase intentions [27].

H4 : There is a positive correlation between Reputation (REP) and Intention to enroll (ITE)

Economic Value

Economic value can be defined as the utility derived from the product due to the reduction of its perceived short term and longer term costs [7]. Lin [28] found that economic value has a positive impact on purchase intention. In addition, based on Lee, Cheng and Shih [29] price has positive impacts on purchase intention willingness . Furthermore, in e-commerce sales promotion, price value has influence on purchase intention [30].

H5 : There is a positive correlation between Economic Value (EV) and Intention to enroll (ITE)

Emotional Value

According to Kato and Tsuda [31] , emotional value can be defined as the value which customer himself or herself finds additional meaning in the product outside the original specification. Based on Topaloğlu [32] , emotional value has positive influence on intention for online shopping in Turkey. Moreover, Thye Goh, Mohd Suki and Fam [12] states emotional value positively influences intention in Islamic mobile banking adoption. Additionally, in the context of online games, emotional value has positive impact toward intention [33]. Additionally, emotional value also influences the purchase intention for shoppers at shopping centers [34]. Finally, the emotional value is positively associated with customer repurchase intention [35].

H6 : There is a positive correlation between Emotional Value (EMV) and Intention to enroll (ITE)

Thus, the model for this research is shown in figure 1.

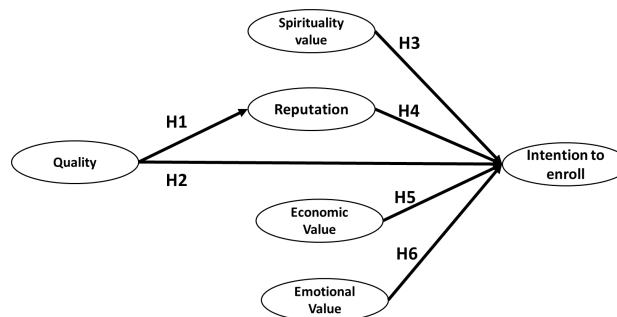


Figure 1 Research Model

III. METHODOLOGY

Survey method is used in this research. Data is collected via questionnaire instrument. The targeted population are year 11 and year 12 students in DKI Jakarta and Banten Province, Indonesia. Non-probability sampling is applied due to Covid-19 restriction. Moreover, convenience sampling technique is chosen because as mentioned by Hermawan [36] it can be used in specific situations , such as in pandemic situations, to retrieve the sample. The number of respondents are 137 students. Partial least square-structural equation model (PLS-SEM) is used to manage the statistical analysis. The 5-point Likert scale is applied, there are 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly disagree. This research uses measurement based on previous studies, with some modification to suit the current research.

IV. RESULT

Profile of Respondents

The number of respondents is 137 high school students. They are consisting of 42 male (30%) and 95 female (70%) respondents. Furthermore, 124 or 91 % of respondents are from year 12. The majority of respondents come from public high school (55%) followed by private school (45%). The parent's occupation is mainly as an employee from a private company (42%) and entrepreneur (31%).

Outer Model

Composite reliability is measured for the reliability test purpose. The composite reliability must exceed 0.7 to be considered as reliable. Furthermore, the validity test has been done by calculating the value of average variance extracted (AVR), factor loading and discriminant validity. The value of AVE > 0.5 and factor loading > 0.7 to be considered as a valid instrument. Moreover, discriminant validity is fulfilled when the square root of AVE > the correlation value between variables. When the value of factor loading within 0.5 and 0.6 is still acceptable, as long as the value of AVE >0.5 [37]. Table 1 shows the result of the reliability and validity test.

Table 1. Reliability and Validity Test

VARIABLE AND ITEMS		Factor Loading
Quality (QUA) AVE=0.705; CR=0.905		
QUA 1	I am happy with a quality university	0.834
QUA 2	I am happy with a university that is well prepared	0.91
QUA 3	I like universities that have good quality standards	0.821
QUA 4	I like universities that have consistent performance	0.789
Spirituality (SV) AVE=0.527; CR= 0.816		
SPV2	I feel connected to all kind of life	0.707
SPV3	I felt a deep inner peace and harmony	0.757
SPV4	Universities must have a vision of spirituality	0.701
SPV5	Universities must have a spiritual mission	0.736
Reputation (REP) AVE=0.621; CR=0.907		
REP1	I love the university that everyone is known for	0.833
REP2	I am happy with a famous university	0.734
REP3	I am happy with a reputable university	0.813
REP4	I will check whether the academic program run by the university is reputable	0.725
REP5	I like it when university graduates find it easy to find jobs	0.781
REP6	Universities with strong prospects for future growth are important	0.834
Economic Value (EV) AVE=0.622; CR=0.868		
EV1	I like it when universities offer reasonable tuition fees	0.826
EV2	I am happy if the university has value for money tuition fees	0.746
EV3	I am happy if the university provides tuition fees in accordance with the services provided	0.823
EV4	I am happy with the economical tuition fees	0.755
Emotional value (EMV) AVE=0.666; CR=0.888		
EV1	It is important for me to be able to enjoy the university that I will enter	0.852
EV2	It is important for me to be able to feel comfortable in the university I will be attending	0.828

EV3	It is important for me to be able to feel worthy of the university I will enter	0.876
EV4	I intend to go to a university that makes me happy *	0.696
Intention to enroll (ITE) AVE=0.599; CR=0.881		
EMV1	I intend to enroll in a university that I am interested in	0.794
EMV2	I would like to get more information about the university I am interested in	0.765
EMV3	I am very likely to apply to a university that I am interested in	0.759
EMV4	I firmly believe in applying to the university that I am interested in	0.848
EMV5	I have a good chance of applying to the university I am interested in	0.694
Information : AVE=Average variance constructed ; CR=composite reliability		
Source : Result from data analysis		

The value of AVE is within 0.527 to 0.705. Moreover, the value of CR is between 0.881 to 0.907. Furthermore, the value of factor loading is in the range from 0.694 to 0.91. Thus the requirements of validity and reliability tests have been fulfilled. According to Joseph E Hair, Hult, Ringle and Sarstedt [37], the requirement for discriminant validity is the value of the square root of each variable more than the value of the correlation between variables. Table 2 shows the requirement is fulfilled. Thus, the instrument is valid.

Table 2. Evaluation of Fornell-Larcker Criterion

	Economic value	Emotional value	Intention to enroll	Quality	Reputation	Spiritual value
Economic value	0.788					
Emotional value	0.552	0.816				
Intention to enroll	0.424	0.639	0.774			
Quality	0.46	0.681	0.513	0.839		
Reputation	0.506	0.721	0.599	0.609	0.788	
Spirituality value	0.38	0.395	0.422	0.374	0.344	0.726
Source : Data Processing Result						

Inner Model

Hypothesis tested by significant value of $\alpha=5\%$ (one-tailed proof) and is tested by comparing the p-value with a level of significance. If p-value < α -value, the hypothesis is supported. The value of R² of the reputation variable is 0,371, which means it is 37.1 % explained by the quality variable. Thus 62.9% is explained by other variables which are not outside the focus of this research. Furthermore, the value of R² of intention to enroll is 0,478 (47,8%), it means the variable intention to enroll is explained as much as 47,8 % by quality, spirituality value, reputation, economic value and emotional value variables. It means 62,2 % is explained by variables not included in this research.

The purpose of collinearity test is to examine whether independent variables are strongly related. The value of VIF should be below 5 to illustrate no collinearity has occurred [37]. Table 3 below shows that all the VIF are below 5, so there is no collinearity within independent variables.

Table 3. Collinearity Evaluation

	VIF
Economic value	1.559
Emotional value	2.779
Quality	2.022
Reputation	2.261
Spirituality value	1.263
Source : Data Processing Result	

The results of all hypothesis testing are shown in table 4 below. The result of the statistical testing shows 4 hypotheses are supported and 2 hypotheses are not supported. which is represented by the p-value < α -value (=5%). All standardized coefficient values have a positive value. The most influencing variable toward intention to enroll is the emotion value (0.344). Whereas the spirituality value is the least influencing variable toward the intention to enroll (0.174).

Table 4. Hypothesis Testing

Hypothesis	Standardized Coefficient	p-Value	Decision
H1 : There is a positive correlation between Quality (QUA) and Reputation (REP)	0.609	0.000	Supported
H2: There is a positive correlation between Quality (QUA) and Intention to enroll (ITE)	0.053	0.326	Not Supported
H3 : There is a positive correlation between Spirituality Value (SV) and Intention to enroll (ITE)	0.174	0.039	Supported
H4 : There is a positive correlation between Reputation (REP) and Intention to enroll (ITE)	0.251	0.008	Supported
H5 : There is a positive correlation between Economic Value (EV) and Intention to enroll (ITE)	0.017	0.437	Not Supported
H6 : There is a positive correlation between Emotional Value (EMV) and Intention to enroll (ITE)	0.344	0.008	Supported

V. DISCUSSION

A positive correlation between quality and reputation is supported because the p-value ($=0.000$) $<$ α -value ($=5\%$). This result is supporting the previous research by [9], [10] and [8]. Therefore, university must have good quality, well prepared, good standards and perform consistently. A positive correlation between quality and intention to enroll is not supported because the p-value ($=0.326$) $>$ α -value ($=5\%$). Thus this finding is different from previous research by [11], [14], [13], [15] and [12].

A positive correlation between spirituality value and intention to enroll is supported because the p-value ($=0.039$) $<$ α -value ($=5\%$). This finding is aligned with prior research by [20],[21],[18],[19] and [22]. According to this, university should provide an environment to support the spirituality ambience. Moreover, the university mission and vision must accommodate spirituality value too.

A positive correlation between reputation and intention to enroll is supported because the p-value ($=0.008$) $<$ α -value ($=5\%$). This result is according to earlier research by [27],[26] and

[25]. As a result of this, university must have a recognizable reputation and provide a proper network for the alumni to seek employment.

A positive correlation between economic value and intention to enroll is not supported because the p-value ($=0.437$) $>$ α -value ($=5\%$). Thus this finding is different from previous research by [28],[38] and [30]

A positive correlation between emotional value and intention to enroll is supported because the p-value ($=0.008$) $<$ α -value ($=5\%$). Hence this finding is aligned with prior research by [32], [35],[12],[34] and [33] .The feeling of emotion such as enjoyment , comfort, worthiness and happiness should be offered for the high school student to appeal them for enrolling into the university.

VI. CONCLUSION AND IMPLICATIONS

In this pandemic time, any affecting factors in university selection for high year students should be an important insight for university institutions. The first implication, despite the economic crisis, it seems university must not focus heavily on how affordable the tuition fees are in attracting the high school students. The second implication, university marketers should have a proper strategy to introduce the quality, spirituality value, reputation and emotional value that university possesses. If the marketer team is able to create awareness of those values, it will positively affect the intention to enroll high school students. Third implication, if the university does not have a strength in any of those important factors, then they must provide a solution to improve it.

This research has some limitations. First, this research has samples from two provinces in Indonesia whereas there are 34 provinces in total. Second, the sample size should be larger for the next research.

REFERENCES

- [1] H. Andriyanto, "Jokowi Admits "Worst Economic Crisis in History"," <https://jakartaglobe.id/business/jokowi-admits-worst-economic-crisis-in-history>, [12/9/2020, 2020].
- [2] M. S. Ramadhan, "Aptisi Keluhkan Jumlah Pendaftar PTS Merosot Akibat Pandemi," <https://www.medcom.id/pendidikan/news-pendidikan/9K50050k-aptisi-keluhkan-jumlah-pe-ndaftar-pts-merosot-akibat-pandemi>, [12/9/2020, 2020].
- [3] S. Agarwal, and R. K. Teas, "Perceived Value: Mediating Role of Perceived Risk," *Journal of Marketing Theory and Practice*, vol. 9, no. 1, pp. , 2001.
- [4] Q. Bian, and S. Forsythe, "Purchase intention for luxury brands: A cross cultural comparison," *Journal of Business Research*, vol. 65, no. 10, pp. 1443-1451, 2012.
- [5] L. L. Matherly, "A causal model predicting student intention to enrol moderated by university image: using strategic management to create competitive advantage in higher education," *International Journal Management in Education*, vol. 6, pp. 38-55, 2012.
- [6] V. A. Zeithaml, "Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence," *Journal of Marketing*, vol. 52, pp. 2-22, 1988.
- [7] J. C. Sweeney, and G. N. Soutar, "Consumer perceived value: The development of a multiple item scale," *Journal of Retailing*, vol. 77, no. 2, pp. 203-220, 2001.
- [8] N. T. Ngan, and B. H. Khoi, "University Reputation in the relationship between Service Quality and Learner's Behavioral Intention," *International Journal of Advanced Science and Technology*, vol. 29, no. 4S, 2020.
- [9] A. Caruana, and M. T. Ewing, "How corporate reputation, quality, and value influence online loyalty," *Journal of Business Research*, vol. 63, no. 9-10, pp. 1103-1110, 2010.
- [10] S. Adnan Duygun, A. Menteş, and A. Kubaş, "The Relationship between Corporate Reputation and Service Quality: A Study on Fast-Moving Consumer Goods Market," *International Journal of Humanities and Management Sciences*, vol. 2, no. 3, 2014.
- [11] M. Bujisic, J. Hutchinson, and H. G. Parsa, "The effects of restaurant quality attributes on customer behavioral intentions," *International Journal of Contemporary Hospitality Management*, vol. 26, no. 8, pp. 1270-1291, 2014.
- [12] T. Thye Goh, N. Mohd Suki, and K. Fam, "Exploring a consumption value model for Islamic mobile banking adoption," *Journal of Islamic Marketing*, vol. 5, no. 3, pp. 344-365, 2014.
- [13] H. Sun, W. Ni, and Z. Wang, "A consumption system model integrating quality, satisfaction and behavioral intentions in online shopping," *Information Technology and Management*, vol. 17, no. 2, pp. 165-177, 2015.

-
- [14] N. Y. Jung, and Y.-K. Seock, "The impact of corporate reputation on brand attitude and purchase intention," *Fashion and Textiles*, vol. 3, no. 1, 2016.
- [15] Y. B. Susanto, and S. C. Pratiwi, "The Effect of Technology Readiness, Service Quality and Perceived Risk on Relationship Quality, and the Implications for Continuance of Intention - Study on Users of BCA Mobile Banking Applications," *International Journal of Innovation, Creativity and Change*, vol. 5, no. 6, 2019.
- [16] T. F. Stillman, F. D. Fincham, K. D. Vohs, N. M. Lambert, and C. A. Phillips, "The material and immaterial in conflict: Spirituality reduces conspicuous consumption," *Journal of Economic Psychology*, vol. 33, no. 1, pp. 1-7, 2012.
- [17] J. E. King, and M. R. Crowther, "The measurement of religiosity and spirituality," *Journal of Organizational Change Management*, vol. 17, no. 1, pp. 83-101, 2004.
- [18] Chairy, "Spirituality, Self Transcendence, and Green Purchase Intention in College Students," *Procedia - Social and Behavioral Sciences*, vol. 57, pp. 243-246, 2012.
- [19] J. Milliman, A. Gatling, and J. Kim, "The effect of workplace spirituality on hospitality employee engagement, intention to stay, and service delivery," *Journal of Hospitality and Tourism Management*, vol. 35, pp. 56-65, 2018.
- [20] N. Aboobaker, M. Edward, and Z. K.A, "Workplace spirituality, employee wellbeing and intention to stay," *International Journal of Educational Management*, vol. 33, no. 1, pp. 28-44, 2019.
- [21] R. Anvari, A. S. Barzaki, L. Amiri, S. Irum, and S. Shapourabadi, "The mediating effect of organizational citizenship behavior on the relationship between workplace spirituality and intention," *Intangible Capital*, vol. 13, no. 3, 2017.
- [22] R. Nagoya, and I. Bernarto, "Determinant Factors of University Choice for UPH Students," *International Journal of Innovation, Creativity and Change*, vol. 5, no. 6, 2019.
- [23] L. P. K. Adeosun, and R. A. Ganiyu, "Corporate Reputation as a Strategic Asset," *International Journal of Business and Social Science*, vol. 4, no. 2, 2013.
- [24] P. Foroudi, Q. Yu, S. Gupta, and M. M. Foroudi, "Enhancing university brand image and reputation through customer value co-creation behaviour," *Technological Forecasting and Social Change*, vol. 138, pp. 218-227, 2019.
- [25] S. Polat, G. Guncavdi, and Y. Arslan, "The Impacts of a University's Organizational Reputation and Organizational Attraction on Students' Intention to Pursue," *Eurasian Journal of Educational Research*, vol. 84, 2019.
- [26] H.-T. Tsou, F.-H. Liu, and H.-Y. Hsu, "The Effects of Reputation and Relative Low Price on Purchase Intention: Service Quality as a Mediated Moderator," *Web Journal of Chinese Management Review* • vol. 18, no. 3, 2015.

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- [27] C. Har Lee, N. Oly Ndubisi, U. Cyril Eze, and N. Oly Ndubisi, "Analyzing key determinants of online repurchase intentions," *Asia Pacific Journal of Marketing and Logistics*, vol. 23, no. 2, pp. 200-221, 2011.
- [28] C.-Y. Lin, "Perceived convenience retailer innovativeness: how does it affect consumers?," *Management Decision*, vol. 54, no. 4, pp. 946-964, 2016.
- [29] W.-I. Lee, S.-Y. Cheng, and Y.-T. Shih, "Effects among product attributes, involvement, word-of-mouth, and purchase intention in online shopping," *Asia Pacific Management Review*, vol. 22, no. 4, pp. 223-229, 2017.
- [30] L. Peng, W. Zhang, X. Wang, and S. Liang, "Moderating effects of time pressure on the relationship between perceived value and purchase intention in social E-commerce sales promotion: Considering the impact of product involvement," *Information & Management*, vol. 56, no. 2, pp. 317-328, 2019.
- [31] T. Kato, and K. Tsuda, "Related Verification of Emotional Value and Company Brand Emitted from Pure Recall," *Procedia Computer Science*, vol. 112, pp. 1298-1307, 2017.
- [32] C. Topaloğlu, "CONSUMER MOTIVATION AND CONCERN FACTORS FOR ONLINE SHOPPING IN TURKEY," *Asian Academy of Management Journal*, vol. 17, no. 2, 2012.
- [33] T. G. Sharma, P. Tak, and A. Kesharwani, "Understanding Continuance Intention to Play Online Games: The Roles of Hedonic Value, Utilitarian Value and Perceived Risk," *Journal of Internet Commerce*, vol. 19, no. 3, pp. 346-372, 2020.
- [34] W. Handayani, M. Musnaini, and W. I. Praditya, "Purchase Intentions of Consumer Hedonic Effect," *Jurnal Perspektif Pembiayaan dan Pembangunan Daerah*, vol. 8, no. 1, pp. 91-100, 2020.
- [35] C. Kim, R. D. Galliers, N. Shin, J.-H. Ryoo, and J. Kim, "Factors influencing Internet shopping value and customer repurchase intention," *Electronic Commerce Research and Applications*, vol. 11, no. 4, pp. 374-387, 2012.
- [36] A. Hermawan, *Penelitian Bisnis : Pendekatan kuantitatif, kualitatif, dan metode campuran*, Jakarta: Universitas Trisakti, 2013.
- [37] J. Joseph E Hair, G. T. M. Hult, C. M. Ringle, and M. Sarstedt, *A PRIMER ON PARTIAL LEAST SQUARES STRUCTURAL EQUATION MODELING (PLS-SEM)*, California: SAGE, 2014.
- [38] H. Ting, and R. Thurasamy, "What matters to infrequent customers: a pragmatic approach to understanding perceived value and intention to revisit trendy coffee cafe," *Springerplus*, vol. 5, pp. 651, 2016.

Mapping the Potential of the Domestic Tourist Market in Indonesia

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Abstract

By modifying the quadrant model using secondary data related to the number of domestic tourist trips, GRDP per Capita, Trip Duration, and Average Spending per visit in each province in Indonesia. This research has succeeded in mapping 7 provinces which are categorized as high domestic tourist market categories, including DKI Jakarta, Riau Islands, East Kalimantan, North Kalimantan, Papua, West Papua, and Riau. And, 11 provinces with moderate potential categories, including Central Kalimantan, Gorontalo, Jambi, West Kalimantan, Maluku, North Maluku, East Nusa Tenggara, Central Sulawesi, Southeast Sulawesi, North Sulawesi, and South Sumatra. The Indonesian government needs to optimize these provinces because they are considered capable of providing added economic value to other provinces when traveling.

Keywords: Domestic Travelers, Quadrant Model, Economic Value Added

I. INTRODUCTION

In a health crisis, isolation is the most effective method and has proven successful over time [1]. This is what is happening in the world today when facing the massive spread of Covid-19. The world tourism organization - UNWTO, even in its report states that until the first quarter of 2020 the world has lost more than 67 million foreign tourist trips, whereas of April 20, 2020, it was recorded that all tourist destinations in the world implemented Travel Restrictions [2, p. 8]. The potential losses caused by travel restrictions are very significant for the travel business and tourism industry and have the potential to damage a country's "image", especially tourism [3]. But what is certain is, the restrictions will deter foreign visitors from affected countries [4].

UNWTO stated that according to experts, domestic tourists are the market that will recover first [2, p. 6]. But unfortunately, domestic tourists are still ignored by many developing countries, even though developed countries manage domestic tourism seriously as a way to achieve sustainable tourism development [5]. Likewise with Indonesia, which until now still places the indicator of foreign tourists as an indicator of tourism progress, and this is deemed inappropriate because domestic tourists have a bigger role [6, p. 54]. Domestic tourists play an important role in Indonesia's tourism economy by always being the largest contributor compared to other sources of tourism income (foreign tourists, national tourists, investment, promotion & development) to output, gross value added, labour compensation, and tax on products Neto [6, pp. 56–62].

The advantages of domestic tourists include that this market is not sensitive to crises, be it economic, natural, health or political [7], and does not hesitate to change its travel plans in cases of emergencies such as epidemics or security alerts, and the existence of social commitment as an important function of individuals to visit relatives [8]. This is one of the reasons why domestic tourists can become the basis for the tourism economy in a country [9]. Thus, good management of domestic tourists in Indonesia is expected to help optimize the economic impact of tourism nationally.

The problem faced by Indonesia is, apart from not being managed by the domestic tourist market to provide an optimal tourism impact, there is also no mapped market potential in Indonesia. One of the studies that conducted a mapping of the domestic tourist market was carried out by Anonymous (2019) who modified the Boston Consulting Group matrix, using indicators of travel trends and potential tourism expenditure in Indonesia. In this study, the results showed that the economic conditions described by the indicator of GDP per capita in a province are not always directly proportional to the tendency of the population to travel (Anonymous, 2019). Therefore, further research needs to be carried out, to identify with

certainty the potential of domestic tourist markets in Indonesia, by using the latest data, as well as adding other indicators that can help map potential markets.

The development of Indonesian tourism under the document of the National Long-Term Development Plan is that increasing the added value of tourism will be focused on increasing the length of stay and tourist spending [10, p. 29]. This is done by promoting tourism through various events and easy access to travel within the country, which are expected to increase the choice of domestic tourists for domestic tours, so that service imports can be managed better [10, p. 31]. Where there are 10 priority destinations that will be developed over the next 5 years, including: Lake Toba and its surroundings, Borobudur and its surroundings, Lombok-Mandalika, Labuan Bajo, Manado-Likupang, Wakatobi, Raja Ampat, Bangka Belitung, Bromo-Tengger- Semeru, and Morotai [10, p. 29]. Thus, the research will map the potential of the domestic tourism market in Indonesia, which can be used by the government in formulating Indonesian tourism development policies that, in addition to paying attention to aspects of tourism trends and potential tourism expenditures, also pay attention to aspects of trip duration and expenses per visit when conducting tourism activities. It is important that the economic benefits of tourism can be seen from the indicators of the number of tourists, the length of stay, and the average tourist spending [11].

Tourism demand can be divided into 3 types, namely Inbound, Outbound, as well as domestic market demand [12]. In the tourism sector, the effective measure of demand is the propensity to travel (Travel propensity), which means the percentage of the population that is engaged in tourism [13], [14]. Travel propensity is divided into two, namely: Net Travel Propensity which refers to the percentage of the population that takes at least one tour in a certain period, and Gross Travel Propensity gives the total number of travel trips taken as a percentage of the population [13, p. 23]. Referring to two measures (Net and Gross), the concept of Gross Travel Propensity (GTP) or the portion of the tourist trips of foreign residents becomes more relevant because it includes multiple visits [13, p. 23]. In previous research, Anonymous (2019) successfully identified Indonesia's GTP in terms of domestic tourist travel. Provinces with the highest GTP in Indonesia include Bangka Belitung Islands (3.63), DKI Jakarta (2.41), Riau Islands (2.21), DI Yogyakarta (2.09), and North Sulawesi (1.75) (Anonymous, 2019).

Tourism demand is influenced by many factors such as the desire of tourists to get away from their worldly life, the need to escape [23] [31], the urge to look for something new or the desire for a certain experience, culture, the number of hotel rooms, transportation, tourism infrastructure such as direct flights, sanitation facilities, safety, security, and information dissemination systems [17]–[19], distance [17], [20], [21], Population trends [22],

the price [15], [23], [24], economy [25]–[27], the image of the destination [28], [29], infrastructure, diversity of attractions and seasons/climate [30], [31]. In addition to factors originating from within tourists, the motivation for tourist visits is also influenced by factors that come outside of their control. These factors include marketing programs [32], [33], as well as government policies related to travel [4], [20], [34].

There are several indicators that are generally used as a measure of prosperity or welfare, one of which is GDP per capita. In macroeconomic measures, the level of welfare of a country's population is generally measured using GDP per capita [35] [36]. Despite its distribution and equity limitations, GDP per capita is a reasonable, rough, and ready-to-use standard of living [37]. GDP and GDP per capita have a relationship with a person's tendency to travel, as well as tourist spending [38] [39]. Gross Regional Domestic Product (GRDP) at constant prices shows the added value of these goods and services which is calculated using the prevailing price in a certain year as the base year, which can be used to determine the distribution and economic structure of an area [40]. The greater the per capita GRDP, the more prosperous the population of an area [41] [42]. Economic growth is also an important factor as an illustration of people's income as seen through the per capita GRDP indicator [43].

Tourist expenditure is an indicator that affects the value of income obtained from the tourism sector [44], so the most important government policy goal is to increase spending by tourists [45]. The increase in tourist consumption will increase the growth of economic output, with various efforts, among others: promotion by targeting potential markets based on market segmentation, especially quality tourists; and increase the length of stay and return visits [46]. Apart from income [47] or who have more potential in terms of expenditure (Gilmore, 2017 & Anonymous, 2018), length of stay and disperse [50] are the indicators commonly used in defining quality tourism.

From a tourist perspective, the length of stay is one of the most important variables in the tourist decision-making process (Salmasi et al. In Alén, Nicolau, Losada, & Dominguez, 2014). In the statistics of domestic tourists in Indonesia, the indicator of the length of stay is shown by the indicator of trip duration. Trip duration is the number of days spent traveling, counted from the time the respondent leaves his house until he returns home [52, p. 26]. From a destination perspective, the factor of the length of stay for tourists is one of the factors that determine the size of foreign exchange received [53]. Travelers with longer stays open the possibility to generate more economic impacts [54]. The amount of money spent by tourists in carrying out tourism activities, include: recreation costs, lodging, and the use of other entertainment services facilities can produce results in the trade sector, hotels, and

restaurants [44]. The amount of tourist expenditure depends on how much time they spend on the trip [55].

II. METHODS

This is a descriptive statistical study using the quadrant model modification approach. The quadrant model is an integrative operating system for complex knowledge and practical development in various areas of life, that defines four basic perspectives that can help expand our understanding of a given phenomenon by combining precision and focus with a broad scope and a clear overview [56]. Quadrant model is a planar (container) divided by grid-2 and formed cells of the same size which is called a quadrant and the number of points in each cell is random, rectangular, (Figure 1) and the hypothesis developed is more about whether the points are regularly distributed or clustered or random or not random [57]. So it can be concluded that the quadrant model can help us understand the phenomenon of the 2 types of variables observed through the four perspectives depicted.

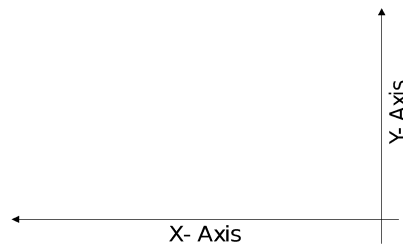


Figure 1. Quadrant Model Illustration

The indicators that will be used as benchmarks in this study include Gross travel propensity according to the province of origin, GRDP per capita Province based on current prices for each province, duration of travel by the province of origin, and average expenditure per visit according to the province of origin. Gross travel propensity in the province of origin refers to the definition presented by Boniface & Cooper (2009) and Rögnvaldsdóttir (2015). Provincial GRDP per capita the current price basis describes the added value of goods and services calculated using the prices in the current period [40], which is divided by the number of inhabitants. In this research, a quadrant model exercise of the four observation indicators will be carried out as shown in Appendix 1.

The steps taken to map the potential domestic tourist movement are as follows. First, for the GRDP per capita indicator based on the prevailing prices for each province, length of stay by the province of origin, and average expenditure per visit by the province of origin, the data

is already available on the official website of the Central Statistics Agency in the 2019 Indonesian Statistics book and Indonesian Tourist Statistics. 2019. Meanwhile, the calculation of GTP is by dividing the total trips produced in a country, by the total population of that country in the same period, then multiplying by 100 [13], [58]. In this study, provincial GTP is obtained from the number of domestic tourist trips produced by a province, divided by its total population and multiplied by 100.

$$GTP_{Province} = \frac{\text{Number of total trips generated}}{\text{Total Population}} \times 100 \quad (1)$$

Second, the midpoint or the intersection of the X and Y axes is the national average, so that the quadrant model will later show which indicators are above or below the national average. Third, pairing the four observed variables with each other to produce six simulation results of comparing the data as shown in Figure 2. The national average data on the X and Y axes will be used as the meeting point. So that the quadrant will show the position of the Province when compared to the national average.

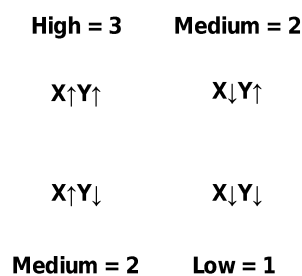


Figure 2. Quadrant Model Modification and Scale Division

Fourth, dividing the simulation results class for each province into a scale of 1 for low, 2 for medium, and 3 for high as in Figure 2. If quadrants IV and II show that one of the indicators is below the national average, then the value in The quadrant is 2. Whereas in quadrant III, where the two indicators are below the national average will be given a value of 1. Quadrant I, which shows both indicators are above the national average, will be given a score of 3. Referring to the picture above, the formula to get the total simulation value is as follows. The total minimum value (V_{Min}) is obtained by the formula:

$$V_{Min} = S_{Min} \times E_n \quad (2)$$

Where is the minimum score, namely 1, and is the number of simulations carried out, namely 6 exercises. So that is 6. The total maximum value (V_{Max}) is obtained by the formula:

$$V_{Max} = S_{Max} \times E_n \quad (3)$$

Where is the maximum score, namely 3, and is the number of simulations carried out, namely 6 simulations. So that is 18. To determine the range between classes (r), the following calculations are performed:

$$r = \frac{V_{Max} - V_{Min}}{N_c} \quad (4)$$

Where is the number of classes, namely 3. Thus, the quadrant with a low total value will be in the range of 6 to 10. A quadrant with moderate values will be in the range 10 to 14. While the quadrant with a high value will be in the range of 14 to 18.

III. RESULTS AND FINDINGS

3.1 Population, GRDP Per Capita, Domestic Tourist Trip, Length of Travel, Expenditure, and Gross Travel Propensity

The data used as an indicator is official data from the Indonesian Central Bureau of Statistics, can be found in Appendix 2. In 2018, Indonesia's population was recorded at 265 million with a growth rate of 1.19% compared to the previous year [59, p. 2]. Provinces with the highest population, among others: West Java (48.7 million), East Java (39.5 million), Central Java (34.9 million), North Sumatra (14.4 million), and Banten (12, 7 million). Indonesia's national average GRDP Per Capita is Rp. 56,548 thousand [59, p. 655]. Provinces with the highest per capita GRDP, among others: DKI Jakarta (Rp. 248,306 thousand), East Kalimantan (Rp. 174,882 thousand), North Kalimantan (Rp. 120,126 thousand), Riau Islands (116,581 thousand), and Riau (110,827 thousand).

When viewed from the number of trips produced by domestic tourists, there are 5 provinces that have the largest number of domestic tourist visits, including East Java (52 million), West Java (49.2 million), Central Java (39.2 million), DKI Jakarta (21.7 million), and Banten (11.4 million). The total of all domestic tourist trips that occurred in 2019 was 282.93 million trips [52, p. 38]. If seen, then 3 of them are provinces with the largest population in Indonesia. This is in accordance with the statement Tribe (2004) which states that the population is an important factor in the aspect of tourism demand.

The national average length of travel taken is 3.13 days [52, p. 47]. Based on the length of trip duration taken, the province of origin of domestic tourists, the longest is West Papua (9.32 days), Maluku (8.34 days), North Maluku (7.41 days), Papua (6.8 days), and North Kalimantan (6.32 days). Meanwhile, the average national expenditure of domestic tourists is Rp. 1,086.2 thousand [52, p. 49]. Provinces with the highest average expenditure per visit were Papua (Rp. 3,846.41 thousand), West Papua (Rp. 3,918.99 thousand), North Kalimantan (Rp. 2,983.8 thousand), North Maluku (Rp. 2,685.15 thousand), and Maluku (Rp. 2,452.02 thousand). There is a positive relationship between the length of the tour and the expenses incurred by domestic tourists. This is in accordance with what was stated by Suastika & Yasa (2015), Wang, Ka, Fong, Law, & Fang (2017), and Brida & Scuderi (2013). The GTP calculation for each province can be found in Appendix 3.

Nationally, Indonesia's GTP is 1.07, which means that every Indonesian resident takes domestic tourist trips on average 1.07 times per year. Provinces with the highest GTP include Bangka Belitung Islands (6.05), Riau Islands (3.70), DKI Jakarta (2.07), DI Yogyakarta (2.03), and Bali (1.48). There has been a shift in the travel pattern of domestic tourists compared to the previous year, as has been done by Anonymous (2019). The Bangka Belitung Islands are still the province with the highest GTP, however, the frequency of trips has almost doubled, while the Riau islands, which were previously in the second position, were displaced by DKI Jakarta, which increased from before. The Riau Islands have experienced a decline in the tendency to travel domestically and occupy third place nationally. Meanwhile, DI Yogyakarta is still in the fourth position with an increase in GTP. However, the fifth rank, previously North Sulawesi Province, was shifted by Bali. The national average used as the intersection point between the X and Y axes are 1.07 for GTP, Rp. 56,548 thousand for GRDP per capita, 3.313 days for trip duration, and Rp. 1,086.2 thousand for average spending per trip.

3.2 Quadrant Model Exercises

The simulation on each combination of the 2 indicators that can be found in Appendix 4. The result is there are Provinces identified that can be used as potential markets for domestic tourists in Indonesia when viewed from each of the 2 forming indicators. The markets with the highest potential are those in quadrant I, where each indicator he observes is above the national average. In exercise 1, which identifies the indicators of GTP and GRDP Per Capita, it can be seen that 2 provinces are in quadrant I, namely DKI Jakarta and Riau Islands. Likewise with Exercise 2, which combines the GTP and Trip Duration indicators, and Exercise 3 which combines the GTP and Average Spend Per Trip indicators which show the same results.

In exercise 4 which combines the indicators of GRDP Per Capita and Trip Duration, and exercise 5 with indicators of GRDP per Capita and Average Spending per Trip, it can be seen that each of the 7 provinces are the same in quadrant I, including DKI Jakarta, Riau Islands, East Kalimantan, North Kalimantan, Papua, West Papua, and Riau. While in exercise 6 with indicators of Trip Duration and Average Spending per trip, 17 provinces are in quadrant I, namely DKI Jakarta, Riau Islands, East Kalimantan, North Kalimantan, Papua, West Papua, Riau, Central Kalimantan, Gorontalo, West Kalimantan, Maluku, North Maluku, East Nusa Tenggara, Central Sulawesi, Southeast Sulawesi, and South Sumatra. Based on the exercise results graphs, it can be seen that the observed variables are random with an indication that there is no pattern formed between the two variables.

From these results, it is found that in the case of domestic tourists in Indonesia, the welfare of an area does not have the potential to generate the tendency of its citizens to travel. This is shown by the quadrant model in exercise 1, where only 2 provinces are in quadrant I, which contradicts the statement of Morphet & Bottini (2015). The results in the quadrant exercise 5 model show that there are only 7 provinces that have a welfare level above the national average with an average spend per trip above the national average. This shows that the findings of WTTC & Oxford Economics (2016) in their research which state that richer regions will spend more per capita spending on tourist trips, do not apply to the domestic tourist market in Indonesia.

Likewise with the findings of Brida & Scuderi (2013), Barros & Machado (2010), Suastika & Yasa (2015), which in their research stated that the amount of tourist expenditure depends on how long they spend while traveling. This looks not much different from what happens in the domestic tourist market in Indonesia, where the quadrant model in exercise 6 shows that there are 17 provinces out of 34 provinces that have the trip duration and average spend per trip above the national average. These findings certainly reaffirm the statement of the Federation of Indian Chambers of Commerce and Industry (2007) where visiting relatives and friends is the main and most frequent destination of domestic tourists. This, of course, will affect spending patterns and length of stay in the area visited. Because this type of visit also generally indicates that tourists are likely to have a stay at a relative/friend's house compared to using the means of commercial accommodation.

3.3 Quadrant Model Combined-Exercises

If the entire quadrant model is combined to be able to identify the potential market for domestic tourists in Indonesia, it can be found in Appendix 5. From Appendix 5, the results show that there are 7 provinces in Indonesia that are in the high potential category to serve as a domestic tourist market, namely DKI Jakarta, Riau Islands, East Kalimantan, North Kalimantan, Papua, West Papua, and Riau. These provinces have the potential for travel, potential expenditure, and a high potential for the length of stay, so efforts can be made to provide added value to the economy of the destinations they visit. Meanwhile, there are 11 provinces that fall into the medium potential category, including Central Kalimantan, Gorontalo, Jambi, West Kalimantan, Maluku, North Maluku, East Nusa Tenggara, Central Sulawesi, Southeast Sulawesi, North Sulawesi, and South Sumatra.

In Appendix 6, can be seen the results of the potential market mapping when combined with the distribution of 10 priority destinations. First, there are priority destinations that are located in provinces with low market potential, but are geographically located close to

each other, either on one island, adjacent to or opposite other provinces with moderate to high market potential. These destinations include Lake Toba and its surroundings, Bangka Belitung, Borobudur and its surroundings, Bromo-Tengger-Semeru, and Lombok-Mandalika. Second, some destinations are located in provinces with medium to high market potential and are geographically located close to each other, either on one island, adjacent to or opposite other provinces with moderate to high market potential. These destinations include Manado-Likupang, Morotai, and Raja Ampat. Third, some destinations are located in provinces with medium to high market potential, but are not geographically close to each other, are in one island, adjacent to, or opposite other provinces with moderate to high market potential. The destination is Labuan Bajo.

IV. CONCLUSIONS, IMPLICATIONS, AND SIGNIFICANCE

This study mapped 7 provinces with high potential for domestic tourists and 11 provinces with medium-level potential for domestic tourists. Under normal conditions, the government needs to develop the seven provinces that have high potential to be able to have an impact on added economic value to other provinces through their tour trips. Meanwhile, in 11 provinces with medium level potential, the government needs to look back at each indicator to be able to find which indicator is below the national average. This can be done to determine the right stimulus for the province in order to increase the number of trips it produces, the average expenditure, and the length of stay on domestic tourism trips.

The implication of this research is that it is time for Indonesia to also pay attention to domestic tourists with great economic potential that can be generated by each trip. Especially at this time where the whole world is being hit by the Covid-19 pandemic, and UNWTO predicts that the domestic market is the first market to recover compared to the international market, where until now Travel restriction is still set by almost all countries in the world. So Indonesia must be able to optimize the potential of domestic tourists. It has to be able to recover the economy from the crisis caused by this pandemic. However, of course, Indonesia must also juxtapose Health indicators in its implementation.

Development of priority destinations that are in provinces with low market potential, but geographically located close to each other, either on one island, adjacent to, or opposite other provinces with moderate to high market potential, it is necessary to create a stimulus so that they visit priority destinations. The geographical location between destinations and markets with medium to high potential levels is an advantage, so it is necessary to optimize promotional activities to generate awareness, interest, and the decision to visit these priority

destinations. For destinations that are in provinces with moderate to high market potential levels, and have a geographic location that is close to each other, either within one island, adjacent to, or opposite other provinces with moderate to high market potential, with the advantage of the geographical location with potential markets, of course In addition to optimizing promotional activities to generate interest, as well as decisions to visit other provinces, it is also important to do the same for market demands that are local in nature or within one province. Meanwhile, for destinations that are in a province with a moderate to high market potential level, but geographically not close together, on one island, adjacent to, or opposite to another province with moderate to high market potential, more effort is needed to bridge the distance between destinations and potential markets, both in terms of promotion and ease of accessibility.

This research has significance in the conditions currently facing Indonesia, where travel abroad is not possible and it is time for domestic tourists to play a bigger role in the tourism economy. Domestic tourist trips must also pay attention to health protocols and the risk of spreading a pandemic. The economic recovery policy through gradual domestic tourism trips can be started with trips within the city, across cities - within provinces, across cities - across provinces, which still pay attention to health indicators.

It is felt that the research still needs further development by identifying and mapping destination provinces which are tourist destinations. Further research using primary data sources is also felt necessary, in order to strengthen the findings in this study.

Appendix 1. List of Exercises for Mapping the Potential of the Indonesian Domestic Tourist Market

INDICATORS	X-Axis			
	Gross Travel Propensity	GRDP Per Capita	Trip Duration	Average Spending Per Trip
Y	Gross Travel Propensity	-	-	-
-	PDRB Per Capita	Exercise 1	-	-
A	Trip Duration	Exercise 2	Exercise 4	-
xi				
s				

Average Spending Per Trip	Exercise 3	Exercise 5	Exercise 6	-
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Source: Author's Process, 2020

Appendix 2. Population, GRDP per Capita, Number of Domestic Tourist Trips, Average Domestic Tourist Trips, and Average Domestic Tourist Expenditure per Province in Indonesia.

Province	Populati on ¹⁾	GRDP Per Capita (In Rp. '000) ¹⁾	Total Trip According To Origin ²⁾	Trip Duration (Day) ²⁾	Average Spending Per Visit (In Rp. '000) ²⁾
Aceh	5,281,300	29,522	6,677,350	2.55	887.05
Bali	4,292,200	54,618	6,336,447	2.57	585.9
Banten	12,689,700	48,457	11,390,512	2.31	909.96
Bengkulu	1,963,300	33,827	2,049,220	2.99	832.9
In Yogyakarta	3,802,900	34,152	7,718,353	2.22	630.06
DKI Jakarta	10,467,600	248,306	21,683,578	3.89	1579.37
Gorontalo	1,185,500	31,832	764,717	3.16	1124.45
Jambi	3,570,300	58,365	1,862,760	3.26	1068.38
West Java	48,683,700	40,306	49,247,753	2.18	806.33
Central Java	34,908,000	36,784	39,211,023	1.82	525.15
East Java	39,500,900	55,436	52,081,723	1.86	565.7
West Kalimantan	5,001,700	38,794	2,924,941	3.28	1406.96
South Borneo	4,182,700	41,106	3,344,620	2.84	1043.56
Central Kalimantan	2,660,200	52,154	2,082,520	4.21	1566.05
East Kalimantan	3,648,800	174,882	1,823,000	4.9	2075.84
North Kalimantan	716,400	120,126	686,336	6.32	2983.8
Bangka Belitung Islands	1,459,900	50,052	8,835,507	1.88	631.26

Riau Islands	2,136,500	116,581	7,904,297	3.89	1693.89
Lampung	8,370,500	39,864	6,210,447	2.86	878.7
Maluku	1,773,800	24,278	754,528	8.34	2452.02
North Maluku	1,232,600	29,610	622,143	7.41	2685.18
West Nusa Tenggara	5,013,700	24,707	2,065,701	2.59	956.89
East Nusa Tenggara	5,371,500	18,447	2,865,432	4.92	1560.3
Papua	3,322,500	63,404	796,440	6.8	4846.41
West Papua	937,500	84,958	622,840	9.32	3918.99
Riau	6,814,900	110,827	4,524,315	4.31	1285.81
West Sulawesi	1,355,600	32,124	779,228	4.44	987.71
South Sulawesi	8,772,000	52,707	8,045,434	3.4	950.58
Central Sulawesi	3,010,400	50,038	1,850,710	4.88	1588.74
Southeast Sulawesi	2,653,700	44,502	2,028,472	4.36	1110.99
North Sulawesi	2,484,400	48,118	3,250,699	2.86	1116.2
West Sumatra	5,382,100	42,833	6,608,377	2.65	709.96
South Sumatra	8,370,300	50,144	5,005,476	3.32	1240.76
North Sumatra	14,415,400	51,417	10,270,955	2.66	812.1

Source: 1) Statistical Yearbook of Indonesia 2019 [59], 2) Domestic Tourism Statistics 2019 [52]

Appendix 3. Indonesia's Gross Travel Propensity (GTP), 2019

PROVINSI	GROSS TRAVEL PROPENSITY
Aceh	1,26
Bali	1,48
Banten	0,90
Bengkulu	1,04
DI Yogyakarta	2,08
DKI Jakarta	2,07
Gorontalo	0,65
Jambi	0,52
West Java	1,01
Central Java	1,12
East Java	1,32
West Kalimantan	0,58
South Kalimantan	0,80
Central Kalimantan	0,78
East Kalimantan	0,50
North Kalimantan	0,96
Bangka Belitung Islands	0,95
Riau Islands	1,70
Lampung	0,74
Maluku	0,43
North Maluku	0,50
West Nusa Tenggara	0,41
East Nusa Tenggara	0,53
Papua	0,24
West Papua	0,66
Riau	0,86
West Sulawesi	0,57
South Sulawesi	0,92
Central Sulawesi	0,61
Southeast Sulawesi	0,76
North Sulawesi	1,31
West Sumatra	1,23
South Sumatra	0,60
North Sumatra	0,71

GROSS TRAVEL POPENSITY (GTP)

National Average
1,07

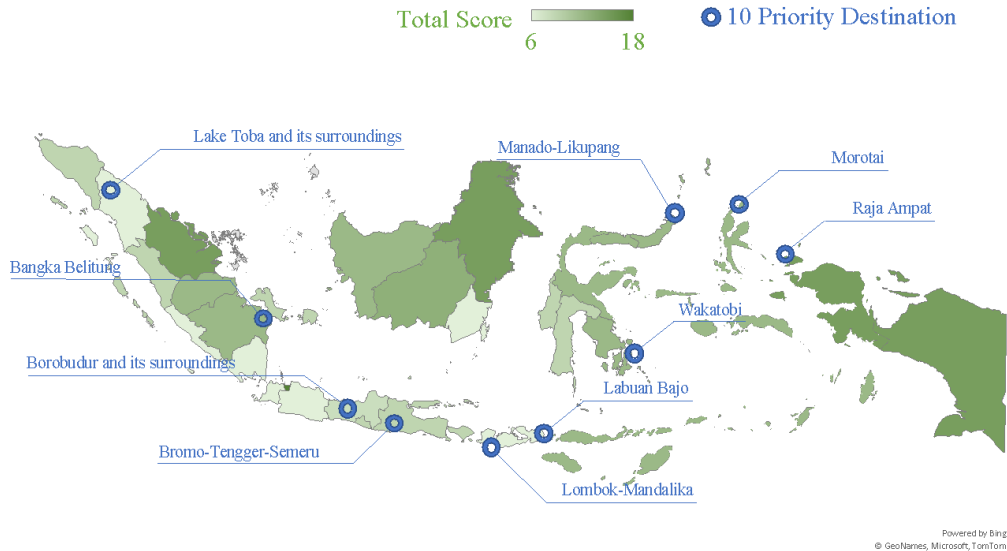
Appendix 4. Potential Market-Forming Indicators Exercis.

Appendix 5. Quadrant Model Scoring Results

Province	E	E	E	E	E	E	Total Score	Remarks
	1	2	3	4	5	6		
DKI Jakarta	3	3	3	3	3	3	18	HI
Riau Islands	3	3	3	3	3	3	18	HI
East Kalimantan	2	2	2	3	3	3	15	HI
North Kalimantan	2	2	2	3	3	3	15	HI
Papua	2	2	2	3	3	3	15	HI
West Papua	2	2	2	3	3	3	15	HI
Riau	2	2	2	3	3	3	15	HI
Central Kalimantan	2	2	2	2	2	3	13	MED
Gorontalo	1	2	2	2	2	3	12	MED
Jambi	2	2	1	3	2	2	12	MED
West Kalimantan	1	2	2	2	2	3	12	MED

Maluku	1	2	2	2	2	3	12	MED
North Maluku	1	2	2	2	2	3	12	MED
East Nusa Tenggara	1	2	2	2	2	3	12	MED
Central Sulawesi	1	2	2	2	2	3	12	MED
Southeast Sulawesi	1	2	2	2	2	3	12	MED
North Sulawesi	2	2	3	1	2	2	12	MED
South Sumatra	1	2	2	2	2	3	12	MED
Aceh	2	2	2	1	1	1	9	LOW
Bali	2	2	2	1	1	1	9	LOW
In Yogyakarta	2	2	2	1	1	1	9	LOW
East Java	2	2	2	1	1	1	9	LOW
Bangka Belitung Islands	2	2	2	1	1	1	9	LOW
West Sulawesi	1	2	1	2	1	2	9	LOW
South Sulawesi	1	2	1	2	1	2	9	LOW
West Sumatra	2	2	2	1	1	1	9	LOW
Central Java	1	2	2	1	1	1	8	LOW
Banten	1	1	1	1	1	1	6	LOW
Bengkulu	1	1	1	1	1	1	6	LOW
West Java	1	1	1	1	1	1	6	LOW
South Kalimantan	1	1	1	1	1	1	6	LOW
Lampung	1	1	1	1	1	1	6	LOW
West Nusa Tenggara	1	1	1	1	1	1	6	LOW
North Sumatra	1	1	1	1	1	1	6	LOW

Appendix 6. Potential Domestic Market and 10 Priority Destination



REFERENCES

- [1] L. H. Chung, "Impact of Pandemic Control Over Airport Economics: Reconciling Public Health with Airport Business Through A Streamlined Approach in Pandemic Control," *J. Air Transp. Manag.*, vol. 44, no. 45, pp. 42–53, 2015.
- [2] World Tourism Organization (UNWTO), "UNWTO World Tourism Barometer, May 2020 – Special focus on the Impact of COVID-19," 2020.
- [3] I. M. Budiasa and N. M. Nadra, "The Potential Cost of Travel Restriction on Tourism Industry," in *Asia Tourism Forum 2016 - The 12th Biennial Conference of Hospitality and Tourism Industry in Asia (ATF-16)*, 2016, no. May 2016, pp. 504–507.
- [4] E. Ob and D. Mp, "The Influence of Visa Restrictions on the Choice of Travel Destination among the Academic and Senior Staff of Michael Okpara University of Agriculture, Umudike," *J. Tour. Hosp.*, vol. 7, no. 2, pp. 1–8, 2018.
- [5] F. Kabote, P. W. Mamimine, and Z. Muranda, "Domestic Tourism for Sustainable Development in Developing Countries," *African J. Hosp. Tour. Leis.*, vol. 6, no. 2, pp. 1–12, 2017.
- [6] BPS-Statistics Indonesia, *Neraca Satelit Pariwisata Nasional (NESPARNAS) 2017*. Jakarta: BPS - Statistics Indonesia, 2019.

-
- [7] N. R. Kumar, "Significance of Domestic Tourism in India as a Major Revenue Generator," *Asia Pacific J. Res.*, vol. 1, no. Xxxviii, pp. 6–9, 2016.
- [8] Federation of Indian Chambers of Commerce and Industry, *Domestic Tourism: Evolution, Trend & Growth*, no. December. New Delhi: Federation of Indian Chambers of Commerce and Industry (FICCI), 2007.
- [9] Anonymous, "Pemetaan Prospek Pasar Wisatawan Nusantara di Indonesia," *J. Kepariwisata Indonesia.*, vol. 13, no. 1, pp. 1–15, 2019.
- [10] Presiden Republik Indonesia, "Attachment I to Presidential Regulation No. 18/2020, Concerning the 2020-2024 National Medium-Term Development Plan (In Bahasa)," 2020.
- [11] I. B. P. Wijaya and M. D. S. Mustika, "Pengaruh Jumlah Kunjungan Wisatawan, Lama Tinggal dan Pengeluaran Wisatawan mancanegara Terhadap Pendapatan Sektor Perdagangan, Hotel dan Restoran (PHR) Provinsi Bali Tahun 2000-2012," *Ekon. Pembang. Univ. Udayana*, vol. 3, no. 4, pp. 124–133, 2012.
- [12] J. Vencovsk'a, "Charles University in Prague Faculty of Social Sciences Institute of Economic Studies The Determinants of International Tourism Demand," Charles University in Prague, 2014.
- [13] B. Boniface and C. Cooper, *Worldwide Destinations: The Geography of Travel and Tourism*, Fifth Edit. Oxford: Butterworth-Heinemann Publications, 2009.
- [14] L. B. Rögnvaldsdóttir, "Tourism Data Collection: Analysis at the sub-national level in Iceland," *Sigillum Universitatis Islandiae*, 2015.
- [15] H. Moon and H. Han, "Tourist Experience Quality and Loyalty to An Island Destination: The Moderating Impact of Destination Image," *J. Travel Tour. Mark.*, pp. 1–17, 2018.
- [16] I. N. Subadra, I. K. Sutapa, I. W. A. Artana, L. K. H. K. Yuni, and M. Sudiarta, "Investigating Push and Pull Factors of Tourists Visiting Bali as a World Tourism Destination," *Int. J. Multidiscip. Educ. Res.*, vol. 8, no. 8(7), pp. 253–269, 2019.
- [17] J. Mariyono, "Determinants of Demand for Foreign Tourism in Indonesia," *J. Ekon. Pembang.*, vol. 18, no. 1, pp. 82–92, 2017.
- [18] Y. Lin and W. Deng, "Are per capita international tourist arrivals converging?," *Int. Rev. Econ. Financ.*, no. April 2017, pp. 1–17, 2017.
- [19] S. U. Tony and Y. S. Jacky, "The Impacts of Financial and Non-Financial Crises on Tourism: Evidence From Macao and Hong Kong," *Tour. Manag. Perspect.*, vol. 33, no. May 2019, p. 100628, 2020.
- [20] A. Artal-Tur, V. J. Pallardó-López, and F. Requena-Silvente, "Examining The Impact of Visa Restrictions on International Tourist Flows Using Panel Data," *Estud. Econ.*, vol. 43, no. 2, pp. 265–279, 2016.

-
- [21] S. S. Mishra and V. Bansal, "Role of source-destination proximity in international inbound tourist arrival : empirical evidences from India Role of source-destination proximity in international inbound tourist," *Asia Pacific J. Tour. Res.*, pp. 540–553, 2017.
- [22] J. Tribe, *The Economics of Recreation, Leisure & Tourism*, 3rd ed. Oxford: Elsevier, 2004.
- [23] C. Theara, "On the Investigation of Factors Affecting International Tourist Arrivals to Cambodian Market : A Static and Dynamic Gravity Approach On the Investigation of Factors Affecting International Tourist," *Southeast Asian J. Econ.*, vol. 5, no. 2, pp. 115–138, 2017.
- [24] I. G. B. R. Utama, "Destination Image of Bali Based on the Push Motivational Factors, Identity and Destination Creations in the Perspective of Foreign Senior Tourist," *J. Manaj. Kewirausahaan*, vol. 18, no. 1, pp. 16–24, 2016.
- [25] I. A. Nugroho, S. Gunawan, A. A. Awirya, and P. Nurman, "The Effect of Exchange Rate Fluctuations on Bali Tourism Sector," *J. Ekon. dan Pembang.*, vol. 1, no. December, pp. 4–6, 2017.
- [26] P. A. Krasnokutskiy, A. V Kulchittskij, T. V Perova, and N. V Bystrova, "The Main Trends and Prospects of Development of International Tourism," *Int. J. Econ. Financ. Issues*, vol. 6, pp. 257–262, 2016.
- [27] S. F. F. B. Song, Haiyan; Li, Gang; Witt, "Tourism demand modelling and forecasting : how should demand be measured ?," *Tour. Econ.*, vol. 16, no. 1, pp. 63–81, 2010.
- [28] X. Liu, J. J. Li, and W. G. Kim, "The Role of Travel Experience in The Structural Relationships Among Tourists' Perceived Image, Satisfaction, and Behavioral Intentions," *Tour. Hosp. Res.*, pp. 1–12, 2015.
- [29] M. Battour, F. Hakimian, M. Ismail, and E. Boğan, "The Perception Of Non-Muslim Tourists Towards Halal Tourism: Evidence From Turkey And Malaysia," *J. Islam. Mark.*, vol. 9, no. 4, pp. 823–840, 2018.
- [30] M. F. Yusup, A. Kanyan, J. Kasuma, H. Kamaruddin, and J. Adlin, "Determinants of Factors and The Growth of Tourism Industry in Langkawi Island," *J. Sci. Res. Dev.*, vol. 3, no. 2, pp. 13–20, 2016.
- [31] K. Jayaprakash, "Factors Influencing The Tourists to Visit Udhagamandalam," *Int. J. Manag. Soc. Sci. Res. Rev.*, vol. 1, pp. 40–44, 2017.
- [32] O. Sukirman, "Apakah Anggaran Pemasaran Pariwisata Pemerintah Efektif dalam Meningkatkan Jumlah Kunjungan Wisatawan?," *Tour. Hosp. Essentials J.*, vol. 7, no. 2, pp. 121–128, 2017.

-
- [33] J. Liu, H. Pan, and S. Zheng, "Tourism Development, Environment and Policies: Differences Between Domestic and International Tourists," *Sustain. MDPI, Open J. Access*, vol. 11, no. 1390, pp. 1–15, 2019.
- [34] D. Mylonopoulos, P. Moira, and A. Kikilia, "The Travel Advice as an Inhibiting Factors of Tourism Movement," *Orig. Članak*, vol. 10, pp. 13–26, 2016.
- [35] C. Utama, "Kesejahteraan Penduduk Antara Negara Diukur Menggunakan GDP Per Kaput dan GDP-PPP Per Kapita," *Bina Ekon.*, vol. 17, no. 1, pp. 1–14, 2013.
- [36] T. Lesmana, "Perkembangan Indikator Ekonomi dan Kemakmuran Indonesia Dibandingkan Dengan 6 Negara tetangga Periode 2005-2012," *J. Binus*, vol. 5, no. 1, pp. 101–111, 2014.
- [37] OpenStax, *Principles of Macroeconomics*. Houston, Texas: Rice University, 2016.
- [38] H. Morphet and C. Bottini, "What do the trends mean for aviation infrastructure investment ?," 2015.
- [39] WTTC and Oxford Economics, "WTTC / Oxford Economics 2016 Travel & Tourism Economic Impact research," Oxford, 2016.
- [40] Badan Pusat Statistik, "Metadata Informasi Dasar Produk Domestik Regional Bruto (PDRB)," Jakarta, 2015.
- [41] Y. Rahayu, "Analisis Pengaruh Indeks Pembangunan Manusia, Pdrb Per Kapita, Dan Jumlah Pengangguran Terhadap Jumlah Penduduk Miskin Di Provinsi Jambi," *Ekon. J. Econ. Bus.*, vol. 2, no. 1, p. 165, 2018.
- [42] S. Safuridar and M. Damayanti, "Analisis Pengaruh Pendidikan dan PDRB per Kapita terhadap Jumlah Penduduk Miskin di Provinsi Aceh," *J. Samudra Ekon. dan Bisnis*, vol. 9, no. 2, pp. 180–187, 2018.
- [43] R. Ezkianto and M. F. Alexandi, "Analisis Keterkaitan Antara Indeks Pembangunan Manusia Dan Pdrb Per Kapita Di Indonesia," *J. Ekon. Dan Kebijak. Pembang.*, vol. 2, no. 1, pp. 14–29, 2018.
- [44] R. Munandar and S. Amar, "Pengaruh Kunjungan Wisatawan Mancanegara, Rata-Rata Pengeluaran Dan Tingkat Hunian Hotel Terhadap Pendapatan Indonesia Pada Sektor Pariwisata," *J. Kaji. Ekon. dan Pembang. Univ. Negeri Padang*, vol. 1, no. 1, pp. 37–48, 2019.
- [45] S. Rudkin and A. Sharma, "Enhancing Understanding of Tourist Spending Using Unconditional Quantile Regression," *Ann. Tour. Res.*, 2017.
- [46] I. A. A. Leri, "Dampak Pengeluaran Wisatawan terhadap Perkembangan Sektorekonomi di Provinsi Bali," Universitas Udayana, 2011.

-
- [47] I. P. G. Sukaatmadja, M. Wardana, I. B. A. Purbawangsa, and G. B. Rahanatha, "Pariwisata Spiritual: Berbasis Event-Event Upadara Agama Hindu," in *Prosiding Seminar Nasional AIMI*, 2017, pp. 27–28.
- [48] A. Gilmore, "Quality and Quantity in Tourism," *J. Hotel Bus. Manag.*, vol. 6, no. 1, pp. 1–2, 2017.
- [49] Anonymous, "Pemetaan Prospek Kunjungan Wisatawan Asal Tiongkok Di Pasar Global," *J. Ekon. dan Pembang.*, vol. 26, no. 2, pp. 117–130, 2018.
- [50] Tourism Australia, "High Value Traveller Snapshot," 2018.
- [51] E. Alén, J. L. Nicolau, N. Losada, and T. Dominguez, "Determinant Factors of Senior Tourists' Length of Stay," vol. 49, no. November 2014, pp. 19–32, 2014.
- [52] BPS-Statistics Indonesia, "Domestic Tourism Statistics 2019," Jakarta, 2020.
- [53] I. G. Y. Suastika and I. N. M. Yasa, "Pengaruh Jumlah Kunjungan Wisatawan, Lama Tinggal Wisatawan dan Tingkat Hunian Hotel Terhadap Pendapatan Asli Daerah dan Kesejahteraan Masyarakat Pada Kabupaten/Kota di Provinsi Bali," *Ekon. Pembang. Univ. Udayana*, vol. 6, no. 7, pp. 1332–1362, 2015.
- [54] C. P. Barros and L. P. Machado, "The Length of Stay in Tourism," *Ann. Tour. Res.*, no. October, 2010.
- [55] J. G. Brida and R. Scuderi, "Determinants of Tourist Expenditure : A Review of Microeconomic Models," *Tour. Manag. Perspect.*, vol. 6, pp. 28–40, 2013.
- [56] J. Tønnesvang, N. B. Hedegaard, and S. E. Nygaard, *The Quadrant Model - What It Is and How It Is Can Be Used In Practice*. Aarhus, 2015.
- [57] M. N. Aidi, "Deteksi Pola Sebaran Titik Spasial secara Reguler Melalui Penelusuran Fungsi Massa Peluang, Metode Kuadran dan Tetangga Terdekat," in *Seminar Nasional Sain II*, 2009.
- [58] X. Li, F. Meng, and M. Uysal, "Spatial pattern of tourist flows among the Asia-Pacific countries: An examination over a decade," *Asia Pacific J. Tour. Res.*, vol. 13, no. 3, pp. 229–243, 2008.
- [59] BPS-Statistics Indonesia, "Statistical Yearbook of Indonesia 2019," Jakarta, 2019.
- [60] L. Wang, D. Ka, C. Fong, R. Law, and B. Fang, "Length of Stay : Its Determinants and Outcomes," *J. Travel Res.*, pp. 1–11, 2017.

Relocating and Resizing Strategy for Shop House Area to Build Resiliency in Dealing with New Normal

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Abstract

Covid-19 pandemic has dramatically impacted performance and demand in the retail-shopping sub-sector. All trading activities have mostly gone into online activity to comply with safety measure protocols. In the long run, this situation will impact the tourism sector as certain areas rely on the role of shop houses as their economic driver. As the new normal requires people to be able to coexist with Covid-19, many retail-shopping areas should review their strategies and work patterns. One of them is applying relocating and resizing strategies to shop houses. Relocating and resizing the shop houses means to review the spaces, reconsider open and enclosed spaces, as well as create a flexible space that prioritizes vitality in order to increase space effectiveness that is safe for shop customers and shop-owners. This research is conducted in the Pasar Lama Tangerang area and the research method is done through field observation as well as literature studies. Through this research, the authors obtain certain criteria that meet relocating and resizing strategies to increase effectiveness and improve the shop-houses' performance to build resilience in the tourism sector.

Keywords: Shop Houses, Pasar Lama, Flexible Space, Relocating and Resizing.

I. INTRODUCTION

Covid-19 pandemic has dramatically impacted performance and demand in the retail-shopping subsector. City-dwellers are no longer going to the store by themselves, but relying on all the online activity. We are currently in the middle of an unprecedented restriction in the use of public areas as the population have to maintain safety measure protocols. Cities well-known for their active street life such as New York, Rome or Barcelona now appear ghostly as the population stays home for the collective public good [1].

Over the past few months, there are various stories from different countries about how the pandemic changes people's behavior and ways to adapt to the new normal. Some people have to experience full lock down in one country while some people have started to reopen stores and public facilities. Therefore, many retail shopping-areas have to review their strategies and create new work patterns in order to strengthen certain area's economic that rely on retail-shopping subsectors as one of the area's revenue. Although we could not be more sure of what the future will look like, we can examine and predict the thing that has been the current trend these days that plays a great role in facing new normal.

This research is conducted in Pasar Lama which is one of the most visited areas and also a favourite tourist spot in Tangerang City. The whole area was filled by row of shop houses and has become the economic driver as this area is always filled with tourist crowds even in the night. Now, Pasar Lama are almost entirely free of people. Tourism ground to halt when covid-19 started to spread in Indonesia. Restaurants, shopping and entertainment centers have all been ordered to close. However, this situation will not last for long as the recovery phase of covid-19 crisis starts unfolding for business. Everyday life has come to resemble the way it was before.

Now, the question is how to deal with the new reality when it requires people to be able to coexist with covid-19? How will these shop houses manage to restart the whole operation and keep life like it was before? This paper tries to observe the system applied in Pasar Lama's shop house area so that the author obtains certain criteria that meet the strategy to regain and increase effectiveness. Furthermore, this effectiveness could improve the shop houses' performance to build resilience in the tourism sector.

II. LITERATURE REVIEW

A. Row of Shop Houses

Shop House

Shop house is a form of building in a hybrid urban combining commercial and residential functions [2]. The concept that combines two functions makes the shop house have a different typology than any other building. The spatial formation for the shop house is marked by the side elevation that is longer than the front elevation, forming a rectangular as the plan characteristic and causes the shop house to be classified as low rise building. Narrow land plots, where the shop house was built, have a tendency to be unable to accommodate building heights exceeding six floors [3]. In the development phase, shop houses are constructed side by side simultaneously. The placement of shop houses are elongated filling a straight line on the side of the road space, creating a line of commercial area on the ground floor [4].

Shop Houses Typology

In China and Southeast Asia, the typology of shop houses is classified based on the repetitive pattern of shop houses' placement and the road space's pattern. This category produces four typologies of shop houses, namely banded type, tree type, enclosed type and compounded type [4].

a. Banded Type

Shop houses are placed in a row of linear system with the front elevation facing the main road and the side of shop houses are attached to each other. This row of shop houses can be placed in one row or two parallel rows that face each other which forms a harmonious unity. For an example, see Figure 1.

b. Tree Type

Tree type is the extended pattern from the basic form of banded type based on the analogy of a tree. Imagine a tree with a big trunk as the main road and the branches as the secondary road. This type will form nodes or intersections as a result of two or more road spaces that meet each other as shown in Figure 1. Tree types have more rows of shop houses than banded types.

c. Enclosed Type

Based on the existing road, enclosed type dividing the shop houses into a closed cluster as shown in Figure 1. The entrance to the commercial area are facing the main road while the entrance to the living area can be reached through the inside space formed by the closed cluster.

d. Compounded Type

Compounded type is the extended pattern of enclosed type. The difference is there might be a combination of two or more settlements in the second floor between the shop houses in one cluster.



Fig. 1. Banded Type (Left), Tree Type (Middle), Enclosed & Compounded Type (Right).
Source: Han & Beisi, 2015

Unit of Shop House

In the life of shop houses, working and living activities occur under one roof [2]. Shop house that has two main functions provide different spaces for residents to live and work at the same time. The use of the term work-live supports the concept of a sustainable community, minimizing the carbon footprint thereby reducing the use of vehicles [3] and defining clear boundaries between visitor and shop owner’s area. However, merging commercial with residential areas means that there should be a consideration about the level of noise, odor and other impacts that might be caused by the work activities [5]. Marina Khoury [6] explained that there are four types of work-live units, which are, the Live-Within, Live-Above, Live-Behind and Live-in-Front Type with different room layouts that can be seen in Figure 2. These can be applied to shop houses except the Live-in-Front type. The characteristics of each type can be seen in Table 1.

Table 1. Work-Live Unit’s Characteristic

Unit Type	Visitor	Individual / Group	Produce Odor	Produce Noise	Use of Dangerous Tools
<i>Live-Within</i>	Client Visit by Appointment	Individual	No	No	No
<i>Live-Above</i>	Walk-in-Trade	Group	Yes	Yes	No

	Client Visit by Appointment (in commercial area)				
<i>Live-Behind</i>	Walk-in-Trade	Group	Yes	Yes	No
	Client Visit by Appointment (in residential area)				

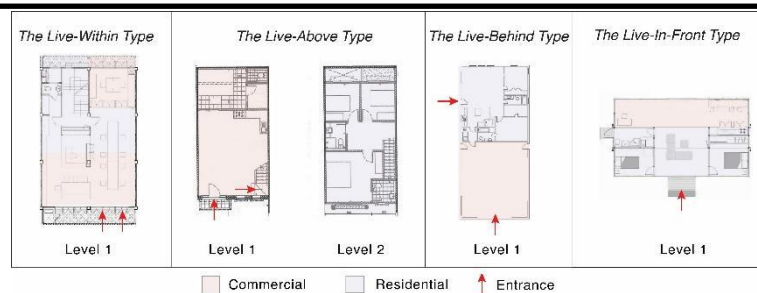


Fig. 2. *Work-Live Unit's Layout*

Commercial Type in A Shop House

The example of different types of commercial work-live units are taken from Haji Lane Shop Houses in Singapura [7] and Pasar Lama Shop Houses in Tangerang City, Indonesia as shown in Table 2.

Table 2. The Diverse of Commercial Types

Types	Variables
Fashion	Clothing, textiles, fabrics, cosmetics and jewelry
Food and Beverage	Restaurant, cafe, food and beverage stall, raw and food ingredients
Art and Sculpture	Painting, sculpture, stationery, art utensils
Service	Printing, maintenance and repair of automotive

	and electronics, salon, massage
Retail	Drug store, optics, household appliances and furniture, daily life
Office	product

The whole part of the shop house is rendered to be the site of every facet of life, from rest and sustenance to work and entertainment. Therefore, knowing the whole part will be beneficial to increase effectiveness and improve the shop house's performance.

B. Flexible Space to Relocating and Resizing

Relocating and resizing strategy aims to face current conditions and prepare for post covid-19 such as phasing in new normal, business recovery and adapt business model. In response given this unprecedented reality, Australian architectural practice Woods Bagot [8] has developed a modular system to support a range of activities throughout the day through managing the spatial flexibility as shown in Figure 3. These three different modes produce certain locations based on homeowners tasks and activities. Bagot called this term as resilient homes as well as flexible space. Whether covid-19 or not, this system will grow the flexibility as many individuals desire in determining where they work, live and play.



Fig. 3. Three Different Mode Arrangement in One Open-Plan. Source: Bagot, 2020.

III. RESEARCH METHOD (CASE STUDY: PASAR LAMA, TANGERANG CITY)

A. Study of Shop Houses in Pasar Lama, Tangerang City

Pasar Lama is an ever-active urban center which has a unique identity as a historical area located in Tangerang City, Banten Province as shown in Figure 4.



Fig. 4. The map of Pasar Lama, Tangerang City

The exact site area to be observed is located on Kiasnawi Road of Sukarasa Sub-District in Tangerang City. The east boundary is Al-Ittihad Grand Mosque and the south boundary is Tangerang Station. The area consists of two rows of shop houses, a 200 m main road and three nodes so it was classified as tree type.

Based on the field observation, there are six commercial types that exist in these two rows of shophouses with a total of 77 buildings as shown in Figure 5. The chart shows the number of existing commercial types and it can be seen that the highest commercial use is service while the lowest is the use of office. Meanwhile, each of the units have the same room layout (in the size of 4 x 12 m) while some of the shop owners re-laying their shop according to their needs. The total of floors that each shop has in this area varies, ranging between two until five different levels.

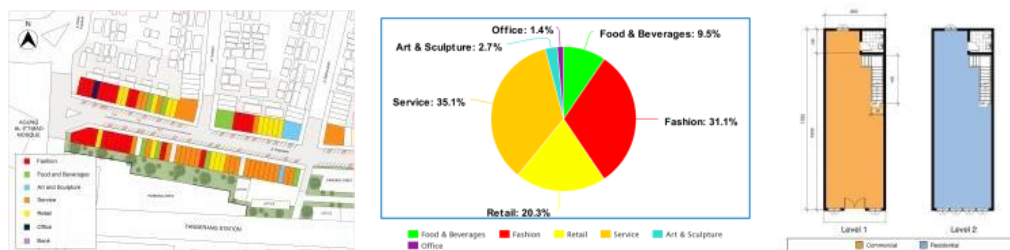


Fig. 5. Commercial Types in Pasar Lama Shop Houses (Left & Middle), Shop House's Layout (Right)

B. Result

Shop House's Analysis in Pasar Lama Tangerang Area

Each of the shop house's commercial types in Pasar Lama can be linked to the work-live unit characteristic and is described in Table 3. As mentioned before, the type of visitor from each commercial also affects which work-live unit they were categorized. Fashion categorized as live-behind since there are walk-in trades who can enter the ground floor front area and client visits by appointment who can enter the rear area of residential for special occasions such as workshops or exhibitions. Meanwhile, offices are categorized as live-within since they only accept client visits by appointment as well as other commercial types that are categorized as live-above.

Table 3. *Work-Live Unit in Pasar Lama's Shop House Area*

Commercial Types		Individual / Group	Produce Odor	Produce Noise	Use of Dangerous Tools	Unit <i>Work-Live</i>
Fashion	Boutique	Group	No	No	No	<i>Live-Behind</i>
	Shoe Shop	Group	No	No	No	<i>Live-Behind</i>
Food & Beverages	Restaurant	Group	Yes	Yes	No	<i>Live-Above</i>
	Grocery Store	Group	No	No	No	<i>Live-Above</i>
	Mini Market	Group	No	No	No	<i>Live-Above</i>
Art & Sculpture	Stationary Shop	Group	No	No	No	<i>Live-Above</i>
	Print Shop	Group	No	Yes	No	<i>Live-Above</i>
Service	Salon	Group	Yes	Yes	No	<i>Live-Above</i>
	Vehicle	Group	Yes	Yes	Yes	<i>Live-Above</i>
Retail	Reparation	Group	No	Yes	No	<i>Live-Above</i>
	Household Appliances	Group	No	No	No	<i>Live-Above</i>
	Optic	Group	No	No	No	<i>Live-Above</i>
Office	Toy Shop	Individual	No	No	No	<i>Live-Within</i>
	Convection	Group	No	No	No	<i>Live-Within</i>

Analysis on Table 3 is beneficial to provide alternatives on how to manage and utilize a shop house completely if it is built based on their daily work activities. It can also give clear boundaries between the shop owners and visitors to increase residential security and safety during covid-19. This alternative will be covered and reviewed in concept design development.

Concept Design Development

As described in Table 3, work-live unit type on each shop house can be developed through relocating and resizing strategy in order to create a new work pattern and regain new strategy in facing new normal.

Live-Above and Live-Behind type distinguished entrance access, one for visitors and one for the shop-owner, as shown in Figure 6 and Figure 7. This effort aims to increase security and safety including hygiene awareness for both of them. The making of green areas in each type (including Live-Within in Figure 8) will improve air circulation. As we know, shop houses nowadays are starting to neglect the importance of green areas. The amount of openness within four walls will provide a good cross ventilation.



Fig. 6. *Live-Above* Unit Plan



Fig. 7. *Live-Behind* Unit Plan



Fig. 8. *Live-Within* Unit Plan



Fig. 9. Alternative Unit Plan (*Live-Above* left; *Live-Behind* middle; *Live-Within* right)

For some commercial types that are related to product selling, in order to survive, they shift their business model from offline store to online store. The physical store experience has become the secondary thing since the primary focus for the consumer is the internet. According to the Global Consumer Insights Survey 2020 by PricewaterhouseCoopers (PwC), 69 percent of the Indonesian respondents stated that they were buying more groceries online following the implementation of social restrictions to contain the covid-19 outbreak [9]. On the other hand, only 42 percent of the consumers still remain shopped in-store this year, indicating that in-store shopping is now less preferred for daily shopping.

Following up to the statement above, offline to online store transformation means the hall area, used for the shop, in the ground level of the shop house is no longer used. The new strategy that can be applied is by inserting a series of adjustable walls and screens that would be used to divide an open plan shop into various dedicated spaces.

The other implementation is to divide one big space into several small spaces that can be used for each family members' needs. It might be designed as a nice workspace for one parent while the children is having their own play space, for an example see Figure 9. When the working hour ends, the movable walls can be removed so it will become one big space for the family room. On the other side, the hall can be transformed as a working area as well as a small-space home gym. Now, with gyms closed, people are all innovating. Maintaining a fit body is one of the requirements to have a good immune system especially during the pandemic.

For other commercial types that are related to food and beverage, a whole new set of restrictions means to minimize the spread of covid-19. Restaurant and cafe in Pasar Lama shop houses can utilize half of the pedestrian in the front area as a safer outdoor-seating to get the fresh air where covid-19 infection is less likely to occur, for an example see Figure 10. Despite that, maintaining social distancing is also a must. The use of stuffed or mannequins to ensure social distancing makes people don't sit too close together [10]. The installment of plexiglass barriers also help to section off tables and to avoid droplet exposure that can be the cause of covid-19 infection.

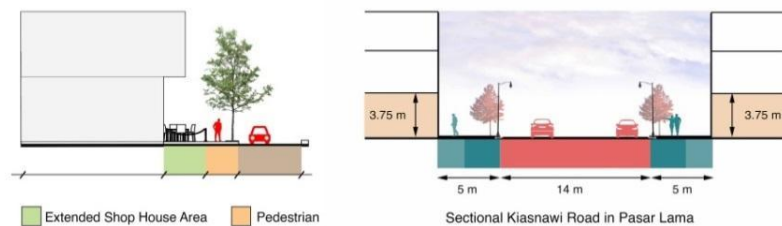


Fig. 10. Correlation Between Shop House and Road Space in Pasar Lama Shop Houses

IV. CONCLUSION

Making the most of the combination of commercial and residential functions, in the form of a shop house, will avoid performance decrease of retail-shops in facing new normal. In fact, it will establish a new strategy in dealing with new normal.

The application of flexible space by relocating and resizing strategy to shop houses has certain criterias that is linked to each other, such as layouting, producing more individual space, creating additional space including small-space home gym and also utilising outdoor space has been the main things in dealing with new normal. It increases the effectiveness and improves the shop houses' performance so that the retail-shopping subsector will remain alive. In the long run, this situation helps to build resilience in the tourism sector.

V. ACKNOWLEDGMENTS

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REFERENCES

- [1] J. Honey-Roses et al., "The Impact of COVID-19 on Public Space: A Review of the Emerging Questions," no. April, 2020, doi: 10.31219/osf.io/rf7xa.
- [2] H. Davis, *Living Over The Store*. Routledge; 1 edition, 2012.
- [3] N. Weinberger, "The Shophouse as a Tool for Equitable Urban Development: The Case of Phnom Penh, Cambodia," University of Pennsylvania, 2010.
- [4] W. Han and J. Beisi, "A Morphological Study of Traditional Shophouse in China and Southeast Asia," *Procedia - Soc. Behav. Sci.*, vol. 179, pp. 237–249, 2015, doi: 10.1016/j.sbspro.2015.02.427.
- [5] T. Dolan, *Live-Work Planning and Design: Zero-Commute Housing*. New Jersey: John Wiley & Sons, 2012.
- [6] M. Khoury, "Leaning Toward Work-Live," CNU. 29-Jan-2016.
- [7] D. Boontharm and E. Viray, *Future Asian Space*, no. May. Singapore: NUS Press, 2012.
- [8] N. Bahadursingh, "The New Normal? AD-APT Modifies Your Apartment for Any Activity." [Online]. Available: <https://architizer.com/blog/inspiration/stories/ad-apt-woods-bagot/>, 2020.
- [9] Y. Prasadya, "Retailers Embrace Consumers' Shift to Online Channels," *The Jakarta Post*. [Online]. Available: <https://www.thejakartapost.com/news/2020/08/14/retailers-embrace-consumers-shift-to-online-channels.html>.
- [10] L. Itzkowitz, "How Restaurant Design is Changing As a Result of COVID-19."

Strategies for Strengthening the Purun Handicraft Creative Industry in Banjarbaru City South Kalimantan

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Abstract

Some research and development results that have been funded, the largest portion is Technology Readiness Level of 3-5. Very few researchers entered in 6,7, or 8 levels. In effort to bridge the results of research and implementation in society, the technology transfer program needs a strategy to strengthen human resources in the creative industry, especially purun crafts. The application of the Analytic Network Process method in selecting strategies was based on weighting of each criterion and alternative. The results of analysis gave priority weights for product performance and market performance sub-criteria which affect the choice of strategy, namely motive and product type sub-criteria of 0.48715, while customer satisfaction was 0.42224. In the alternative cluster, there were two strategies that became the best priority, namely development of creative products of 0.44857 and strengthening of purun handicraft brands in the Galoeh Banjar and Al-Firdaus groups of 0.28947. Strategies to strengthen human resources in terms of creative product development and brand strengthening were done through education, training, and coaching based on the principles of Competitive Advantage.

Keywords: Analytic Network Process, creative industry, purun craft, Technology Readiness Level, cluster

I. INTRODUCTION

Handicraft products are the pride of society and the country because they are traces of culture, intellectuality, wisdom and aesthetics [1]. Global competition requires regions to be able to produce output efficiently so that they can survive. Efficiency triggers creative thinking, which in turn can lead to creative ideas. Multicriteria analysis using the Analytic Network Process method has been used by several researchers to combine several criteria relationships into a comprehensive decision making on alternative selection. Researchers have previously conducted the assessment and determination of the potential for sustainable biomass waste using the Analytic Network Process method which shows that the waste of orange peels, pineapple leaves, and palm skin can be applied as a source of heterogeneous catalysts [2]. Based on the results of the characterization test for heterogeneous catalyst synthesis from the biomass waste studied, it was known that the synthesis of silica-based catalysts from waste sugar palm husks, pineapple leaves, and orange peels had met the characteristics of standard silica catalysts [3].

Various changes have occurred including shifting business patterns, shifting people's behavior, resilience and efficiency, shifting industrial structures, industrial revolution 4.0, and a digital ecosystem that is connected between sectors [4]. The Smart City concept is an innovative research framework to increase the Technology Readiness Level of a research product [5]. Some research and development results that have been funded, the largest portion is at the technology readiness level 3-5. Very few enter 6, 7, or 8 levels. In an effort to bridge the results of research and implementation in society, then the technology transfer program needs a strategy to strengthen human resources in the creative industry, especially purun crafts.

II. METHODS

The method used for strategy selection was the Analytic Network Process using Super Decision Software version 2.10.0 based on the weighting of each criterion and alternatives from the pairwise comparison for each interaction in the network. This research began by identifying with the purun craftsmen group and stakeholders referring to conditions in the field. Furthermore, the network model construction was made consisting of goal clusters, criteria clusters containing sub-criteria nodes, and alternative clusters. Then each cluster was assessed in pairs by the expert based on the pairwise comparison rating scale of Saaty 1-9 used in the model [6]. In the final stage, the highest priority value would be obtained for the chosen strategy alternative.

III. RESULTS AND FINDINGS

3.1 Criteria and Alternative Strategies for Strengthening the Purun Handicraft Creative Industry

The criteria used in the strategy to strengthen the purun craft creative industry were product performance criteria and market performance criteria based on observation, secondary data collection, and interviews with groups of purun craftsmen and related stakeholders. Furthermore, the alternative cluster consisted of developing creative products, mapping marketing areas, strengthening the purun craft brand, and developing educational tourism. The network model of Criteria and Alternative Strategies for Strengthening the Purun Handicraft Creative Industry can be seen in Figure 1.

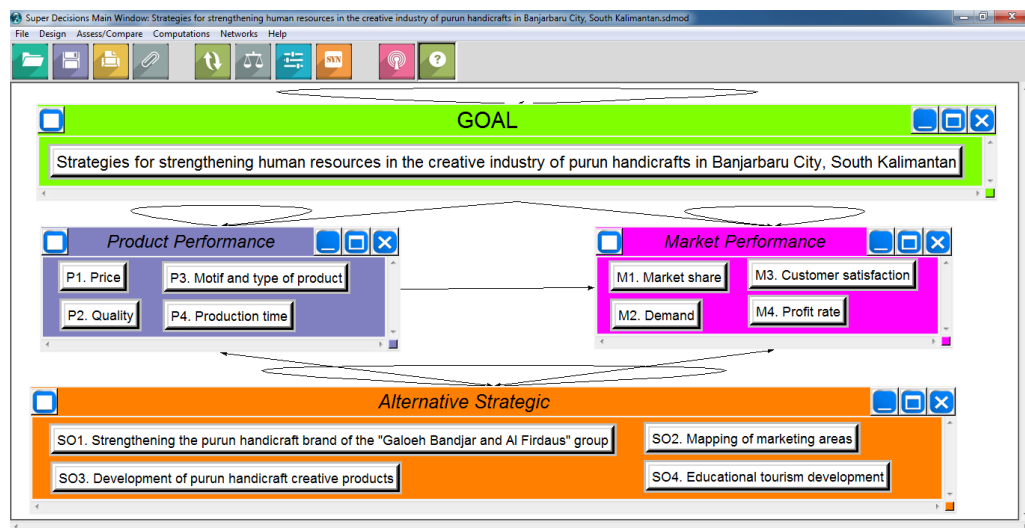


Fig. 1. The strategic network model for strengthening the purun craft creative industry

Based on the construction of the network model processed using the Super Decision software version 2.10.0, a summary of the results of the pairwise comparison was obtained. There was an inner dependence relationship that occurred at the nodes in a cluster that affects other nodes in the same cluster, which showed the results of the analysis giving priority weights for product performance and market performance sub-criteria that affected strategy selection. In addition to the inner dependence relationship in the network model, there was also an outer dependence relationship that occurred at nodes in other clusters.

In the product performance criteria, the motive and product type sub-criteria (P3) had the highest priority value of 0.48715 which can be seen in Figure 2. This showed that the motive and type of product became a strong consumer attraction for handicraft products. The second place was the quality sub-criteria (P2) of 0.20855, then the price sub-criteria (P1) of 0.16094, and finally the production time sub-criteria (P4) of 0.14336. Meanwhile, on the

market performance criteria, customer satisfaction sub-criteria (M3) had the highest priority value of 0.42224. This was due to the unique motifs and appearance of handicraft products when wearing them. According to [7] the motifs and shapes of handicraft products reflected the culture, skills inherited, knowledge, and the beauty of the heritage. Thus, skills, techniques and knowledge were essential for sustainable production from one generation to the next. Furthermore, sequentially, the sub-criteria for market share (M1) was 0.25014, Demand (M2) was 0.24903, and the profit level (M4) was 0.07859. According to [8] there were varieties of handmade products based on natural resources. Also, the skills for the particular craft differed due to different cultures, traditions, and customs. For this variety of handicrafts product form worldwide, people had different attitude and intentions, so the factors that effecting buyers to buy the product was an important issue to become successful in the market.

Super Decisions Main Window: Strategies for strengthening human r...
Here are the priorities.

Icon	Name	Normalized by Cluster	Limiting
No Icon	M1. Market share	0.25014	0.101570
No Icon	M2. Demand	0.24903	0.101117
No Icon	M3. Customer satisfaction	0.42224	0.171451
No Icon	M4. Profit rate	0.07859	0.031910
No Icon	P1. Price	0.16094	0.030241
No Icon	P2. Quality	0.20855	0.039187
No Icon	P3. Motif and type of product	0.48715	0.091538
No Icon	P4. Production time	0.14336	0.026939

Fig. 2. The priority weight of the cluster criteria for strengthening the purun creative industry

In the alternative cluster, synthesis was carried out so that two strategies were obtained as the best priority, namely the development of creative products of 0.44857 and strengthening of purun handicraft brands in the Galoeh Bandjar and Al-Firdaus groups of 0.28947 which can be seen in **Figure 3**.

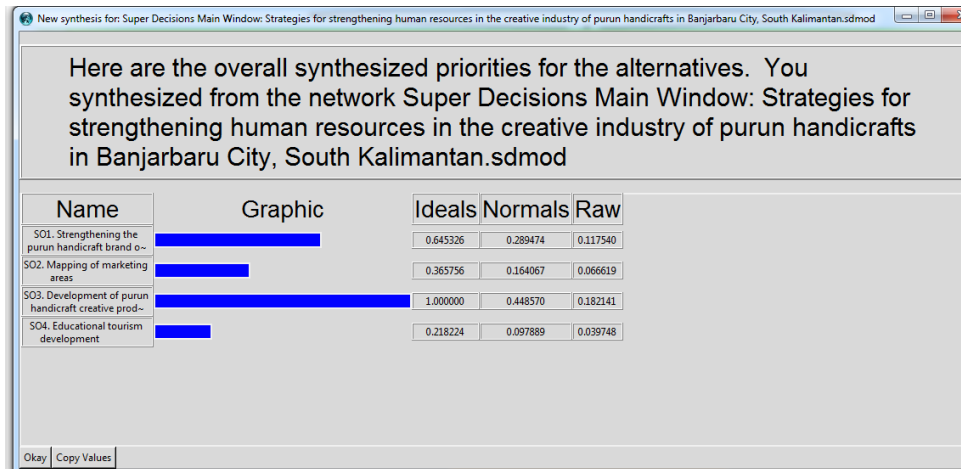


Fig. 3. Priority ranking in alternative strategy for strengthening the purun creative industry

Strategies to strengthen human resources in terms of creative product development and brand strengthening were carried out through education, training, and coaching based on the principles of Competitive Advantage. Crafts were created because of the demands of the need for function [9], so in the manufacture or creation of the crafts must be good by meeting the criteria for form of use, aesthetics, and also economical.

IV. CONCLUSIONS, IMPLICATIONS AND SIGNIFICANCE

Based on the pairwise comparison value in the network model, it was known that the highest priority weight for product performance criteria was the motive and product type sub-criteria (P3) of 0.48715. Meanwhile, the market performance criteria were customer satisfaction (M3) sub-criteria of 0.42224 which affected the choice of strategy. So we got two strategies that became the best priority, namely the development of creative products of 0.44857 and strengthening of purun handicraft brands in the Galoeh Bandar and Al-Firdaus groups of 0.28947. Strategies to strengthen human resources in terms of creative product development and brand strengthening were carried out through education, training, and coaching based on the principles of Competitive Advantage.

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REFERENCES

- [1] Suntrayuth, R. (2016). Collaborations and design development of local craft products: Service design for creative craft community. *International Journal of Creative and Arts Studies*, 3(2), 1-12.
- [2] Heryani, H, & Yanti, N. R. (2020). Assessment and determination of potential sustainable biomass waste using the analytic network process method. *IOP Conference Series: Earth and Environmental Science*. 499, 012008. IOP Publishing.
- [3] Heryani, H, & Yanti, N. R. (2020). Potentials of biomass waste sources for heterogeneous catalyst production. *IOP Conference Series: Earth and Environmental Science*. 472, 012035. IOP Publishing.
- [4] Lom, M., Pribyl, O., & Svitek, M. (2016). Industry 4.0 as a part of smart cities. In 2016 Smart Cities Symposium Prague (SCSP) (pp. 1-6). IEEE.
- [5] Blut, M., & Wang, C. (2020). Technology readiness: a meta-analysis of conceptualizations of the construct and its impact on technology usage. *Journal of the Academy of Marketing Science*, 48(4), 649-669.
- [6] Pourjavad, E., & Shirouyehzad, H. (2014). Evaluating manufacturing systems by fuzzy ANP: a case study. *International Journal of Applied Management Science*, 6(1), 65-83.
- [7] Yang, Y., Shafi, M., Song, X., & Yang, R. (2018). Preservation of cultural heritage embodied in traditional crafts in the developing countries. A case study of Pakistani handicraft industry. *Sustainability*, 10(5), 1336.
- [8] De Silver, G., & Kundu, P. (2013). Handicraft products: Identify the factors that affecting the buying decision of customers (The Viewpoints of Swedish Shoppers).
- [9] Zhan, X., Walker, S., Hernandez-Pardo, R., & Evans, M. (2017). Craft and sustainability: Potential for design intervention in crafts in the Yangtze River Delta, China. *The Design Journal*, 20(sup1), S2919-S2934.

The Effect of Service Quality on Customer Satisfaction and Trust in Using Tokopedia Services

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Abstract

The development of internet users encourages a great potential for the creation of online shopping. Consumers have several factors considered in making online purchasing decisions through an electronic market. This is because one of the problems in online sales in Indonesia is the difficulty in building buyer trust. However, customer satisfaction level towards Tokopedia site is relatively low due to the high level of complaints, specifically the one that is provided by its customer service that is deemed to be very slow in responding to complaints. The aim of this study is to find out the effect of service quality on customer satisfaction, service quality on consumer trust, and customer satisfaction on consumer trust in utilizing Tokopedia services. This study used a quantitative approach with a casual type. The sample used was 100 users who use Tokopedia services. The analysis technique used in this study is Structural Equation Modeling (SEM) Partial Least Square (PLS), with the help of SmartPLS program. The results showed that Service quality has a positive effect on customer satisfaction, Service quality has a positive effect on trust, and customer satisfaction has a positive effect on trust.

Keywords: Service Quality, Customer Satisfaction, Trust, SEM, PLS.

I. INTRODUCTION

The development of technology and information is growing rapidly. It is marked by the increasing extent of Internet coverage in the community. Nowadays, most people are broad connected to the Internet, including Indonesia. The significant increase in Internet users encourages the development of online shopping. This is due to the fact that out of 143.26 millions of total Internet users, 36 millions of it, or 32.19% of it use online shopping service (APJII, 2017). Increasing the number of internet users, it also increases the Indonesian selling and buying process through e-commerce. This development surely changes a lot of elements in the business activities sector. E-commerce is promised to create a virtual market that is way more economical, efficient and effective. The number of business entities and marketers will continue to increase, and they will complete each other to develop e-commerce. This is due to the fact that e-commerce is experiencing a significant increase each year. One of the fastest growing e-commerce in Indonesia is e-marketplace. This is a great deal for the producers because they no longer need to spare a budget for creating their own website or even a physical store. (Alwafi and Magnadi, 2016).

In general, there are two types of e-commerce being developed; those are, e-commerce Business to Consumer (B2C) such as Zalora and Lazada, and Consumer to Consumer (C2C) such as Tokobagus, Bukalapak, and Tokopedia. In Indonesia, there are several marketplaces; such as, tokopedia.com, bukalapak.com, blibli.com, zalora, lazada, etc. According to Indonesian Ecommerce Association (Idea) 2019, among those e-commerce stores, Tokopedia is the most visited platform with 805.5 million visits. In second place, Bukalapak recorded 588.3 million visits. Meanwhile, in third place followed by Shopee with a total of 476.5 million visits. Tokopedia.com website first released on 17 August 2009. In its 5th year anniversary, Tokopedia has partnered up with tens of thousand online stores and has served more than 18,5 million IDR transactions per month throughout Indonesia. Its current visit level has reached tens of million visitors each month, which is dominated by mobile traffic as high as 72.35 percent (www.tokopedia.co.id).

Tokopedia.com facilitates online transactions along with its payment method. To some extent, Tokopedia is involved in precautions of fraud involving sellers and buyers. Tokopedia has the right to hold the distribution of payment to the seller until the buyer receives the product. It helps in increasing the safety of the buying and selling process. This method also increases customer trust. The precaution does not stop there as Tokopedia is also responsible for returning any kinds of failed payment (Alwafi dan Magnadi, 2016). Based on such a phenomenon, it can be concluded that consumers have several factors to be considered in deciding to purchase products from the online market. This issue is essential

due to the fact that one of the biggest problems in online sales in Indonesia is the difficulty in building customer trust. According to Alwafi and Magnadi (2016), purchasing products via the Internet has its own uniqueness compared to purchasing products conventionally in which it is from some aspects such as uncertainty, anonymity, the minimum level of control, and potential taking chances. To build such trust and security, Nevertheless, the level of customer satisfaction on Tokopedia's website is still relatively low. One of the responses is caused by complaints addressed to the company. Most of the complaints received are associated with the service quality provided by Tokopedia, specifically on its low-quality responses provided by the customer service team (Nurlina, 2017).

To maintain and improve customer trust, an online store must be able to keep a positive perception of its customers' minds. Without a positive perspective, the trust, which is being built, cannot be maintained (Kotler dan Armstrong, 2014). Customer trust towards service providers is the most important element in the service transaction process. Without trust from customers to the company, the transaction will never take place. As in online transactions, trust is the most important thing because the transaction itself takes place in a virtual world (Sinaga and Mely, 2016). Good service quality will positively encourage customers. Service quality in e-commerce is also known as e-service quality, which in practice, is defined as when an online shop provides service via a website. Zeithaml, Parasuraman, dan Malhorta (2002) stated that e-service quality is how a website can facilitate the effectiveness and efficiency in the shopping, processing a purchase, and the delivery of product and service. Santouridis (2009) in his research explained that the impact of service quality on customer satisfaction is something that is expected, considering the high level of Internet use and online shopping tendency. The dimensions of e-service quality such as ease of use and service guarantee are proven to be a great impact on customer satisfaction. Part of this conclusion is actually contrasting to the result from Ribbink et al. (2004) which found that other than customization, an assurance also has an important role in customer trust development. E-service quality is found to be one of the predictors of customer trust in the research from Kundu and Datta (2015), Sinaga and Mely (2016), Setyaningsih (2017), Nurlina (2017).

Tokopedia.com is in third place of the Top Brand award 2019 with the Top Brand index is 13.4 % after,shopee 15.6 %,and Lazada.co.id with 31.6% for online marketplace site category. Based on the previous research, it can be concluded that the result is inconsistent such as on the matter of service quality and its effect on customer satisfaction (Santouridis, 2009; Torres-Moraga et al., 2013; Kundu and Datta, 2015; Sundaram et al., 2017; Setyaningsih, 2017). This result is contradicting the result from Mardatilla et al. (2017) which

stated that service quality does not have an effect on e-commerce customer trust. Service quality has an effect on customer trust (Ribbink et al., 2004; Kundu and Datta, 2015); Sinaga and Mely, 2016; Setyaningsih, 2017; Nurlina, 2017). The only dimension of e-service quality that has a significant effect on customer trust is only customization (Santouridis, 2009).

Service quality has several unique measurements which can be applied differently in different companies, or even in different products at the same company. It is important to modify a specific measurement to gather an accurate analysis and accurate proposed solutions for a company or for certain products which need to be improved. The objectives of this study are to determine the effect of service quality on customer satisfaction, customer trust, and the effect of customer satisfaction on customer trust in using Tokopedia services.

II. SERVICE QUALITY

According to Tjiptono (2008), service quality is the level of excellence, which is expected, as well as the control of such level of excellence to fulfill customers' wants. Service quality is a form of customers' evaluation of the perceived service with the expected service. Customer's demand in terms of the perceived service makes the company pull all of its effort to ensure that they provide the best service for the customers. According to Lovelock and Wright (2011), service quality is a long-term cognitive evaluation from the customers towards a service provided by a company. Service quality is the whole customers' attitude towards a service, which is formed by a series of both successful and not successful service experiences. While Parasuraman, et al. (1988), cited from Kotler and Keller (2016), stated that service quality is an attitude and the comparison of expectation and the perceived performance. This refers to the customers' evaluation of the excellence or superiority of an entity. A company's service quality is tested on each of its service applications.

Thus, it can be concluded that service quality is a comparison between the perceived results with the actual result received by the customers. On the other hand, service quality can also be understood as one aspect of marketing which requires attention to the customer's perspective, so that the quality of service can be imaged by the customer according to what is expected.

There are five dimensions in SERVQUAL according to Tjiptono et al. (2004): a. Tangibles, b. Reliability, c. Responsiveness, d. Assurance, e. Empathy.

E-service quality has an important role in establishing a value for customers in the online shopping environment. The value perceived by the customers is the evaluation from the customers, which are conducted by comparing the benefits obtained by the customers from a

certain service in which it is provided by the company to certain sacrifices provided by the customers to get certain products (Nurlina, 2017). Ribbink et al., (2004); Santouridis (2009); Mardatilla et al. (2017), developed 3-SERVQUAL dimension on e-commerce which has five dimensions or components, which are ease of use, web design, responsive, personalization, and assurance.

III. CONSUMER TRUST

Trust is defined as a model of a fundamental relation which involves an individual's expectation in which other people would act in a certain way. Trust also refers to the wish to rely on an exchange partner in which an individual possesses confidence. (Kundu dan Datta, 2015). Trust is considered as the basis of the relationship between customers and trust is the most important tool, which a company can have. In business, trust is seen as one of the stable antecedents, which are most relevant and collaborative. Trust can only exist if one party has confidence in exchanging a partner's reliability and integrity (Setyaningsih, 2017). Based on the above explanation, it can be concluded that trust, on an online network is the confidence of an individual on an online exchange, or on an online exchange line. Trust is considered as the foundation of the customer relationship.

Trust dimension is defined as a business relation dimension, which determines a level in which a person feels that they can rely on the integrity of a promise offered by other people. In detail, the factors that influence the process of trust development are company reputation, company scale, and the quality of being comforting both between customers and companies and between customers and employees.

According to Mayer et al. (1995 in Santouridis, 2009), there are three factors which develop somebody's trust in others, those are; ability, benevolence, and integrity which are described as follows: Ability, Benevolence, Integrity. Kundu and Datta (2015) used the trust construction with four indicators such as: (1) websites and service with a good reputation, (2) a good past history of the service provided, (3) clear information, and (4) accurate information. Nurlina (2017) stated that the factors which can increase customer trust in online shopping are customers' knowledge about technology, good quality websites, and good quality company. Technology knowledge is defined more as how an individual trusts him/herself in which he/she is able to do a specific task.

IV. CUSTOMER SATISFACTION

According to Kotler and Armstrong (2014) "satisfaction is a person's feelings of pleasure or disappointment that result from comparing a product's perceived performance (or outcome) to expectations". Lovelock and Wright (2011) stated that customers experience a lot of level of satisfaction or dissatisfaction after experiencing each service according to how far their expectation is fulfilled or exceeded. Since satisfaction is an emotional state, a post-purchase reaction can be in anger, dissatisfaction, neutrality, happiness or joy. Satisfaction is also a sentiment of joy or disappointment, which emerges from comparing a perceived performance from a product (or result) with their expectation. If the performance fails to meet customers' expectations, then the customers will be dissatisfied. If it exceeds the expectation, the customers will be satisfied (Kotler & Keller, 2016). In costumers' perspective, Oliver (2010) gave a definition of satisfaction as follows: "satisfaction can be likened to an individual pursuit, a goal to be obtained from the consumption of products and the patronization of services". Hill, et al. (2007) explained that the keyword from customer satisfaction is "the most appropriate label for the range of attitudes and feelings that customers hold about their experience with an organization".

In evaluating satisfaction on a product, service, or certain companies, customers will generally refer to several factors or dimensions. The factors which are often used in evaluating customer satisfaction on a certain product are as following (Tijptono et al., 2008):

In evaluating it, customers will use expectation as the standard. Therefore, the expectation is the background of why two different companies can be perceived differently by its customer. In the context of customer satisfaction, the expectation is an assumption or belief from the customers about what they are about to get (Tijptono et al., 2008). Kotler and Armstrong (2014) stated that the factors which influence customer satisfaction are listed as follows: Quality, Reliability, Responsiveness, Access, Courtesy, Communication, Credibility,

IV. RESEARCH FINDING

A. Validity and Reliability

In this research, the sample was selected using proportional sampling. Proportional sampling is used in this research due to the fact that the total of the population is unknown. The formula used to determine total sample for such population is as follows (Eriyanto, 2007):

In this research since the total population in this research is unknown, then the population variation is assumed to be heterogeneous (with the proportion of 50:50). The level of trust used is 95%, and error sampling is 10% (0,1). Based on such a survey plan since the

total population in this research is unknown, then the population variation is assumed to be heterogeneous (with the proportion of 50:50). The level of trust used is 95%, and error sampling is 10% (0,1). Based on such a survey plan, it can be formulated as follows:

$$n = \frac{(1.96)^2 \cdot 0.5(1 - 0.5)}{(0.1)^2} = 96.04 \approx 100$$

Based on the calculation in the above formula, it can be known that the sample used in this research is 100 samples

This research used a questionnaire as a research data collection technique. Response scaling technique used in this research is Likert scale. Likert scale is often referred to as a summated scale which consists of a set of questions with response categories as strongly disagree, disagree, enough agree, agree, and strongly agree (Silalahi, 2009). The score of each response in this research is as follows: Highly agree is equal to 5 points, Agree is equal to 4 points, Enough agree is equal to 3 points, Disagree is equal to 2 points, Highly disagree is equal to 1 points

As for evaluating validity from each question item included in the questionnaire, this research used data processing techniques with the SEM method and Partial Least Square (PLS) basis. There are three criteria in the use of data analysis techniques using SmartPLS to measure validity. These criteria are Convergent Validity, Construct Validity, and Discriminant Validity.

Table 1. Convergent Validity Result

Name of Variable	Indicator	Loading Factor
Service Quality	SQ.1	0.741
	SQ.2	0.716
	SQ.3	0.765
	SQ.4	0.761
	SQ.5	0.781
Customer Satisfaction	CS1	0.856
	CS2	0.849
	CS3	0.885
	CS4	0.893
	CS5	0.880
Trust	T1	0.775

	T2	0.825
	T3	0.905
	T4	0.842

Table .1 provides the result from data processing using PLS. Based on the result, it can be identified that all dimensions and indicators have passed the requirement for loading value, which should be above 0.5. Therefore, it can be concluded that the whole collected data is valid and it has good convergent validity.

Construct validity is validity, which shows how far a test measure constructs a theory in which it is the basis of the test itself. A construct is said to have good construct validity if the value of Average Variance Extracted (AVE) is above 0.5 (Ghozali, 2014). The result of Construct Validity is presented as follows:

Table 2 Average Variance Extracted (AVE)

Variable	AVE
Service Quality	0.567
Customer Satisfaction	0.762
Trust	0.702

Based on Table 2, it can be identified that the value of AVE on each dimension and variable in this research analysis model has a good construct validity due to the AVE is higher than 0.5.

Reliability is tested by Composite Reliability to evaluate construct reliability. This research aims to measure the value among variables to see whether there is good reliability. The quality of composite reliability can be seen from the composite reliability table. It is by checking the value of composite reliability, if it is higher than 0.7, then it can be classified as good (Ghozali, 2014).

Table 3 Composite Reliability Result

Name of Variable	Composite Reliability
Service Quality	0.867
Customer Satisfaction	0.941
Trust	0.904

Based on Table 3 it can be seen that the whole construct has the value of composite reliability more than 0.7. From this data, it can be concluded that all constructs are reliable.

The Cronbach's Alpha is the most common measure of internal consistency. It measures consistency of the likert scale. Cronbach's alpha is commonly used when you have a

questionnaire, the test will ensure whether the scale is reliable or not. If it is higher than 0.7, then it can be classified as reliable.

Table 4 Cronbach's Alpha Result

Name of Variable	Cronbach's Alpha
Service Quality	0.810
Customer Satisfaction	0.922
Trust	0.858

Based on Table 4 it can be seen that the whole construct has a Cronbach's Alpha value, which is more than 0.7. From this data, the writer can conclude that all constructs are reliable.

B. Path Analysis

B.1 Coefficient of Determination

The coefficient of determination is in the Adjusted R-square table. The test results, which show the coefficient value of determination, are as follows:

Table 5 R-square

Name of Variable	R-Square Adjusted
Customer Satisfaction	0.454
Trust	0.480

Based on the value of R-square adjusted above in which each has been multiplied by 100%, produces a determination coefficient value of customer satisfaction of 45.4%. Such value of the coefficient of determination is categorized as moderate. Such value shows that 45.4% of the variation in customer satisfaction values can be explained by service quality, while the remaining 54.6% can be explained by other variables outside the analysis model.

The coefficient of determination of trust produces a value of 48.0%. It is categorized as moderate. It shows that 48.0% of variation in trust value can be explained by service quality and customer satisfaction, while the remaining 52.0% is explained by other variables outside the analysis model.

The R-square Value is small because statistically the distribution cannot be explained by an independent variable or can be more explained by a variable outside the independent variable (component error). So it's not strange if the r-square value is small, it means a larger error component. In other words, small R-Square means the ability to explain from the independent variable to the low dependent variable. This can be influenced by many factors. One of the

factors, which cause the value of R-square to be very small, is that the correlated variable does not have a connection so the correlation value is small

B.2 Hypothesis Test

The path coefficient estimation is evaluated based on the value of T-statistics. The path coefficient estimation shows the estimation value, which describes the relation between latent variables gained by bootstrapping procedure. The measurement items used can be classified as significant if the value of T-statistics is higher than 1.96 on the error margin of 5% (Ghozali, 2014).

Table 6 Path Coefficients

	Original Sample (O)	T-Statistics	P-Value
Service Quality -> Customer Satisfaction	0.678	12.122	0.000
Service Quality -> Trust	0.315	2.810	0.005
Customer Satisfaction -> Trust	0.448	4.064	0.030

Based on Table 6, the data can be elaborated as follows:

1. The first hypothesis proposed is that Service Quality has a positive effect on customer satisfaction. The result of SEM analysis obtained from the value of Original sample is 0.678 (positive), T Statistic is 12.122 (>1.96) and the p-value is 0.000 (< 0.05). Therefore, Hypothesis 1 is accepted. It shows that the better the service quality, the higher the satisfaction of Tokopedia users.
2. The second Hypothesis presented is Service Quality has a positive effect on trust. The result of SEM analysis obtained from the value of Original sample is 0.315 (positive), T Statistic is 2.810 (>1.96) and the p-value is 0.005 (< 0.05). Therefore, Hypothesis 2 is accepted. It shows that the higher the service quality, the higher the trust of Tokopedia users.
3. The third hypothesis proposed is that customer satisfaction has a positive effect on trust. The result of SEM analysis obtained from the value of the original sample is 0.448 (positive), T Statistic is 4.064 (>1.96) and the p-value is 0.000 (< 0.05). Therefore, Hypothesis 3 is accepted. It shows that the higher the customer satisfaction, the higher the trust of Tokopedia users.

The Effect of Service Quality on Customer Satisfaction

Test results by using Partial Least Square (PLS) showed that service quality has a positive and significant effect on customer satisfaction. Thus, the hypothesis, which stated that service quality has a positive effect on customer satisfaction, is acceptable. This result is consistent

with the research conducted by Torres-Moraga et al., (2013) in which he concluded that service quality has an effect on customer satisfaction. This statement is supported by the research conducted by Kundu and Datta (2015) that e-Service Quality is found to be highly correlated with customer satisfaction. The same result is also presented by Sundaram et al. (2017), Setyaningsih (2017), that e-Service Quality is an important predictor in increasing customer satisfaction.

The Effect of Service Quality on Customer Trust

Test results by using Partial Least Square (PLS) showed that Service Quality has a positive and significant effect on Trust. Thus, the hypothesis, which stated that service quality has a positive effect on trust is acceptable.

Service quality was found to be the predictor of Customer Trust in e-Commerce. It means that it has an important role in the development of Customer Trust (Ribbink et al., 2004). The result of this research is consistent with the result from the research conducted by Kundu and Datta (2015), Sinaga and Mely (2016), Setyaningsih (2017), Nurlina (2017).

The Effect of Customer Satisfaction on Trust

Test results by using Partial Least Square (PLS) showed that Customer Satisfaction has a positive and significant effect on Trust. Thus, the hypothesis which stated that Customer Satisfaction has a positive effect is acceptable. According to Kotler and Armstrong (2014), to maintain and increase customer trust, an online store must be able to maintain a positive perception in the customer's mind. Without a positive perception, the Trust which is being built cannot be maintained.

As in online transactions, Trust is important due to the fact that the transaction is conducted online (Sinaga and Mely, 2016). Earning Customer Satisfaction has an important effect on Trust, in e-Commerce, due to the fact that its development can reduce the risk of using Internet service (Santouridis, 2009). This statement is supported by the research that Customer Satisfaction in conducting an online transaction has an effect on Customer Trust (Santouridis, 2009; Torres-Moraga et al., 2013; Sidharta dan Suzanto, 2015; Mardatilla et al., 2017).

V. CONCLUSION AND RECOMMENDATION

A. Conclusions

Based on the analysis and test on the hypothesis which has been done, the result of the research can be concluded as follows:

First Hypothesis which stated that there is an effect of Service Quality on Customer Satisfaction is accepted. 2. Second Hypothesis which stated that there is an effect of Service Quality on Trust is accepted. 3. Third Hypothesis which stated that there is an effect of Customer Satisfaction on Trust is accepted.

B. Implication

The results of this research provide empirical evidence that Service Quality has a significant positive effect on Customer Satisfaction and Trust. It shows that the quality of online retail Service Quality such as performance, access, sensation, information, and security are important in improving Customer Satisfaction. In other words, online customers may be most satisfied and believe in factors such as retailers' ability to provide good products on time (performance), to provide the informative interface (information), and to ensure security and privacy in terms of financial and personal data of the customers. In addition, this research provides support for the strength of strong prediction from the whole scale to predict the satisfaction by a trust. It means that Customer Satisfaction can be an important predictor in improving Online Customer Trust.

Customer satisfaction can be improved if the online shopping site (Tokopedia) improves its service quality and covers the dimensions of performance, access, sensation, security, and information. These dimensions must improve at the same time to maximize Customer Satisfaction.

To optimize Customer Satisfaction, the operator of an online shopping website must prioritize the attributes which are included in the dimension of information. This is due to the fact that attribute is included in the most dominant variable from other variables. For customers, the elements such as the availability of information, the quality of product information, and the accuracy of product information are very important. It makes sense if Online Customer Satisfaction is improved, then the Online Customer Trust on Tokopedia will also be improved.

C. Suggestions

The next limitation is the limited sample in this research. To generate good research, it is highly advised to conduct a similar test using a greater number of samples and a stricter data collection, so that better answers from respondents will be obtained. In addition,

it would be better to test a hypothesis using other analysis techniques such as Structural Equation Modelling with the help of different programs such as Lisrel, AMOS, and others.

REFERENCES

- [1] Alwafi, F. dan Magnadi, R.H. (2016). Pengaruh Persepsi Keamanan, Kemudahan Bertransaksi, Kepercayaan Terhadap Toko Dan Pengalaman Berbelanja Terhadap Minat Beli Secara Online Pada Situs Jual Beli Tokopedia.com. *Diponegoro Journal Of Management*, Vol. 5, No. 2, Tahun 2016:1-15.
- [2] Asosiasi Penyelenggara Jasa Internet Indonesia. (2017). Hasil Survei Penetrasi dan Perilaku Pengguna Internet Indonesia 2017. Diakses melalui https://web.kominfo.go.id/sites/default/files/Laporan%20Survei%20APJII_2017_v1.3.pdf, pada 15 Oktober 2018
- [3] Eriyanto. (2007). *Teknik Sampling: Analisis Opini Publik*. Yogyakarta: LKIS
- [4] Ghozali, I. (2014). *Structural Equation Modeling, Metode Alternatif dengan Partial Least Square (PLS)*. Edisi 4. Semarang: Badan Penerbit Universitas Diponegoro.
- [5] Katadata.co.id. (2016). Transaksi E-Commerce Indonesia Naik 500% dalam 5 Tahun.(Media Online). Diakses melalui <https://databoks.katadata.co.id/datapublish/2016/11/16/transaksi-e-commerce-indonesia-naik-500-dalam-5-tahun>, pada 15 Oktober 2018
- [6] Kotler, P. & Armstrong, G. (2014). *Principle of Marketing*, 14 Edition. England : Pearson Education, Inc
- [7] England : Pearson Education, Inc
- [8] Kotler, P. dan Keller, K.L. (2016). *Marketing Management*, 15th Edition. England: Pearson Education, Inc
- [9] Kundu, S. dan Datta, S.K. (2015). Impact of trust on the relationship of e-service quality and customer satisfaction. *EuroMed Journal of Business*, Vol. 10 Issue: 1, pp.21-46
- [10] Lovelock, C. & Wright, H L.K. (2011). *Managemen Pemasaran Jasa*. (Terjemahan). Jakarta: PT Indeks (Gramedia Group).
- [11] Mardatilla, R., Kusyanti, A., & Aryadita, H. (2017). Pengaruh Kualitas Layanan Terhadap Kepuasan, Kepercayaan dan Loyalitas Pelanggan Pada E-Commerce (Studi Kasus : Berrybenka). *Jurnal Pengembangan Teknologi Informasi dan Ilmu Komputer*, Vol. 1, No. 12, Desember 2017:1822-1832.
- [12] Nurlina. (2017). Pengaruh E-Service Quality, Dan Kepercayaan Online Terhadap Minat Pembelian Toko Online Di Tokopedia. *Jurnal Lentera Bisnis*, Vol .6 No 2, November 2017.

-
- [13] Oliver, R. L. (2010). Satisfaction : a behavioral perspective on the consumer. New York: M.E. Sharpe, Inc.
- [14] Parasuraman, A. V. (2001). (Diterjemahkan oleh Sutanto) Delivering Quality Service. The Free Press, New York
- [15] Ribbink, D., Van Riel, A.C.R., Liljander, V. & Streukens, S. (2004). Comfort your online customer: quality, trust and loyalty on the internet. *Managing Service Quality*. 14:446-456.
- [16] Santouridis, I. (2009). E-Service Quality and its Impact on Customer Satisfaction and Trust: An Empirical Study on Greek Customers of Internet Shops. 6th International Conference on Enterprise Systems, Accounting and Logistics (6th ICESAL '09) 18-19 May 2009, Thessaloniki, Greece – PROCEEDINGS
- [17] Setyaningsih, O. (2017). Pengaruh Persepsi Kualitas Pelayanan E-Commerce Terhadap Kepuasan Pelanggan, Kepercayaan Dan Loyalitas Pada Produk Fashion. *Jurnal Bisnis dan Manajemen*, Vol 14, No 2 (2014).
- [18] Siagian, H., & Cahyono, E. (2014). Analisis Website Quality, Trust dan Loyalty Pelanggan Online Shop. *Jurnal Manajemen Pemasaran*, 8(2), 55-61.
- [19] Sidharta, I. dan Suzanto, B. (2015). Pengaruh Kepuasan Transaksi Online Shopping dan Kepercayaan Konsumen Terhadap Sikap Serta Perilaku Konsumen Pada E-Commerce. *Jurnal Computech & Bisnis*, Vol. 9, No. 1, Juni 2015:23-36
- [20] Silalahi, U. (2009). *Metode Penelitian Sosial*. Jakarta: PT. Refika Aditama.
- [21] Sinaga, I.W. dan Mely, R. (2016). Pengaruh Trustmarks dan Kualitas Layanan terhadap Kepercayaan Pelanggan Online Shop. *Jurnal Akuntansi, Ekonomi dan Manajemen Bisnis*, Vol. 4, No. 1, July 2016, 21-27.
- [22] Tjiptono, F. (2008). *Strategi Pemasaran*, Edisi 3. Yogyakarta: Andi.
- [23] _____. (2014). *Pemasaran Jasa*. Yogyakarta: Andi.
- [24] Tjiptono, F., Chandra, G., dan Adriana, D. (2008). *Pemasaran Strategik*. Yogyakarta: Andi.
- [25] Tjiptono, F., Chandra, Y., dan Diana, A. (2004). *Marketing Scales*. Yogyakarta: Andi.
- [26] Top Brand Award. (2018). Top Brand Index 2018 Fase 2. (Online). Diakses melalui http://www.topbrand-award.com/top-brand-survey/survey-result/top_brand_index_2018_fase_2, pada 15 Oktober 2018
- [27] Torres-Moraga, E., Barra, C., Vasquez-Parraga, A., & Farias, A. (2013). The Effects of Service Quality on Customer Trust and Satisfaction in Internet Banking. *Estudios de Administración*, Vol. 20, No. 1, 2013, pp. 1-36.
- [28] www.tokopedia.co.id

-
- [29]Zeithaml, V.A., Parasuraman, A., Malhotra, A. (2002). Service Quality Delivery Through Web Sites: A Critical Review of Extant Knowledge. Journal of the academy of marketing science, 30(4), 362-37

The Impact of Food Operational Control Cycle Towards Food Cost Management: a Comparison Study of 3 Branches of Korbeq Restaurant by Stevan Meatshop

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Abstract

This research aims to investigate the impact of food operational control cycle towards restaurant food cost management in Korbeq restaurant by Stevan Meat Shop. In this research it will mainly focus on quantitative methods however to strengthen the study it will also be supported with qualitative methods and direct observation before the pandemic occurs. Furthermore, this study has come up with the conclusion that the food operational control cycle has an impact on food cost management. Based on results it shows that food operational control cycle contributes 41.9% on impacting food cost management on restaurant operations, and another 58.1% was caused by other factors that are not mentioned in this study. The dimensions of food operational control cycle also analyzed using descriptive study supported with qualitative data to determine which factors of food operational control cycle has the most impact. As a result, issuing and production are determined as the most impactful dimension. The other dimension of the food operational control cycle are menu planning, purchasing, receiving, storing, service. This research was analyzed through IBM SPSS ver 25.

Keywords: Food and Beverage, Food Service Industry, Management, Operational Control Cycle, Food Cost Management.

I. INTRODUCTION

ASIAN countries are a promising investment target because they have a positive economic development prospect on an ongoing basis in the next few years. Among these countries, Indonesia is one of the ASIAN countries which is predicted to become one of the biggest economic powers recognized by the global world around 2050. Therefore, foreign investors are competing to build their business in Indonesia as early as possible in order to win the competition in the future. The prediction of business potential in Indonesia refers to the positive trend of economic growth reaching more than 5% annually (LTI, 2019).

The main advantage of Indonesia compared to other ASEAN countries is on its very large population, which reaches around 267 million people. With these demographic advantages, Indonesia become a potential target market for the food service industry, and therefore, the food service industry is classified as a business sector that has a great development prospects in Indonesia, which even in the span of 2018 and 2023 are expected to achieve a compounded annual growth rate (CAGR) of 7.06% (Przybylski, 2018). Supporting this explanation, data from the Central Statistics Agency (BPS) stated that the food industry sector will continue to grow. In accordance with the explanation put forward by the Minister of Industry, that in 2017, the food and beverage industry became the largest contributor compared to other sub-sectors of the non-oil and gas industry sector with a contribution reaching around 34% of GDP. The contribution of the food and beverage industry sub sector has a positive trend considering that its achievement in 2017 increased by 4% compared to the same period in the previous year. Furthermore, seen from the development of investment realization, the food and beverage industry sector for domestic investment (PMDN) in the third quarter of 2017 reached Rp27.92 trillion or an increase of 16.3 percent compared to the same period in 2016. (Hartarto, 2017).

According to (Friedman, 2012), at each level, the main objective of carrying out business activities is to achieve the greatest possible profit for the owner. At a larger business level, the business owner does not only consist of individuals, but includes many parties with different contributions, such as companies that have gone public. In a broader perspective, parties called business owners are not limited to investors, but also other parties who have an interest, or are called stakeholders, such as corporate customers, all company employees, to the wider community that became the company's target market. Based on the number of

interested parties, a legal protection is needed that explicitly regulates interactions and transactions that occur in the business processes run by the company. The existence of these regulations is expected to remind the businessmen to implement business practices oriented to creating benefits for all parties. This is consistent with the statement of Anu Aga, ex-chairperson of Thermax Limited, said, “We live to tell the tale through respiration but we can’t say we live to breathe”. Likewise, making money is vital for a commercial enterprise to survive, however cash alone can’t be the cause for business to exist.”

A business activity is said to produce a profit if all the costs incurred to produce a product or service are less than the revenue received. In this case, the revenue must be able to be used to finance production activities in a sustainable manner and be able to provide benefits to business owners financially. The allocation of financial benefits can be intended for asset development or just to increase savings owned by business owners (Kenton, 2019).

In the food service industry the primary responsibility for a manager is to deliver service to guests and a good product quality at an agreeable price for both parties (Harrington, 2014). In addition, the quality should be compatible towards the money they spend. When they apply that theory, a business should be having a prosperous future. If, however, management concerns more about reducing the food cost compared to providing a valuable service to the guest, problems will inevitably occur (Dopson & Hayes, 2016).

Restaurant food cost is simply the total cost of your food net of existing inventory. (Cooper, 2002) Usually beverage costs are counted separately but occasionally these are combined. When expressed in a percentage, the food cost is simply net food purchases divided by the restaurant’s net sales. Food and beverage costs can vary depending on the type of restaurant, it is uncommon to see this represent 25-40% of the restaurant’s total cost. Outside of labor, which can be in a similar range of 25-35%, there is no other cost so high when it comes to a restaurant’s cost structure. This is why food and labor costs are called “prime costs” within the industry. They are the biggest costs for any given restaurant and the ones over which the restaurants have the most control. Generally restaurants aim to have prime costs in the 60-65% range. (Chan & Au, 2012).

II. LITERATURE REVIEW

A. Food Operational Control Cycle

According to (Dittmer & III, 2009) (Barrows & Vieira, 2013), control is a managing process in terms of giving direction, making a suitable regulation and restraining the actions of people so that the vision of an enterprise may be achieved. Probably the usual goal for all private

start-up company is financial success or return on investment. However other goals may include operating the best restaurant compared to the community competitors. The control process itself consists of four steps:

- Establish standards and create a regulated SOP (Standard Operational Procedure).
- Encourage the employees to obey the SOP and give the newcomers orientation training about how important the SOP.
- Monitor performance and compare the established standards with the actual performance.
- Discipline in conducting evaluations and improvements to maintain the suitability of the process with established standards.

B. Food Cost Management

Food cost and sales are two of the most important elements in building a company in the food service industry. Besides food, there are still many more aspects that might also be critical for instance labor cost and etc. Nevertheless controlling food and labor costs are two of the foremost critical points for a restaurant business. With legitimate menu arranging, deals estimating and representative preparation, an eatery can avoid overspending on staff and supplies and still give fabulous quality dishes. Employing a variety of arranging, checking and assessment strategies, you'll be able persistently oversee these costs to guarantee you stay beneficial without relinquishing quality. (Seidel, 2019)

It is pretty obvious that the amount of sales of a company must be more than the total costs if a food service company are to be profitable. If the cost of the food in a company exceeds the sales for a period of time, the company might face bankruptcy (Basu, 2020). At the very least, the shareholders or even the owner should inject some more funds into the business to keep it going. It is the job of the manager and the cost controller to always constantly be aware of the cost of operating the enterprise to keep and maintain the cost under the amount of sales. It is important that the data of the company's cost and sales should be compared within a period of time. The comparisons are made for specific amount of days in a week-for instance Saturday of last week should be compared to Saturday this week. (Camillo, 2008)

Establishments that gather cost and sales information only monthly, quarterly or even annually should not be as effective as the one who did it on specific amount of frequent time (Grunert, 2008). The company itself may not be able to take effective remedial action due to the information not being sufficiently timely to shed light on current problems. (Dittmer & III, 2009)

However, none of these previous researches connect these two variables. Therefore, this study proposes the following hypothesis:

H1a: There is a positive relationship between work-life balance and employee retention.

H10: There is no positive relationship between work-life balance and employee retention.

C. Company Benefits of Food Cost Management

According to (Woodruff & Thompson, 2019), these are the benefits of conducting a good food cost control that could affect the company:

- Pay-Down Debt : the debt to equity ratio can be further reduced in accordance with a decrease in the level of debt.
- Improve Creditworthiness: Firms credit increased along with a decrease in debt to equity ratio and an increase in the company's finances.
- Better Equipment : Asset development is an appropriate alternative for the utilization of profits applied in order to develop service quality.
- Less Maintenance Cost: Since the restaurant obtains or purchases more updated equipment so that it needs less maintenance. Indirectly, the restaurant spends less money on repairing the old equipment.
- More Marketing Budget: Increasing the efficiency of production and operating activities can provide the funds needed to penetrate the sales of products to the market. More sales will also create more profit.
- Improve Competitive Adv.: For a restaurant to survive in a business industry, a restaurant should maintain an efficient operation which could give itself more competitive advantages. This indirectly means more investment on better capital equipment and increased productivity for employees.

D. Employee Benefits of Food Cost Management

According to (Woodruff & Thompson, 2019), these are the benefits of conducting a good food cost control that could affect the human resource:

- Improve Productivity : Cost Control gives the employee of your restaurant a performance target that must be achieved.
- Create culture to cost control: When the employees are used to maintaining good cost control, it becomes a mantra for the entire company. Food cost control creates a mindset for them to eliminate the avoidable waste.
- Increase pay for employee: With more profits, the owner has more chances of increasing the employee's salary and wage.

-
- Better employee morale: The positive impact of cost control on increasing employee incentives can encourage higher work motivation and reduce the desire of employees to leave the company.
 - Hire better employees : Restaurant or any other firms that are able to pay higher salaries and wages are able to attract or hire more skillful employees.

III. RESEARCH METHOD

A. *Type of Study*

The research methodology applied in this study will be the descriptive study. According to (Cooper & Schindler, 2014), descriptive study is formalized studies that are structured with a clear hypothesis or investigate questions. This type of study also describes a phenomenon and the sample will be taken from the directed population and samples, so that the result will be related and correlated within each variable and indicator. In addition, (Nassaji, 2015) and (Sekaran, 2003) also added that the objective of descriptive studies is to explain a certain event and help to make managerial decisions. Therefore, this study will analyze the impact of the Food Operational Control Cycle towards Food Cost Management. Furthermore, the results of this research will help the owner and related industry to develop strategies to enhance the sop in her restaurant in order to improve the performance and cost efficiency.

Population and Sample

Because the population will only consist of millennial employees, the sampling method is non-purposive judgmental method, which means not all people may participate in the survey. Using slovin's formula, it is determined that the minimum sample for this research is 110. Although after spreading the questionnaires to all 160 millennial employees, this research is able to require 153 samples. For the pre-test, the sample comprises 30 respondents, also millennial employees from the same hotel.

B. *Type of Data and Collection Method*

The primary data will be collected from questionnaires as its quantitative collection method, then interviews and observations as its qualitative collection method. While secondary data will be collected from previous studies and journals.

C. *Data Analysis Technique*

The focused area of this research is described in the unit analysis. Unit analysis can be individuals, groups, artefacts including books, photos, newspaper, and geographical units such as town, census tract, and state. Based on the studies differences and gaps that found in

the review of the discussed context, this research is dedicated to analyze and observe the problems within the hospitality industry (company perspective) as the unit of analysis. Furthermore, the unit analysis is then specified into the unit of observation, which this research specifically designs to observe the impact proper applicants of food operational control cycle towards food waste management which applies towards the subjected company's employees who have direct engagement towards the product and hold a crucial role to reach the effective cost of the company. In accordance, following the level of intensity of the Food and Beverage department such as Owner, Food and Beverage Manager, Kitchen Team, Service Team and Butcher are chosen to be the roles that will be observed in this study.

D. Population and Sample

According to (Sekaran, 2003), defined a population as a total collection of people that are being studied by the research. It is mentioned that the population in the research area should be interpreted as individuals in the selected group that generally share mutual characteristics or features that become the attention of study, which is known by a specific number called population size (Singh & Nath, 2007). In this research, the discussion will be focused on the food and beverage department employee and owner of Korbeq Restaurant by Stevan Meat Shop in 3 Branches as the population of the study.

The research sample is part of the population determined to be tested for its characteristics. Sample is selected in numbers and in accordance with certain conditions to ensure that the sample can represent the characteristics of the entire population.

As mentioned on the population part the sampling will be focused on the food and beverage department on subject respondent. Narrowing it down, the targeted sample will be specifically the one who works in the kitchen department, steward department and also butcher department.

E. Data Processing Procedure

Data Screening

After having the data from the questionnaire, the process after it will be screening the data. This method is used to make sure every data is clean and ready for quantitative analysis. The purpose of it is to identify missing values. Missing value occurs when the respondents did not fill the questions or skipped the question.

Validity Test

The validity test for this research will be using Pearson's Correlation Coefficient. The range of Pearson's is from -1 to 1. The closer it is to 1 indicates the positive relation between the question and result. While the closer it is to -1 indicates the negative relation between question and answer, while 0 indicates no direct relation at all between the variables (Cooper

& Schindler, 2014). Thus, Pearson's r value is used in the study because it was specified the strength of the relationship between the two variables through the correlation coefficient (r) that addressed as product-moment correlation coefficient, that can be computed using the mean of each variable (x and y),

Reliability Test

Reliability tests in research cannot be neglected because they describe consistency and determine whether the same instruments remain stable in producing outcomes and can be used overtime by other researchers or under different circumstances. This test is also reflected as a bias-free approach towards the consistency measurement of a study. Reliability test is conducted to indicate the stability and consistency of an instrument, thus suggesting that there are two related methods. First of all, the stability of measures can be approached through the test-retest reliability which uses the instrument multiple times with the gap of time to the same respondents. The higher the coefficient is, the more reliable the instrument. Meanwhile, the stability test can also be found through parallel-form reliability, in which two similar sets of instruments are tested to the same respondents with the difference of wording, arrangement and other variance factors. Secondly, the prevalent index to measure the internal consistency is the Cronbach's alpha that is mostly considered adequate to apply in various cases and appropriate for correlational studies. The values of Cronbach's alpha ranging from zero (0) to one (1), which if the correlation of the variables is high, and then the Cronbach's value will also follow. The results will directly show the value of Cronbach's alpha.

Descriptive Comparison Analysis

Descriptive statistics serve as a summary of the numerical collection data that allow the researcher to understand the data easily by categorizing. There are many calculations that can be approached to generate descriptive statistics. However, this study will analyze the data through basic and simplified interpretation of data such as mean, minimum, and maximum value, standard deviation and variance. By using the calculation it is expected to describe the general response or behavior from the sample and comparison between items can also be seen.

Classical Assumption Test

Before conducting simple linear regressions, there are five tests from classical assumption tests that need to be conducted, including normality test, linearity test, heteroscedasticity test. Classical assumption test is "a test that statistically measures and determines the relationship between variables". The main reason for doing this test is to minimize an error in regression analysis. However, in doing research, it is not a must to

conduct all the tests. Hence this study will only focus on the normality test and heteroscedasticity test.

F. Simple Linear Regression

Regression analysis is a statistical procedure used to estimate the relationships among variables. It includes a lot of techniques and it helps people understand how the typical value of the dependent variable changes when anyone of the independent variables is varied and the other ones fixed. This method also clearly measures how strong the influences are between independent variables with dependent variables.

This study involves the usage of one of the regression techniques which is the multiple regression method since it involves one single dependent variable and single independent variable.

IV. RESULT AND DISCUSSION

A. Profile of Respondent

Out of 37 respondents, 46% of them are between 21 to 25 years old, and 81% of them are male.

B. Validity and Reliability Tests (Pre-Test)

After collecting the questionnaires and input the eligible ones into SPSS, the results are all questions pass the validity test; all pearson correlations from all variables surpass both 0.3808 minimum for pre-test, and 0.325 for post-test, and the questionnaire pass the reliability test; the cronbach's alpha of all variables surpass the minimum 0.70.

C. Descriptive Statistic

The following statements are the ones most agreed by the respondents from each variable:

Product Forecast in Pantai Indah Kapuk Branch has the lowest mean ($\bar{x} = 4.00$ - Applied), however in their product requirement indicator it shows that Gading Serpong Branch has the lowest mean at ($\bar{x} = 4.25$ - Applied). Combined with the direct interview with their manager they really do menu planning well by creating a forecast for 3 days in order to have sufficient and adequate inventory which is why the average of this indicator is still above 4 or categorized as applied. Even though the lowest mean located at Pantai Indah Kapuk branch however, if we see on average the lowest mean located at Gading Serpong whereas two of

the other branches (Harmonie Exchange and Pantai Indah Kapuk) strongly applied this dimension.

The first Requisition Issue in Gading Serpong Branch has the lowest mean ($\bar{x} = 4.33$ - Applied), however in their second requisition indicator it shows that Harmony Exchange Branch has the lowest mean at ($\bar{x} = 3.87$ - Applied). If we observe averagely, all of the branches of this restaurant apply a good standard purchasing procedure on ordering their product.

PIK has the lowest receiving mean at ($\bar{x} = 4.00$ - Applied) for product receiving 2 and Product Allocation at ($\bar{x} = 4.07$ - Applied). Which means that even though some of the staff still applied the correct receiving procedures; some of employees are still not being educated in this section. In addition, combined from the direct in-depth interview with the branch supervisor of Gading Serpong (Irvan, 2020), he said that there are still some of their employees that did not select and sort the fresh ingredients from the main kitchen which create a huge food waste in this branch. Which is pretty make sense that Gading serpong branch has the second lowest mean in this receiving process. On the other hand, the Harmonie Exchange branch perfectly applied all the receiving procedures.

Gading Serpong has the lowest Storing mean average for Temperature 1, Cleanliness 1, and Cleanliness 2. Well for the product turnover, third temperature and cleanliness indicator Pantai Indah Kapuk has the lowest mean. Even though all of them have a stable mean, based on direct observation and in-depth interviews. I observed that two of their branches (Pantai Indah Kapuk and Gading Serpong) don't have a proper buffet station in e.g proper bain-marie counter – salad bar refrigerator to keep their free salad bar cold and fresh. Combined with my direct observation and in-depth interview, (Irvan, 2020) as the branch manager of Pantai Indah Kapuk stated that this branch does not have enough ingredients and food storage to store their product. They might sometimes store their product in one of their branch managers located in Tangerang area. This is why some of their employees could not apply the proper storing standard

All the branches present a stable mean. Overall all the branches applied the correct issuing standard procedure. Indirectly, means that they always recorded all of the items that were being issued towards the production process. According to (Vatur, Syahputra, & Ahadianto, Korbeq Restaurant Data Interview, 2020), they stated that they should always do the product recording everyday

All branches have a constant applied and strongly applied in 4 indicators of the production process which are amount, quality 1, and standard. In contrast the data shows that

all of the branches have a very low mean (HXC \bar{x} = 2.80, GS \bar{x} = 2.08 and PIK \bar{x} = 2.13) in their function indicator. This means that all of the branches did not reuse or recycle their leftovers and wasted food became another product however there might still be very few of the employees using their leftovers and waste food to produce another product.

The data shows a low mean on the time indicator of serving dimension for all branches. However the Gading Serpong and Pantai Indah Kapuk branch has the lowest mean (GS \bar{x} = 1.83 & PIK \bar{x} = 1.87), which means that they did not apply this indicator. Well, according to my in-depth interview with the branch manager of Gading Serpong (Irvan, 2020), he said that their branch refills and renews their salad bar if it is empty. In conclusion, they don't really care and pay attention towards the food hygiene and safety in this situation. According to (Manopolou, Lambrinos, Chatzis, & Xanthopoulos, 2010), Raw material such as fresh vegetables (romaine lettuce, carrot etc.) could be kept for a short period at 18°C. However based on my direct observation to the outlet and the analyzed data above, it explained that they are not using a proper salad bar refrigerator so that the fresh vegetables that are being displayed have a lower life time. According to (Rindskopf, 2020), A fresh romaine lettuce that is kept at room temperature could only last for 2 hours. Which means that this branch either they throw a lot of waste or they might be serving bad conditioned food. Compared to the other 2 branches the other branches also do the same procedure however they might be changing the fresh vegetables buffet in a certain part of time.

In overall Harmonie Exchange branch has the highest mean on food cost management variables (Menu Forecast 1 \bar{x} = 4.70 – Strongly Applied, Purchasing \bar{x} = 4.10 – Applied, Storage \bar{x} = 4.50 – Strongly Applied, Issuing \bar{x} = 4.70 – Strongly Applied and Production \bar{x} = 4.1 - Applied) which means that Harmonie Exchange outlet shows a very good understanding on food cost management education on their industry. If we compare to the other 2 branches Pantai Indah Kapuk and Gading Serpong have lower mean compared to Harmonie exchange. If we see individually the data shows the GS branch has the lowest mean (\bar{x} = 2.67 – Neutral) on Purchasing Dimension which means they don't have a minimum standard on to purchase their item. In addition Gading Serpong branch also has the lowest mean (\bar{x} = 3.40 – Applied) on production dimension. Combined with the in-depth interview result, all of the branches (Vatur, Syahputra, & Ahadianto, Korbeq Restaurant Data Interview, 2020) stated that they did not have the food waste log monthly or periodically but Gading Serpong and Harmonie Exchange has their own food waste log internally to count the pre-consumption waste product (in e.g: beef trimming, rotten vegetables and etc.). According to (Vatur, Korbeq Restaurant Data Collecting, 2020) as the branch manager of Pantai Indah

Kapuk, he said that their outlet did not count the leftover or wasted food. So after the trimming process they directly throw out the leftover food.

D. Classical Assumption Test

Normality Test

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		37
Normal Parameters ^{a,b}	Mean	0.0000000
	Std. Deviation	3.32965461
Most Extreme Differences	Absolute	0.087
	Positive	0.087
	Negative	-0.086
Test Statistic		0.087
Asymp. Sig. (2-tailed)		.200 ^{c,d}
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

Table 1. One Sample Kolmogorov Smirnov Test

Source: IBM Spss Ver. 25

Before the data being processed for hypothesis testing, it should be tested whether or not the data is distributed normally, which indicates the ability of the data to represent population (Santoso, 2020). To test the normality, value in Kolmogorov-Smirnov table should be observed (table 4.16). If the Asymp sig. is equal or more than 0.05, then the data is normally distributed. According to the table the data shows that the Asym Sig. (2-tailed) is 0.200, which is greater than the benchmark (0.05). Therefore, the data is proven to be normally distributed.

Heteroscedasticity Test

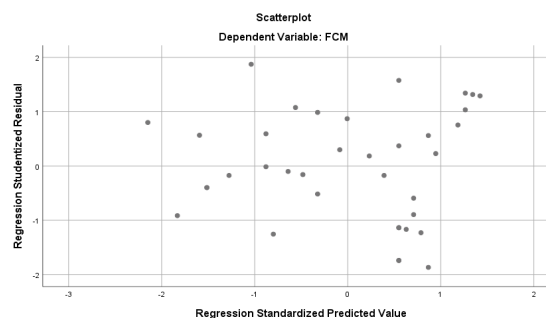


Figure 1. Scatterplot Heteroscedasticity Test

Source: IBM Spss Ver. 25

As presented in the data, it shows that the questionnaire has no heteroscedasticity where the figure has met all of the requirements of the scatter plot test.

E. Inferential Analysis

Simple Linear Regression

The correlation including the relationship and the significance of food operational control cycle towards food cost management is conducted through simple linear regression and the result is discussed further below.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.647 ^a	.419	.402	1.93299

a. Predictors: (Constant), Food Operational Control Cycle

b. Dependent Variable: Food Cost Management

Table 1. Model Summary Table

Source: IBM Spss Ver. 25

For simple linear regression, the correlation could be seen through the R value which ranges from zero (0) to one (1). Based on the table 4.17, the value of R is 647 which correlations is analysed as moderate association between two variables. On the other hand looking at the value of R square, it can be interpreted that roughly 42% of the variance found in the dependent variable (Food Cost Management) can be explained by the predictors/independent variable (Food Operational Control Cycle) F-Test Result

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	94.306	1	94.306	25.240	.000 ^b
	Residual	130.775	35	3.736		
	Total	225.081	36			

a. Dependent Variable: Food Cost Management

b. Predictors: (Constant), Food Operational Control Cycle

Table 2. Anova Table (F-test Result)

Source: IBM Spss Ver. 25

F-Test is executed further through ANOVA table to discover how independent variables can or cannot predict the dependent variable, which as a result hypothesis can be determined. There will be two values, which are F values and the significant value. If the F value is more than the F table and the sig.Value is less than 0.05, then this implies that the independent variable simultaneously predicts the dependent variable.

The value of F value (25.240) is far greater than the F table (4.110) and for the sig. value it is less than 0.05 which is (0.000). With this result, it can be concluded that the null hypothesis is rejected and supported the alternative hypothesis, which is:

H1: Food Operational Control Cycle has an impact on Food Cost Management in Korbeq Restaurant by Stevan Meat Shop.

T-Test Result

Model	Coefficients ^a		Standardized Coefficients	t	Sig.	
	Unstandardized Coefficients	Std. Error				
	B		Beta			
1	(Constant)	7.463	2.430		3.071	.004
	Food Operational Control Cycle	.133	.026	.647	5.024	.000

a. Dependent Variable: Food Cost Management

Table 3. Coefficients Table (T-test Result)

Source: IBM Spss Ver. 25

To provide stronger evidence of the association, t-test is conducted to determine how the independent variable partially affects the dependent variable. Particularly, based on table 4.19, t value and significant value will be compared to each of its benchmark. Hypothesis is accepted if t value is more than t table and significant value is less than 0.05. The t-table in this study to be compared is 2.030. From the comparison, the proposed hypothesis is strongly accepted.

Thereupon, the data shown also interpret that food operational control cycle contributes to the value of food cost management. Given this formula, 1% of food operational control cycle value can increase the value of food cost management by 13.3%

With this result, it can be concluded that the null hypothesis is rejected and supported the alternative hypothesis, which is:

H1: Food Operational Control Cycle has an impact on Food Cost Management in Korbeq Restaurant by Stevan Meat Shop.

Hypothesis Test Discussion

The result above has proven to accept the hypothesis of:

H1: Food Operational Control Cycle has an impact on Food Cost Management in Korbeq Restaurant by Stevan Meat Shop.

It shows and proves that the food operational control cycle as the independent variable has an impact towards food cost management as the dependent variable. This result could be seen from the F-test that has been conducted (table 4.19) where the F value (25.240) is far greater than the F table. In addition the strength of the correlation between two variables is described in the t-test which 13.3% of food operational control cycle influences the 1% of food cost management value. However, the result has supported the theoretical finding that the association exists. It cannot be argued that by referring to the existing literature and arguments in previous chapters, the association of the two variables are still understudied. Nevertheless, this study has confirmed the realization of the discussed model by (Dittmer & III, 2009) and (Hayes & Ninemeier, 2006). Correlating this comparison case study it is proven that some factors and process of food operational control cycle does really affect food cost management. In addition, this can be a statement that food operational control cycles could affect their financial statement (sales, food cost etc.). In conclusion, the hypothesis shows that each food operational control cycle has a big role in order to improve the food cost management of the restaurant.

V. RECOMMENDATIONS

Based on the discussion and the conclusion given, the owner and managerial implications is then suggested. Through this research, the importance of applying proper food operational control cycle is emphasized in order to achieve maximum cost efficiency. Specifically, it is important to realize that conducting proper food operational control cycles could maximize the restaurant's profit. Unquestionably, many studies and literature about the food operational control cycle have proven that conducting the proper procedure could maintain business continuity. This study will separate the recommendation for each branch in order to ease the owner and manager.

A. Operation Team of All Branch

Food Operational Control Cycle

According to the data and in-depth interview taken from all of the branch managers, this recommendation suggested Gading Serpong and Pantai Indah Kapuk branch with higher food cost percentage and lower mean average. However it is still possible for the other Harmonie Exchange to apply the following recommendation. First of all, about the receiving procedure it is highly suggested that there should be at least 2 employees of the food and beverage department or outside food and beverage department to control the receiving process. The advantage of applying this recommendation helps the restaurant to prevent and reduce the food waste that might occur during the production process. So everything should be selected based on the standards and requirements. Secondly about the issuing process, based on direct observation and visit there was no product issue note or sticker that usually attached on every product that was being issued. It is highly recommended to always attach product issue notes or stickers to maintain the product lifetime cycle that could automatically keep the freshness of the product and reduce less waste. Next about the production process, if we analyzed the data it seems that the function indicator in production has the lowest mean which means that the recommendation and suggestion will be focused on this indicator. This recommendation is suggested to the owner, rather than creating more waste it is best that the edible food waste should be reproduced to be the employee meal. By conducting this the owner could save more cost and reduce more waste. Besides that, according to direct observation it is highly suggested to strictly pay attention to employee's uniform standard, as can be seen on the appendix 6 it is clearly seen that two of the employees do not use proper uniform standards such as hairnet and hand gloves. Whereas handling food with bare hands could create cross contamination (CookSafe, 2012). Last but not least, the crucial factor of a restaurant is about serving. According to the data, this branch has a lower mean compared to the other branches. Combined with direct interview and observation it is suggested to repair or purchase a new cold buffet station to always keep the cold product fresh. So that the customers are also satisfied with the restaurant service.

Food Cost Management

According to the analysis and statistics result, Gading Serpong branch has the highest food cost percentage compared to the other branch. Almost all of the indicators of this branch has the lowest mean. There will be overall recommendation that could be done in this branch and also recommendation for the central kitchen:

1. According to a direct in-depth interview with the manager of each branch, it is concluded that all of the branches order different products from the central kitchen (purchasing group). Even though some products could have a lower price compared to the margin, it is highly suggested that all of the restaurant should always order all of the ingredients from the main kitchen so that they have a constant food cost margin.

2. It is recommended to do inventory checking constantly every week to prevent over issuing, lost or even stolen. Well by conducting this recommendation it will be helpful for the ordering process and keeps the restaurant from ordering too much or too little.

3. Track the food prices constantly, so the finance department could always forecast the product value development of each product. By tracking food prices, you can revamp your menu so your recipes include more affordable alternatives.

4. Food waste can eat up the bottom line quickly, so it is recommended to always control the food portion appropriately. These studies will suggest some options on how to portion the food consistently. Since this is an all you can eat restaurant, it could be better if the sliced meat is prepared or cut directly from the central kitchen. By conducting this, it will keep the portioning consistency to all the branches and also ease the food cost control. Always do check and observe post consumption leftover food, by applying this the restaurant could control and cut back some of the portion size.

5. Last but not least, the crucial one is about food waste management. It is an obligation to a food service company to have a food waste log. Use a waste chart and take notes on every food returned because it was made incorrectly, spilled in the kitchen, burned in the kitchen and extra portion size that got thrown away. By keeping track of this, it can keep better track of the restaurant inventory and manage food cost percentage. Additionally, the restaurants could reduce the instances of waste.

B. Owner

As the final thoughts of all the recommendation here are the recommendation intended for the owner:

1. The first is to always shop around and check the market. Use negotiating power to secure better deals on product purchasing. Every vendor has multiple prices for items, and everything is negotiable. So it is one of the best and effective ways to always monitor the market.

2. Second, give a training and workshop for the employees to be more precise and considerate so they can help manage food costs. Consider offering incentives for reducing

waste and bad orders. When they see the numbers reflected in their own paychecks, they might be more cognizant of waste and portion sizes.

3. Lastly, always stay on top of numbers so it can help manage food costs. Be more organized and look at these numbers on a routine basis. This helps the restaurant to lower food costs and increase restaurant's profitability

C. Future Research

The process of writing this research including its limitation has allowed for giving further recommendation to researchers who are going to conduct similar study. Firstly, future researchers within the hospitality industry are suggested to corroborate this present of study, but can be done in another unit of observation such as the kitchen department only so that the focus and result could be seen clearly. Comparatively, the model can also be tested in different type of restaurants. Since, this study only focused on the food cost management other researchers might focus on other variables such as food waste management, restaurant financial management etc. Last but not least, since this research is conducted during pandemic situations which create a lot of limitations it is highly suggested to conduct direct observation parallel with the research process. This might take more effort and time, however the effort would be more genuine and avoid biases including external factors.

REFERENCES

- [1] Abdelrasheed, N. (2018). Which method should I use to present the Mean of a 5-point Likert Scale. Retrieved May 13, 2020, from Researchgate: Abdelrasheed, Nasser Said Gomaa. (2018). Re: Which method should I use to present the Mean of a 5-point Likert scale?. Retrieved from: https://www.researchgate.net/post/Which_method_should_I_use_to_present_the_Mean_of_a_5-point_Likert_scale/5bc8ed553d48b7
- [2] Accounting verse. (2019). Controllable Costs and Uncontrollable Costs. For All things Accounting, 77-80.
- [3] Ahadianto. (2020, March 2). Korbeq Restaurant by Stevan Meat Shop Harmony Xchange. (J. Liuden, Interviewer)
- [4] Alviior, M. (2017, May). What Are The Psychometric Properties of a Research Instrument?. Retrieved May 5, 2020, from Simply Educate Me: <http://simplyeducate.me/2013/10/17/what-are-the-psychometric-properties-of-a-research-instrument/>

-
- [5] Bae, G., & Kim, D. (2014). The effects of offering menu information on perceived waiting time. *Journal of Hospitality Marketing & Management*, 746-767.
- [6] Barber, N., Ghiselli, R., Deale, C., & Whithem, C. (2009). CEO Turnover in the foodservice industry: Is there a relationship to key financial performance? *Journal of Foodservice Business Research*, 2-17.
- [7] Barnard, M. W. (2000). A Case Study to Examine The Application Of Food Cost Theories in Menu Pricing and Cost Control Management within a New Restaurant Operation. *Food Service Cost Management*, 388-96.
- [8] Barrows, C., & Vieira, E. J. (2013). Recommendations for the development of a new operational classification system for the foodservice industry. *Journal of Hospitality & Tourism Research*, 349-376.
- [9] Basu, K. (2020, February 3). Understanding Inflation and Controlling It. Retrieved from www.kaushikbasu.org/Inflation%20%20Gautam%20Mathur%20lecture%2014.pdf
- [10] BPS (Badan Pusat Statistik). (2016). Pertumbuhan HOREKA di Indonesia. Retrieved from <https://www.antaraneews.com/berita/820550/pengamat-sektor-pariwisata-indonesia-alami-p-erkembangan-signifikan>
- [11] Brannon, L., York, V., Roberts, K., Shanklin, C., & Howells, A. (2009). Appreciation of food safety practices based on level of experience. *Journal of Food Service Business Research*, 134-154.
- [12] Camillo, A. C. (2008). "Success and failure in northern California: critical success factors for independent restaurants". *Cornell Hospitality Quarterly*, 364.
- [13] Chan, W., & Au, N. (2012). "Profit measurement of menu items in Hong Kong's Chinese restaurants". *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 39 No. 2 70-75.
- [14] Cohen, E., Cukierman, G., & Schwartz, Z. (2000). Cutting costs on Hazard Analysis Critical Control Points systems in food catering: Sampling frequency and the rate of misclassification. *Journal of Restaurant & Foodservice Marketing*, 19-30.
- [15] Cooper, R. a. (2002). Activity-based systems: measuring the costs of resource usage. *Accounting Horizon*, 1-13.
- [16] Dili. (2017). Difference Between Controllable and Uncontrollable Cost. *Difference Between*, 44-60.
- [17] DiPietro, R., & Milman, A. (2010). Retention factors of tipped hourly employees in the casual dining restaurant segment: Exploratory research in Central Florida. *International Journal of Hospitality & Tourism Administration*, 244-266.

-
- [18] DiPietro, R., & Partlow, C. (2014). Customer expectations of casual dining restaurants: The case of Liberty Tap Room. *International Journal of Hospitality and Tourism Administration*, 376-393.
- [19] DiPietro, R., Murphy, K., Rivera, M., & Uller, C. (2009). Multi-unit management key success factors in the casual dining restaurant industry: A case study. *International Journal of Contemporary Hospitality Management*, 524.
- [20] Dittmer, P. R., & III, J. D. (2009). *Principles of Food, Beverage, And Labor Cost Controls*. New Jersey: John Wiley & Sons, Inc.
- [21] Duffy, B. (2013). What is Food Cost? *The Bar & Restaurant Management*, 241-250.
- [22] Dziadkowiec, J., & Rood, A. (2015). Casual dining restaurant preferences: A cross-cultural comparison. *Journal of Foodservice Business Research*, 73-91.
- [23] Friedman, M. (2012). *Introduction to Business*. Boundless Business.
- [24] Gorodesky, R., & Lange, K. (2018). *Restaurant Accounting: For Profit's Sake, Inventory your Food Cost*. Sales Stars.
- [25] Grunert, K. J. (2008). User-oriented innovation in the food sector: relevant streams of research and an agenda for future work. *Trends in Food Science & Technology*, 590-602.
- [26] Ha, J., & Jang, S. (2012). Consumer dining value: Does it vary across different restaurant segments? *Journal of Foodservice Business Research*, 123-142.
- [27] Harrington, R. (2014). The culinary innovation process, a barrier to limitation. *Foodservice Business Research*, 35-57.
- [28] Hartarto, A. (2017, November 24). *Industri Makanan dan Minuman jadi Andalan*. Retrieved March 10, 2020, from Kementerian Perindustrian Indonesia: <https://kemenperin.go.id/artikel/18465/Industri-Makanan-dan-Minum-an-Masih-Jadi-Andalan>
- [29] Hayes, D., & Ninemeier, J. D. (2006). *Restaurant Operations Management: Principle and Practices*. New York: Pearson Education.
- [30] Hua, N., & Lee, S. (2014). Benchmarking firm capabilities for sustained financial performance in the U.S. restaurant industry. *International Journal of Hospitality Management*, 137-144.
- [31] Irvan, M. (2, March 2020). *Korbeq Restaurant Data Interview Gading Serpong Branch*. (J. Liuden, Interviewer)
- [32] Jang, S., & Park, J. (2011). Hospitality finance research during recent two decades: Subjects, methodologies, and citations. *International Journal of Contemporary Hospitality Management*, 479-497.

- [33] Jang, S., Liu, Y., & Namkung, Y. (2011). Estimating Cashflow-at-Risk (CFaR): A comparables approach for restaurant firms. *Cornell Hospitality Quarterly*, 232.
- [34] Kenton, W. (2019). Profit Definition. *Corporate Finance & Accounting*, 77-88.
- [35] Kimes, S. (2008). The role of technology in restaurant revenue management. *Cornell Hospitality Quarterly*, 297.
- [36] Knight, A., Worosz, M., & Todd, E. (2007). Serving food safety: consumer perceptions of food safety at restaurants. *International Journal of Contemporary Hospitality Management*, 476-484.
- [37] Kotelikov, V. (2020, February 7). Customer Retention: Driving Profits through Giving Lots of Reasons to Stay. Retrieved from Vadim Kotelikov: : www.1000ventures.com/business_guide/crosscuttings/customer_retention.html
- [38] Lightspeed. (2019). Food Cost Formula. Lightspeed.
- [39] Lin, C., & Lin, Y. (2010). Internal and external marketing for exotic restaurants. *Journal of Foodservice Business Research*, 193-216.
- [40] Lin, I. &. (2010). Restaurant servicescape, service encounter, and perceived congruency on customers' emotions and satisfaction. *Journal of Hospitality Marketing & Management*, 819.
- [41] LTI. (2019, June 3). WHY INVEST AND DO BUSINESS IN INDONESIA. Retrieved March 10, 2020, from BIZLATIN HUB: <https://www.bizlatinhub.com/why-invest-and-do-business-indonesia-2019/>
- [42] Manopolou, H., Lambrinos, G., Chatzis, E., & Xanthopolous, G. (2010, September 03). Effect of temperature and modified atmosphere packaging on storage quality of fresh cut romaine lettuce. Retrieved 05 14, 2020, from *Journal of Food quality*: <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1745-4557.2010.00321.x>
- [43] Mhamdia, A., & Ghadhab, B. (2012). Value management and activity based costing model in the Tunisian restaurant. *International Journal of Contemporary Hospitality Management*, 269-288.
- [44] Mohamad, M. S. (2014). Measuring the Validity and Reliability of Research Instrument. *Procedia-Social and Behavioral Sciences*, 164-171.
- [45] Nickolas, S. (2019). Variable Cost vs. Fixed Cost: What's the Difference? Investopedia.
- [46] POSist. (2018). A Beginner's Guide to Food and Beverage Control in Restaurant. *The Restaurant Times*.
- [47] Raab, C., & Mayer, K. (2013). The application of activity-based costing in the US restaurant industry. *International Journal of Hospitality and Tourism Administration*, 25-48.

-
- [48] Raab, C., Mayer, K., Kim, Y.-S., & Shoemaker, S. (2009). Price-sensitivity measurement: a tool for menu pricing. *Journal of Hospitality & Tourism Research*, 93.
- [49] Rindskopf, J. (2020, Feb 19). Here's How Long You Have to Safely Eat 25 Unrefrigerated Foods. Retrieved May 14, 2020, from Cheapism: <https://www.cheapism.com/how-long-before-unrefrigerated-food-spoils/#slide=2>
- [50] S, S. (2020). Statistik Multivariat. PT. Elex Media Komputindo, 776-780.
- [51] Seidel, M. (2019). How to Control Cost of Food & Labor in a Restaurant Service. *Accounting & Bookkeeping*.
- [52] Siaputra, H., & Nadya Christianti, G. A. (2019). Analisa Implementasi Food Waste Management di Restoran 'X' Surabaya. *Jurnal Manajemen Perhotelan*.
- [53] Siguaw, J., & Enz, C. (2009). Best practices in food and beverage management. *Cornell Hotel and Restaurant Administration Quarterly*, 50.
- [54] Soriano, D. (2012). Customers' expectations factors in restaurants: the situation in Spain. *International Journal of Quality & Reliability Management*, 1055-67.
- [55] Syahputra, M. I. (2020, March 2). Korbeq Restaurant by Stevan Meatshop Gading Serpong. (J. Liuden, Interviewer)
- [56] Tay, C. (2017). Restaurant Operating Cost. *I ChefClub SG*, 99-112.
- [57] Trochim, P. W. (2020). Descriptive Statistic. *Research Method Knowledge Base*.
- [58] Vatur. (2020, March 2). Korbeq Restaurant Data Collecting. (J. Liuden, Interviewer)
- [59] Vatur, Syahputra, M. I., & Ahadianto. (2020, March 2). Korbeq Restaurant Data Interview. (J. Liuden, Interviewer)
- [60] Woodruff, J., & Thompson, J. (2019). The Advantage of Cost Control. *Chron*, 170-291.

The Moderating Role of Data Privacy and Protection Security on Service Quality, Brand Equity, and Tariff Towards Firm Performance

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Abstract

Indonesia had more than 200 million cyber-attacks. Due to its poor cybersecurity system, the country is subject to frequent attacks. As an illustration, in one week in January Indonesia experienced 1.35 million website attacks. The most recent major cyber-attacks in Indonesia happened during the 'WannaCry' ransomware attack in May 2017. 12 institutions in Indonesia were attacked, including plantation and manufacturing companies as well as universities. With 355 million telecom subscribers in total as of June 2019 (fourth-largest cellular market in the world) Indonesia still has extremely low awareness of the essentials of data privacy and protection security while few of the major telecom operators that offer prime data privacy and protection are a major distinguishing factor of service quality excellence. The Journal will have as main objective the evaluation of the Data Privacy and Security Protection of mobile telecommunications perceived by the clients towards its brand Equity and firm performance. The relationship and impact between data privacy and protection security as a moderating role with other 5 dependent variables were tested in different periods of telecom professionals

and enthusiasts from different regions. This study applied quantitative analysis with data received from 215 high level telecom professionals from major operators and vendors who had extensive experience and knowledge within the Telecom Industry.

Keywords: Data privacy and protection security, Service Quality, Brand Equity, Firm Performance

I. INTRODUCTION

Cellular security is a growing problem. About 94 percent of customers in mature markets and 90 percent in transition markets are worried about cellular security. Globally, 47 percent of respondents will change operators if they experience a security breach (Nokia Research 2017).

The continuous advancement of registering, interchanges, and capacity advances exhibits a test to security insurance, given the expanding ease with which individual information can be gathered, dissected, put away and shared. PC researchers have created "security by structure" systems, for example, information minimization, which help to implement the information insurance and protection shields contained in national legitimate systems and global human rights instruments. Such procedures give a format to social orders that desire to guarantee the proceeded with insurance of centre social esteems in an undeniable innovation intervened world (Brown, 2014)

In the Indonesian context, the Minister of Communication and Information will speed up the discussion of the Personal Data Protection Bill. For information, the regulation becomes a necessity in the current digital era. This rule is considered important to ensure clarity of complaint mechanisms, if there are suspected leakage and misuse of data, including recovery (www.inet.detik.com, 2019) So far, the regulations concerning protecting personal data are only regulated in Minister of Communication and Information Minister Regulation (Permenkominfo) Number 20 of 2016 concerning Protection of Personal Data in Electronic Systems. Therefore, a bill needs to be made to reinforce these regulations. Reflecting on the countries in Europe, regulations regarding digital advertising whose data are sourced from personal data of social media users, are considered stronger than existing regulations in Indonesia. Thus, the Personal Data Protection Bill is required to keep up the security of individual information of web clients.

II. LITERATURE REVIEW

Research process evaluation of client satisfaction regarding the services of mobile telecommunications. Thus, in this chapter, we will address the concept of Data Privacy and Protection Security, Brand Equity and Firm Performance.

1. Firm Performance

Execution estimation is a subject that is regularly to think about and examined however once in a while characterized. The majority of the firm are looking to improve their exhibition, contending in a ceaselessly changing condition and screen execution. Firm execution is the way toward evaluating activity, where the estimation of the procedure and measurement activity leads to firm execution. The degree of firm execution is a component of the adequacy and productivity of the activities it embraces, so firm execution estimation can be characterized (Neely and Platts, 2005).

2. Data Privacy and Protection Security

Telecommunications regulations in Indonesia will protect consumers in the telecommunications sector, namely the Minister of Communication and Information Regulation (Permenkominfo) Number 20 of 2016 concerning the Protection of Personal Data in Electronic Systems. The most suitable regulatory concept for Indonesia is a combination of regulatory concepts (Rosadi, 2018). This regulatory concept combines several approaches in regulating privacy on personal data due to the rapid growth of information technology, so that the personal information may easily be accessed, processed, compiled and distributed to others.

3. Brand Equity

Research directed by Buzdar, Janjua, and Khurshid (2016) related brand value in the telecom industry, clarify client based brand value in the five significant GSM organizations working in Pakistan. A review technique was utilized and a poll flowed among the clients of GSM, utilized elements of brand value were brand mindfulness, saw quality, brand picture, and brand steadfastness.

4. Service Quality

From the ongoing years, the predominance in the market transformed from the item to administrations, and techniques go to client base and relationship. Conveying quality helps adjusting to reliably satisfy client desires. There are significant contrasts between administration area and buyer merchandise, with qualities of administrations, impalpability, heterogeneity, indivisibility and perishability, which speak to a significant test for suppliers (Polyakova and Mirza, 2015).

5. Government Regulation and Tariff

Structure of Telecommunications Regulatory Body



Structure of World Telecommunication Regulator Body

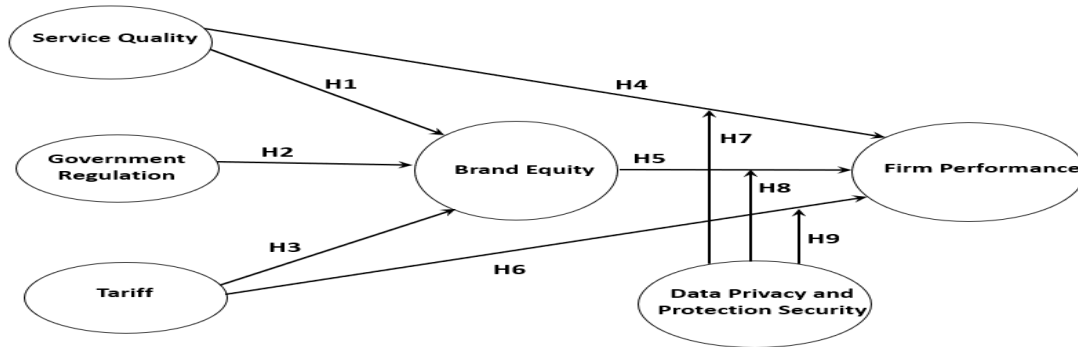
The highest position of the Telecommunications Regulatory Body in the world is ITU (the International Telecommunication Union) which in 1947 was made one of the organs of the United Nations. Indonesia joined the signing of the General Agreement on Trade in Services (GATS), so there must be a requirement for an independent telecommunications regulatory body to be established, then the Ministry of Communication and Information Technology will form a BRTI (Indonesian Telecommunications Regulatory Body). According to Haryadi (2018), there are three key instruments of telecommunications regulation, the first is the regulation of price, theoretically, it can determine certain prices that must be imposed by operators/providers, or maybe limit operators/providers to set prices in several ranges.

III. RESEARCH METHODS

The research methodology that will be used in this thesis presents the models that are used as analysis tools, the assumptions implicit in the research models, the independent and dependent variables to be used, as well as conducting analysis methodology of collecting and processing the data.

Research Framework

Data analysis in this study will use Structural Equation Model (SEM) using tools SmartPLS software version 3



The correlation between ROA and executive compensation is positive and significant at the 5% level. The independent variable leverage level is also negatively correlated with executive compensation. The coefficient correlation varies from -0.3398 (between leverage and ROA) and 0.3076 (between ROA and executive compensation), indicating no multicollinearity problem in our data analysis.

Research Framework

In research conducted there were six variables: Data Privacy and Protection Security, Service Quality, Government Regulation, Tariff, and Firm Performance. The following table is an explanation of the variables and indicators used in the study.

Variables and Indicators

Main Variable	Main Variable Definition	Indicator	Scale
Data Privacy and Protection Security	The ability to access information and services on communication devices with guaranteed information security relating to users (Cussoy, Puspita & Hariyanto, 2013; Klaesson, 2017)	Access without location and time restrictions	Interval
		Service in a short time	
		Ease of access	
		Attention to security	
		Data security on communication devices	
Government Regulation	Regulations issued by the government to develop the telecommunications industry (Haryadi, 2018; Venkatram & Zhu, 2012)	Government regulation	Interval
		Fair competition in the telecommunications sector	
		Telecommunications industry trends	

		Telecommunications operator	
		Access to telecommunications operators	
Tariff	Certain prices that must be imposed by operators, or maybe limit operators to set prices in several ranges (Haryadi, 2018; Venkatram & Zhu, 2012)	Prices are applied according to service quality	Interval
		The services provided are diverse	
		Alternative prices for various operators	
		Affordable service packages	
Brand Equity	a set of association which customer has with the brand (Lee & Leh, 2011)	Brand Awareness among competing brands	Interval
		Owner brand Association	
		Good perceived quality	
		Brand Loyalty	
Service Quality	Customer perceptions of service quality comparison from the result of the customer before service expectation with actual service customer experience (Ghotbabadi, Feiz & Baharun, 2015; Naik, Gantasala & Prabhakar, 2010)	The appearance of physical facilities	Interval
		Perform the promised service	
		Willingness to help customers	
		Improve employee knowledge	
		Attention is given to customers	
Firm Performance	Firm performance is the process of quantifying action, where measurement the process and quantification action lead	Firm market share	Interval
		Firm growth rate	
		Firm profitability	
		Firm innovativeness	

	to firm performance (Neely and Platts, 2005; Taouab and Issor, 2019)		
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IV. POPULATION AND SAMPLING METHOD

The population used in this research is mobile phone users of various ages. The inspecting method utilized in this exploration is likelihood examining. The purpose of probability sampling is to represent the characteristics of the population that will be used in the study, to estimate statistical parameters and obtain data for hypothesis testing and decision making, so that conclusions on populations can be justified. The object of research is service quality, government regulation, tariff, brand equity, and firm performance. Research subjects are the user of mobile telecommunication services, in the telecommunication industry.

V. DATA SOURCES AND COLLECTION

According to Sekaran and Bougie (2013), the example is a subset of the people in a populace. Given the above information obtained for a sample can be generalized to the entire assessment of the Quality of Mobile Telecommunications Services population. However, samples do not always reflect the structure of the population from which they were representative of the population and it may lead to biased results. To calculate the sample size was considered that the population was infinite due to its large size, for a precision of 5% and 95% confidence interval or a precision of 10% and 90% confidence interval.

VI. METHOD OF ANALYSIS

To process the data obtained through the questionnaire, calculations will be performed and different statistical techniques used, using SMART-PLS version 3.0 for validity test, reliability test, and multiple regression analysis. Structural Equation Modeling (SEM) is grouped into two approaches, namely the Covariance Based SEM (CB - SEM) approach and the Variance Based SEM or Partial Least Square (PLS). Partial Least Square is a powerful analysis method in which this method is not based on many assumptions (Latan and Ghozali, 2012).

Outer model analysis

Validity Test

Indicator	Outer Loadings	Indicator	Outer Loadings
SQ1	0,762	TR3	0,805
SQ2	0,859	TR4	0,780
SQ3	0,815	DP3	0,680
SQ4	0,717	DP4	0,727
SQ5	0,712	DP5	0,800
GR1	0,805	BE1	0,185
GR2	0,811	BE2	0,658
GR3	0,480	BE3	0,572
GR4	0,107	BE4	0,818
GR5	0,593	BE5	0,843
DP1	0,646	FF1	0,764
DP2	0,686	FF2	0,814
TR1	0,710	FF3	0,695
TR2	0,741	FF4	0,654

Discriminant Validity Test

Variable	AVE
Brand Equity	0,539
Data Privacy	0,547
Firm Performance	0,539
Government Regulation	0,473
Tariff	0,578
Service Quality	0,601

Reliability and Composite Reliability Test

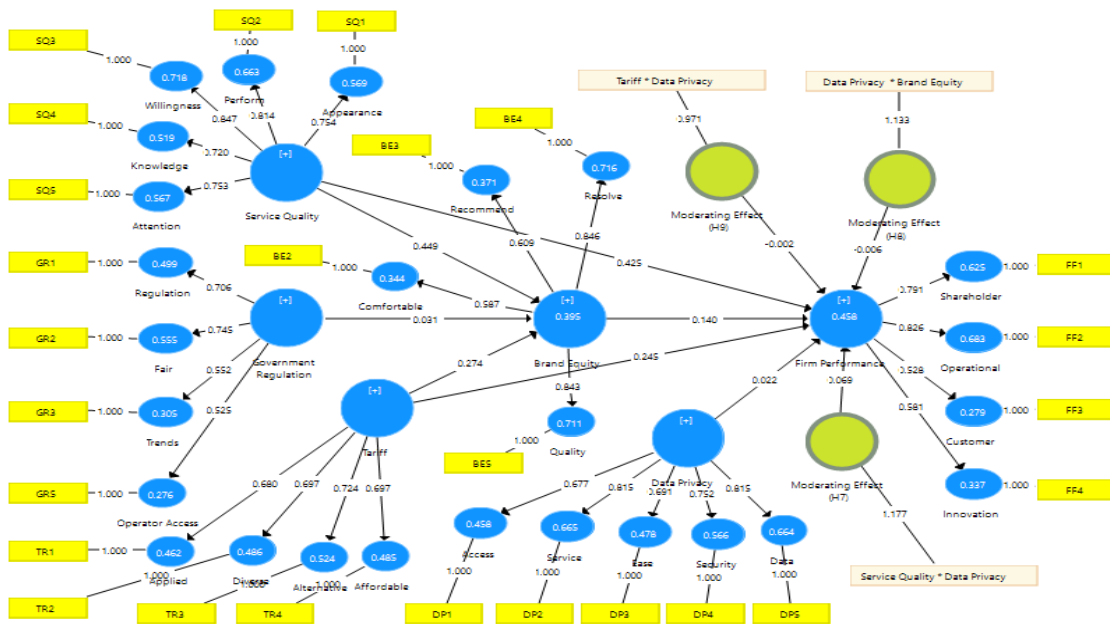
Variable	Cronbach Alpha	Composite Reliability
Brand Equity	0,706	0,820
Data Privacy	0,790	0,857
Firm Performance	0,711	0,823
Government Regulation	0,614	0,775
Tariff	0,755	0,845

Service Quality	0,832	0,882
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Based on the results of data processing on the outer model analysis, the indicators and variables used in the study are valid and reliable.

VII. INNER MODEL ANALYSIS

In the inner model analysis, the coefficient of determination (R²), predictive Relevance test (Q²) and discussion for path coefficients and significance tests are carried out in PLS-SEM.



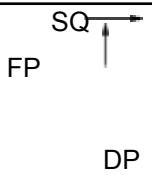
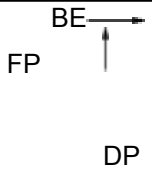
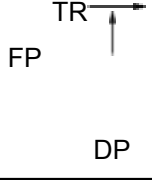
Structural Equation Modelling Analysis

Measurement results of Inner Model

Variable	Firm Performance	Service Quality	Data Privacy	Government Regulation	Brand Equity	Tariff
Communality	0,481	0,535	0,566	0,408	0,607	0,489
R – Square	0,458	0,395				
The goodness of Fit (GOF)	0,468					

Q – Square Predictive Relevance	0,672
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Path Coefficients and Significance

Hypotheses	Description	Sign	Path Coefficient	P-Value	Effect and Significance
Hypotheses 1	SQ → BE	+	0.449	0.000	Positive Significance
Hypotheses 2	GR → BE	+	0.031	0.595	Positive Not Significance
Hypotheses 3	TR → BE	+	0.245	0.000	Positive Significance
Hypotheses 4	SQ → FP	+	0.425	0.000	Positive Significance
Hypotheses 5	BE → FP	+	0.140	0.078	Positive Significance
Hypotheses 6	TR → FP	+	0.245	0.000	Positive Significance
Hypotheses 7		+	0.069	0.335	Positive Significance
Hypotheses 8		-	0,006	0.951	Negative, Not Significance
Hypotheses 9		+	0,042	0.979	Positive, Significance

VIII. CONCLUSION

Based on the data and results given in the previous chapter, the following are the conclusion and recommendation obtained from this study.

Service Quality has a positive and significant effect on Brand Equity, it explains customers who feel good service will tell others so that the information can spread more widely. The dissemination of good information about good service will cause increased customer retention to make the company's brand equity improved.

Government Regulation has a negative and not significant effect on Brand Equity, telecommunications regulation is considered as a barrier to the proper use of resources, development, capabilities, and regulatory structures that have an impact on the economy and security. the regulator changes affected the telecommunications industry, the company face additional expenditure on implementing new regulation

The tariff has a positive and significant effect on Brand Equity, price awareness has been a theme in pricing and the ability of buyers to remember prices. The application of tariffs that are in line with expectations and telecommunications services perceived by customers can increase brand equity owned by the company.

Service Quality has a positive and significant effect on Firm Performance, it explains the importance of improving services provided to customers, satisfied customers will continue to use the services provided by the company, the more telecommunications service users become regular customers, the firm performance becomes better.

Brand Equity has a positive and significant effect on Firm Performance. Telecommunications companies essentially need to have a good brand to support company performance. A good brand must be proven with good service because the end-user will compare the services provided by the company with the services of other companies. The increase in brand equity owned by the company will ultimately have an impact on increasing the company's performance.

The tariff has a positive and significant effect on Firm Performance, increased tariffs can provide better income for the company, with an increase in revenue the company can finance daily operations and invest in newer telecommunications technologies so that the company has competitiveness compared to competing companies.

Data Privacy and Protection Security as a moderating variable to the effect of the Service Quality on Firm Performance has a positive and significant effect. Currently, the end-users of telecommunications services are very concerned with the privacy and security of services provided by companies. Data privacy and protection security provided by the

company will strengthen the service quality felt by the customer so that it can have a positive impact on company performance.

Data Privacy and Protection Security as a moderating variable on the influence of Brand Equity on Firm Performance has a negative and not significant effect. Application of Data Privacy and Protection Security can add to the requirements and procedures of a service experienced by consumers, such as having to re-register and upgrade the sim card used by consumers, although the purpose is good but if it makes consumers difficult, it can have a negative impact on the brand owned by the company, so there needs to be a good handling so that the application of Data Privacy and Protection Security makes users still comfortable using telecommunications services.

Data Privacy and Protection Security as a moderating variable on the effect of the Tariff on the Firm Performance has a positive and significant effect. Application of data privacy and protection security by the company will cause an increase in costs incurred by the company so that it will have an impact on the rates given by the company to end-users. Although increasing tariffs can maintain company revenues, companies still need to pay attention to reasonable tariffs so that company can still be competitive in the market.

VIII. CONCLUSION

Suggestions that can be given relating to this journal is, it is necessary to add variables related to telecommunications company operations, for data privacy and protection security. The Personal data protection bill, 2019 (Draft) introduces an obligation on the data fiduciaries to conduct a Data Protection Impact Assessment (DPIA) in order to reduce any harm or mitigate the risk for the data principals. Further research can be applied to different industries, for example, the Fintech or Financial Technology industry.

REFERENCES

- [1] Alhaddad, A. (2014). Does price awareness matter to brand equity. *European Journal of Economics, Finance and Administrative Sciences*, 65, 21-27.

-
- [2] Almosawi, M. M. (2012). Customer satisfaction in the mobile telecom industry in Bahrain: Antecedents and consequences. *International Journal of Marketing Studies*, 4(6), 139.
- [3] Buzdar, M. F., Janjua, S. Y., & Khurshid, M. A. (2016). Customer-based brand equity and firms' performance in the telecom industry. *International Journal of Services and Operations Management*, 25(3), 334-346.
- [4] Brown, I., (2014) Keeping Our Secrets? Designing Internet Technologies for the Public Good, *European Human Rights Law Review*. Pp. 369 – 377.
- [5] Ghozali, I., & Latan, H. (2012). *Partial Least Square: Konsep, Teknik dan Aplikasi Smart PLS 2.0 M3*. Semarang: Badan Penerbit Universitas Diponegoro.
- [6] Gijrath, S. J. (2017). Telecommunications networks: Towards smarter regulation and contracts?. *Competition and Regulation in Network Industries*, 18(3-4), 175-197.
- [7] Cussoy, C., Puspita, I. P., & Hariyanto, A. (2013). Analisis Pengaruh Accessibility dan Security terhadap Customer Satisfaction dan Customer Loyalty Nasabah KlikBCA. *Jurnal Hospitality Dan Manajemen Jasa*, 1(2), 66-83.
- [8] Haryadi, S. (2018). Applied Statistics for Assessment of the Regulation and Policy: case study in Telecommunication Industry. DOI10, 13140.
- [9] Jurisic, B., & Azevedo, A. (2011). Building customer–brand relationships in the mobile communications market: The role of brand tribalism and brand reputation. *Journal of Brand Management*, 18(4-5), 349-366.
- [10] Lee, G.C. & Leh, F.C.Y., (2011). Dimensions of Customer - Based Brand Equity: A Study on Malaysian Brands, *Journal of Marketing Research and Case Studies*, Vol. 201, Article ID 821981, 10 pages.
- [11] Naik, C. K., Gantasala, S. B., & Prabhakar, G. V. (2010). Service quality (SERVQUAL) and its effect on customer satisfaction in retailing. *European journal of social sciences*, 16(2), 231-243.
- [12] Neely, A., Gregory, M., & Platts, K. (2005). Performance measurement system design: A literature review and research agenda. *International journal of operations & production management*, 25(12), 1228-1263.
- [13] Polyakova, O., & Mirza, M. (2015). Perceived service quality models: Are they still relevant?. *The Marketing Review*, 15(1), 59-82.
- [14] Rosadi, S. D. (2018). Protecting Privacy on Personal Data in Digital Economic Era: Legal Framework in Indonesia. *Brawijaya Law Journal*, 5(1), 143-157.
- [15] Sekaran, U. Bougie. (2013), *Research Methods for Business*. Sixth Edition.
- [16] Taouab, O., & Issor, Z. (2019). Firm Performance: Definition and Measurement Models. *European Scientific Journal*, 15(1), 93-106.

-
- [18] Venkatram, R., & Zhu, X. (2012). An analysis of factors influencing the telecommunication industry growth: A case study of China and India.

Value Chain of Gastronomic Tourism in Ubud, Bali

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Abstract

Abstract. Gastronomic tourism as one form of sustainable tourism has not yet developed in Indonesia. Gastronomic tourism is a bridge between the past and the future to preserve food culture. In 2019, Ubud Bali is chosen to become a world-class gastronomic destination complied with UNWTO standard. The research aims to identify the elements of gastronomic tourism and gastronomic value chains as tourist attractions in Ubud, Bali. Focused discussion, interviews and observations are used to compile data and information then, descriptively analyzed. Research results show that gastronomic elements that can be used as tourist attractions in Ubud include food tours, visits to food producers, home cooking activities and home dining experience, cooking classes in restaurants, and events in traditional cuisine. These elements are interconnected in the value chain of gastronomic tourism, from upstream to downstream, from planting food to promotion and commercialization. The activities of gastronomy tourism in Ubud involves many forms of tourism, such as: agricultural tourism, organic tourism, educational tourism, historical tourism, and food tourism (cooking class).

Keywords: value chain, gastronomic tourism, Ubud Gianyar.

I. INTRODUCTION

Tourism in Indonesia has become the primary and important sector that contribute direct, indirect and induced impact to other sectors involved. One of the key successes of tourism in a destination is the capability of destination management to create authentic tourism products. Lately gastronomy tourism chosen as one of the main tourism products is product enriching culinary tourism and it is estimated that 41.69 percent of gross domestic product (GDP) for creative economics contributed from the culinary sector. In creating further awareness for tourists visiting Indonesia for gastronomy motives Ministry of Tourism has announced five national foods which are: rendang, sate, soto, gado-gado and nasi goreng Those menus are used as a tool for gastronomy diplomacy and the menus have been served at . Indonesia restaurants overseas in 47 cities in 21 countries. Indonesia has a lot of culinary destinations which will become gastronomy destinations. Among those is Ubud, a small town in Gianyar Region, Bali, which is situated approximately 15 km from the sea, and 40 km from a mountain. Since the 1930, Ubud has been famous for its cultural centric, where many international artists came to Ubud and interact with local artisans. The popularity of Ubud amongst international artists, parallel with its enchanting natural beauty and richness of history, has attracted and stimulated tourism development in Ubud. Tourism plays an important role economically due to since the year 2004, the growth of tourists approximately 12 percent annually and has achieved 3.8 million tourists, consists of 27 percent are domestic and 73 percent international tourists. The countries of origin the later are from Australia, France, Germany, Japan, and China (Gianyar, 2019). The Number of accommodations has increased to 395 rooms from stars to homestay accommodations. Undoubtedly the growth of F&B establishment is likewise and has reached to the incremental of 439 restaurants from traditional types to modern/contemporary. Tourism Regional Office of Gianyar states that Ubud competitive advantage is its nature and culture, but also is very well developed due to the support of tourism facilities availability. Ubud to international tourists is well known for its craft center, wellness center, its biodiversity, as well as its harmony collaboration and strong commitment amongst stakeholders in the Ubud area. For instance, the regional government has issued a policy of prohibiting the use of plastic shopping bags (regional regulation issuance), reusable waste processing, and organic product utilization. At present, the proceeding of Ubud to become a world class gastronomy destination with UNWTO standards is still ongoing Gastronomy is a combination of culinary, culture, and tourism blend into one product, and also act . as a vehicle for tourism development sustainability in a tourism destination (Mohanty et al., 2011) Gastronomy can be viewed/interpreted as food contemplation activities, beyond cooking and preparation and also to associate food and drink

in a prime manner. Gastronomy is a creator of cultural identity at the same time as the key of tourists' experience. (Antón et al., 2019). Gastronomy is a bridge from past to the future to protect cultural identity and transform it to the future generations-Polat, 2020). Food can be categorized into four components: 1) local culture, 2) (Polat & Aktaşpromotional tools, 3) the development of local products to boost local economy, 4) food is influenced by eating patterns from the locals and tourists (Hall, 2006). Based on those backgrounds stated above, this article is to lift the discussion of gastronomy as the new tourism attraction in Ubud. The discussion will be shaped into elements of gastronomy activities which can be linked to gastronomy value chain. The essence of gastronomy is from the culture and tradition of a specific area, such as Ubud. Culinary as part gastronomy is associated in transferring knowledge and information in relations with culture,tradition, and local communityidentity. Therefore, the role of gastronomy tourism is essential for tourism development.Hence, the [11]problem formulation in this research is what are gastronomy elements that can be develop in Ubud and how gastronomy value chain can be built as a tourist attraction?

II. LITERATURE REVIEW

A. Gastronomy Tourism Concept

Making a trip or journey has always been an exciting activity to relieve stress as well as gaining new experience, which is impacted economically, socially, culturally and environmentally. On the other hand, tourists as the main actor have well knowledge about tourism, select destinations based on their needs and wants, as well as financial allocation. When tourists have more money to spend, more spare time, likely they would have many alternatives to activities they want to take. Nowadays, many tourists demand for a quality holiday, new experience and gastronomy tourism may fulfill those demands (Gheorghe et al., 2014). Gastronomy trip is aimed for those who plan/design their trip to enjoy local food and also determine some activities related to food accordingly. Just recently, gastronomic is introduced in Indonesia and has become one of the holiday alternatives. When gastronomy is being related to tourism in a more detailed manner, then it will contribute to a bigger influence tourism stakeholders.on[1]Gastronomy Tourism is a phenomenon which can stimulate visits.Its activities can attract food experience, [1]quality, variety, and uniqueness of local [1]products.For destination, it is also beneficial, where 1/3 of tourist's spending pattern goes to food and drinks necessity. Gastronomy tourism can be defined as an activity taken for holiday and recreation, including primarily visiting local food producers (farmers, fisheries, etc.), food festivals, cooking

class, taste local food and all activities related to food(Hall, 2005). In other words, what difference in gastronomy is that it offers an experience and a process of cultural education. Culinary is not merely a product, but an attribute of a tourism product. In Indonesia, gastronomy tourism considers a novelty and an essential element to develop an attraction and tourism development, by merging/blending culture, local products and a lifestyle into experience. This kind of tourism product offers an opportunity to enhance the image of Indonesia through gastronomy diplomacy. The terms of Gastronomy Triangle of Indonesia can be elaborate in three aspects, which are

1. Food as the center of gastronomy tourism. Indonesian food is influenced by a rich culture and history and the food presentation refers to rituals, as well as using local spice richness.

2. Culture: a distinct culture can be very attractive and can be addressed through storytelling to preserve the legacy of a culture for future generations. Rituals and ceremonies are melted in ways of cooking, especially when producing an authentic dish.

3. History is one of the important aspects in the transferring process of culinary. Story behind the food is essential which consists of an event or a situation, or a cultural assimilation (Kingdoms of Sriwijaya, Majapahit, Mataram, and many others) or spice route.



Figure 1. Indonesian Gastronomy Triangle

Source: AGI (2018)

Gastronomy In a certain area is deeply identified by its environment (geography, seasons, topography) and also culture (history, religions/beliefs, ethnicity, traditions, rituals, and many others).Destination Management [7]Organization Or so called DMO faces a challenge to decide gastronomy identity to be included in the development of gastronomy

tourism, therefore the attribute would be diverse in some areas (Chang & Mak, 2018). Gastronomy tourism is a trip to a destination which comprises the richness of culinary resources, recreational experience, as well as leisure activities, for example by visiting farmers, breeders, fishermen, food festivals, cooking classes, enjoying culinary experience (Sandybayev, 2016).

B. Destination Value Chain

Value chain activities include designing, producing, promoting, delivering, and supporting local products in a destination. Tourism value chain commences from the needs and wants to travel. Tourists have alternatives in choosing and buying their trips through tour operators, or self managed. Whatever the arrangements are, either individually or group tour via tour operator, the tourism value chain will be significantly differ, in terms of carrying capacity, tourism business and also flexibility in decision making process (Yilmaz & Bititci, 2006). Tourism value chain can be viewed from two aspects: destination logic and value chain logic. The prior destination is analyzed by the composition or sequence of service so that tourists will gain experience from their trips (Hjalager et al., 2016). Destinations with many tourism product variations are likely to open access to tourists from pre trips, arrival, during trip, departure, and post trips. In this case, the value chain involves numerous elements of tourism which can be off beneficials in every trip stages. In every stage, tourists have specific needs, and these needs can be provided by the tourist industry, either at the origin, transit points or destination area. Value chain logic, which is generally addressed by Porter as a tool to buy a company to recognize its identity to edcreate value to its customers, is even bigger than before. The activities are divided into two, primary and supporting activities to produce/to achieve values (Kotler, 2016). Primary activities include 1) inbound logistics to cater raw materials into process, 2) operate and convert raw materials into products, 3) outbound logistics of delivering products, 4) marketing and sales, 5) service. Supporting activities include 1) procurement, 2) technology development, 3) human resources, 4) Infrastructure such as operating cost, finance, accounting, legal, and good governance. Destination tourism value chain is based on the marketing discipline. Destination as a thorough service system, needs to observe behavior based on their needs and wants. Destination and company are different in tourist's management of the value chain. Involvement from the industry, other stakeholders, government policies, tourism authority, are greater and significant in creating destination tourism value chain. Unlike goods, tourism products cannot be transported from one place to another as mentioned by Porter. Tourists need to come physically to a destination, buy products and services, and enjoy the attractions, therefore, it is undoubtedly needing a bridge between tourists and producers. Tour operators play an important role in

creating this value chain. Tourism products cannot be evaluated before they are consumed, hence, producer behavior will create risk to tourists when producers are unable to give service or products as promised. Tourism has a strong ties with the public/community, as it will generate prosperity to the local people at the destination. (Song et al., 2013)

III. METHODOLOGY

This research is part of the process of making Ubud as a world class gastronomy destination based on UNWTO standards and it is also under priority program from the Ministry of Tourism RI in 2018. To answer problem formulation/identification, data collections is performed through Focus Group Discussions in Ubud which was attended by 33 key tourism players from hotels, restaurants, tour operators, associations, media, government, chefs, food producers, academicians, attractions, traditional markets operators et cetera. They shared views, knowledge and experiences regarding culinary and other aspects attached to culinary as an attraction. Topics were discussed including gastronomy as a culture/historical heritage and gastronomy tourism value chains. Continuing to the discussion, interviews were conducted with a list of structured questionnaires, by asking such as current tourism issues, innovations, community empowerment, and sustainability issues. The objectives of the interviews were to explore insight information about the involvement amongst parties to form a gastronomy value chain as an attraction. Results collections were processed by Excel and analyzed by using qualitative description based on answers from respondents/participants using Likert scale range from 10 (mostly agree) to 1 (mostly disagree). This descriptive analysis is used to examine the results from cus group discussion and interviews concerning gastronomy of elements as an attraction as well as value chain.

IV. FINDINGS AND DISCUSSIONS

A. Gastronomy Tourism Elements in Ubud

Gastronomy tourism as a new phenomenon has emerged as a new form of tourist product. Evidence shows that local food is one of the essential factors in a trip. Indicators of gastronomy tourism contain such as visits to local produce, gastronomy festivals, traditional markets, cooking class, local eateries, or tasty/food tour to name a few (Hall, 2005). The key elements for gastronomy tourism are heritage, gastronomy products, hospitality sectors, trades, events, activities, education and training gastronomy institutions (UNWTO, 2019) To

reveal . gastronomy tourism elements in Ubud, those indicators are adopted to become: culture heritage, food producers, events and activities in gastronomy. Cultural heritage is influenced by eagerness to visit a destination. A divergent/distinct culture heritage, uniqueness is viewed as a valued element that can enrich different tourist experiences accordingly and hugely desire to attract repeaters as well as a recommendation such experience (Antón et al., 2019). Interview results from Raja Ubud, the essence of Hindu's concept Tri Hita Karana has been the main foundation for Balinese in their daily life, as well as to introduce and develop gastronomy tourism. Tri Hita Karana represents three basic balances of harmony in life, God, Environment and Human. The Tri Hita Karana concept is strongly applied and adapted in every Balinese dish. Food offering to Gods, for health, for environment, and food for togetherness. Originally the term "Ubud" came from the word "Ubad" which means medicine. In the area of Campuhan, Ubud, can be found a variety of herbal medicines to be used as a traditional treatment. And now, the tradition continues, by using herbal plantations as a spice ingredient in every Balinese meal. Culinary culture heritage is introduced commercially through food tours. Findings from tour operators, it stated that gastronomy tourism value chain has been introduced commercially through food tours such as a visit to local producers (farmers, fishermen), traditional markets, food production, local restaurants, and street food hawkers. Trips to traditional markets is to get to know variants of spices, local ingredients and the way of bargaining. Taking a cooking class to experience the local way of cooking a Balinese dishes, including a visit to local farmers and gardens. Tourists are accompanied by a professional English-speaking tour guide, however, the knowledge and story telling about gastronomy is still lacking, despite, it is an important part in addressing gastronomy storytelling to tourists.

Visiting local producers can be enjoyable due to tourists not only tasting culinary delight but also appreciating nature in the surrounding as well. Ubud area offers sea, mountain, rice terrace landscape and plantation. From the discussions, it is said that rice is one of sacred ingredients because in every offering to Gods, rice is a must. It is unfortunate that many local producers have not organized trips to their business premises and have not met the minimum standard requirements to attract tourists to come. However, the local producers, aware of the existence of gastronomy tourism can be useful for their future business; therefore, they will start to design a small gastronomy tour with attractive packages. Potential local products that can be raised are rice, vegetables, spice, herbal, coffee, tea, and cocoa. Cultural activities that are interrelated with culinary and gastronomy are being introduced consequently, such as home cooking and home dining experience which can be transformed to learn about the authenticity of the traditional dishes. This authenticity or originality plays an optimum role in gastronomy tourism activities and becomes a domain

attribute for tourist's perception and motivation to visit a destination. (Ozdemir & Seyitoglu, 2017). Not only cooking class (home cooking) is performed in local houses, but also hotels, restaurants (highend, haute cuisine). For contemporary tourists, they are more appreciative and eager to experience "living as locals do", their culture, the interactions, communications, way of life, et cetera. Based on the findings, there are some obstacles, the hygiene issue. From the discussion, it is mentioned that traditional dishes and award-winning restaurants are the most preferred tourist choices. Restaurants can be even more popular by using local/spice ingredients. Ubud has 32 cooking class that can be offered to tourist as part of gastronomic experience. Also, there are [1]some culinary events as a media promotion innovation to introduce Ubud to the world as a gastronomy destination. International culinary events are attended by participants from all over the world, such as Australia.[1][1]Thematic culinary events such as spiritual culinary festivals, vegan event, traditional culinary bazaar, to name a few. From the interview results, respondents elaborate that events are a strong communication tools, however, some issues need to be improved, such as coordination amongst parties.[1]From the above discussion, it can be said that gastronomy tourism activities that can be executed in Ubud are: food tour, visit to local producers, home cooking, cooking class at hotels or restaurants, home dining, and international gastronomy events. Whilst results from interviews and focus group discussion, that support from local producers are great. They optimise gastronomy tourism to be executed in Ubud, it can bring prosperity, sustainability and incremental quality of life for the community. The price of gastronomy tourism is considered high, and tour operators can gain a profitable margin.

B. Gastronomy Value Chain as an attraction

Tourism encompasses many actors, and these parties need to compromise on creating products, services, activities as well as experiences for tourists. Destination always supported by many suppliers. The quality of interactions from these actors not only affected from the tourism perspective, but it will be reflected to other supporting firms. This shows that tourism provides a multiplier effect either from direct or indirect. gastronomy tourism can be viewed as a chain process from upstream (from planting) to downstream (promotion and commercialization). From every phase, there are some activities can be done, such as visit agriculture, education tourism, organic tourism, history tourism, until home cooking, all of these involving many actors from food production process until food consumption. The downstream process such as providing raw materials for food, and the tourism activity taken called agrotourism. Tourists can plant seeds in the rice field, plant a tree, catch fish. All of these activities undoubtedly will contribute a better-quality life for the local people in the area of

agriculture, fishermen, and many others. Tourist involvement can also be done during the reaping, picking and harvesting stage. The raw materials will be used as a basic ingredient for processing traditional food as the authenticity of food of Ubud. In every stage, the tour guide will tell the story behind the food, the historical background in the form of storytelling. This whole stage will complete the tourist experience. Another step/stage of the value chain is trading, where tourists can be taken to markets to shop as well as interact with sellers through the bargaining process. Then the ingredients bought will be used during home cooking class either at house or hotel/restaurant. The session of someone's cooking class itself, brings direct impact to the local community from exchanging culture, knowledge, language, values, and way of life. Tourists gain an authentic experience from local people. Many tourists are willing to take part to experience the way the locals live.



Figure 2. Value Chain of Gastronomy Tourism in Ubud
Source: Data Compilation (2019)

Based on focus group discussion, the role of all parties in creating gastronomy tourism value chain is important. It has to be well planned, coordinated, executed and managed in order to achieve a sustainable gastronomy destination environment. It is needed for the government to issue a policy to strengthen the position of gastronomy destinations. As a starting point is to build a strong collaboration between all parties involved, in this case the Pentahelix. The complexity of gastronomy tourism value chain demand contribution and consistency, and commitment. Below is the table that show coordinators and contributors role:

Stages in Value Chain	Actors
Provision and distribution of raw materials	1. Local Produce (farmer, breeder, etc.) 2. Culture Heritage Guardians 3. Seller in traditional market
Authentic and traditional cooking process	1. Hotelier and homestay owner 2. Restaurateur and food stall owner 3. Home cook and chef
Provision of travel services	1. Tour operators 2. Hotelier and homestay owner 3. Restaurateur and food stall owner 4. Tourist information center officers
Management of event and gastronomy tourism activities	1. Cooking class organizers 2. Food related festival (event) organizers 3. Food guides 4. Attraction operators
Destination management	1. Nation-wide by Ministry of Tourism

Stages in Value Chain	Actors
	2. Regional level by Tourism and Cultural Officials 3. Non-government by Bali Tourism Promotion Board 4. Academician/

Source: Data Compilation (2019)

Trip process gastronomy tourism is considered as a process of value chain in gastronomy from pre-trip until on post-trip. In the case of Ubud, many sectors involved in designing this value chain, such as tourism sector, education, agriculture, transportation, trade, small medium enterprise (SME), creative economy, health

V. CONCLUSION

There is an opportunity for Ubud to become a world class gastronomy destination with a standard from UNWTO, knowing Ubud potentiality, beautiful landscape, historical, immense heritage, beautiful rice terrace, and many others. Ubud food illustrates not only delicacies, but also heritage authenticity, natural resources perfection, quality local ingredients, traditions, and so forth. Culinary process is based on the Tri Hita Karana concept, which can strengthen the value of the food. Penta Helix needs to take charge to create a gastronomy tourism value chain from upstream to downstream. This process is the unity of all parties that can be

implemented through networking and collaboration between public and private sectors. Study about gastronomy tourism is still a novel and new phenomenon to broaden the horizon comprehensively as a new form of tourism. Culinary tourism is the pioneer, and this can be explored more deeply as well as benefits to all actors who are involved in gastronomy tourism. Local government and DMO can utilize research findings to take a role in developing gastronomy tourism. This research has a limitation in terms of time and data source, especially when collecting data and collection information which occur during structured discussion and interviews to all actors in gastronomy tourism. Arguments from the perspective are needed to be explored to complete this tourists research. Tourist segmentation and tourist characteristics can be explored for further research.

REFERENCES

- [1] AGI. (2018). Jakarta: AGI. Segitiga Gastronomi Indonesia.
- [2] Almaz SANDYBAYEV. (2016). Gastronomic Tourism as a Destination Attraction in Kazakhstan. *International Journal of Case Studies*, 5(2016–07), 01–07. <http://www.casestudiesjournal.com/>
- [3] Antón, C., Camarero, C., Laguna, M., & Buhalis, D. (2019). Impacts of authenticity, degree of adaptation and cultural contrast on travellers memorable gastronomy experiences. *Journal of Hospitality Marketing and Management*, 28(7), 743–764. <https://doi.org/10.1080/19368623.2019.1564106>
- [4] Chang, R. C. Y., & Mak, A. H. N. (2018). Understanding gastronomic image from tourists' perspective: A repertory grid approach. (March), 89100. <https://doi.org/10.1016/j.tourman.2018.03.004> *Tourism Management*, 68–
- [5] Gheorghe, G., Tudorache, P., & Nistoreanu, P. (2014). Gastronomic Tourism, a New Trend for Contemporary Tourism? (1), 12 *Cactus Tourism Journal*, 9–21.
- [6] Gianyar, D.P. (2019). Gianyar: Dinas Pariwisata dan Kebudayaan Data Pariwisata Kabupaten Gianyar Bali. Kabupaten Gianyar.
- [7] Hall, C. (2005). Gastronomic tourism Comparing food and wine tourism experiences. In . Elsevier Ltd. *Niche Tourism* <https://doi.org/10.1016/b978-0-7506-6133-1.50014-7>
- [8] Hall, C. (2006). Gastronomy, food and wine tourism. In . Elsevier Ltd. *Tourism Business Frontiers* <https://doi.org/10.1016/b978-0-7506-6377-9.50023-7>
- [9] Hjalager, A. M., Tervo-Kankare, K., & Tuohino, A. (2016). Tourism value chains revisited and applied to rural well-being tourism. (4), 379395. *Tourism Planning and Development*, 13– <https://doi.org/10.1080/21568316.2015.1133449>

-
- [10]Kemenpar. (2019).Jakarta:Tim PP Laporan Kegiatan Tim Percepatan Pengembangan Wisata Kuliner dan Belanja.[0][0]Wiskulja - Kementerian Pariwisata RI.
- [11]Mohanty, P. P., Rout, H. B., & Sadual, S. K. (2011).Food , Culture and Tourism:A Gastronomy Trilogy Enhancing [0][0]Destination Marketing , case study of Odisha , India. 1530. –
- [12]Özdemir, B., & Seyitoğlu, F. (2017).A conceptual studyof gastronomical quests of tourists:Authenticity or safety[0][0]and comfort?7. <https://doi.org/10.1016/j.tmp.2017.03.010> Tourism Management Perspectives, , 123–[0]
- [13]Polat, -Polat, S. (2020).Transformation of Local Culinary through Gastronomy Tourism.S., & AktaşSosyoekonomi, [0][0]28(43), 243256. <https://doi.org/10.17233/sosyoekonomi.2020.01.14>–
- [14]Song, H., Liu, J., &Chen, G. (2013).Tourism Value ChainGovernance:Review and Prospects.Journal of Travel [0][0] Research, 52(1), 1528.<https://doi.org/10.1177/0047287512457264>–UNWTO. (2019).In Guidelines for the Development of Gastronomy Tourism.[0]<https://doi.org/10.18111/9789284420957>
- [15]Yilmaz, Y., & Bititci, U. S. (2006).Performance measurement in tourism:A value chain model.International Journal [0][0][0]of Contemporary Hospitality Management, 18(4), 341349. <https://doi.org/10.1108/09596110610665348>

The Automation, Management Control System and Firm Performance – a Conceptual Framework

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Abstract

Technology evolves therefore, the organizations must keep pace with technological advancements to remain competitive and efficient by automating the system. By implementation of an automation system, work will be effectively and efficiently, reduce cost-effectively and improve the control system. Thus, automation is a formal control that provides rules and standardizations that should be complied with. Implementation of automation would reduce human participation, standardize labour and regulated behaviour in a predictable/programmatic environment. However, it does not necessarily work effectively in a dynamic and flexible environment especially in the manufacturing industry. Drawing on analysis in the field of human-machine interactions in the dynamic environment, management control systems (MCS) provide a nuanced balance between control of standardization and control of flexibility and lead to firm performance. Contingency theory confirms that the function and role of MCS vary according to the context within which firms operate including technology automation. Quantitative methods are used in the study, the data will be collected through the questionnaire. measurement of variables of the study develops from the literature. Unit analysis of the study is the manufacturing industry. The manager of the firm is the respondent of the study. Pre-test will be conducted to ensure the clarity of the questions, minimize error and increase the validity before actual questionnaires are distributed.

Keywords: Management control system, Automation, Firm Performance.

I. INTRODUCTION

Studying advanced technology in the business practices in management accounting has existed over the years. The technology is always updated therefore the organizations should align their business with advanced technology in order to survive in the business market. One of the advanced technologies is automation. Automation provides a work system effectively and efficiently, reduces the cost and improves the control system and leads to performance. Implementing automation would reduce human participation, standardizing labor and/or regulating behavior in predictable/programmable environments. However, it does not necessarily work effectively in the dynamic and flexible environment. Additionally, high uncertainty, contingencies and breakdown of the system are the names of few turbulences that impact firm performance [1], [2]. Management accounting defines automation as an antecedent to control problem avoidance and it prevents the problems occurring as it provides the standardization of the information architecture and does act to shape organizational priorities and procedure [1], [3]. It is known as formative or coercive control [1]. In addition, it minimizes constraints, maintains stability and performance [4]. Without coercive control of the automation, the decisions could be undirected and the performance might be poorly controlled. Meanwhile, facing a dynamic business environment and uncertainty needs flexible ways to react and counter it. It requires the certain behaviors to react that matters and the automation itself does not have such capability, unless the operators who have been authorized by the managers make the automation flexible. In addition to this, the automation should work alongside labor, supporting humans to achieve better firm performance [3].

Manufacture operations are the most complex pieces of any organization. Consequently, they have impact on virtually every other function in the enterprise [5]. In addition, the organization design and implements the system to control all the operations in all circumstances therefore, maintain product quality, prevent delaying product distribution and increase organization's profits. Updating and upgrading the technology are the way manufacturing is conducted to minimize the constraints and one of that is by automating the system. The automation is a formal control that provides rules and standardization that should be compliance without room for discussion. It is hard to handle the contingency and face dynamic business operations such as, changing products development and project scopes. It needs flexibility as an alternative way to face dynamic business operations, therefore the quality of product improves and leads to financial performance.[6]. Management control systems provide nuance balance between both coercive and flexible in that environment due to being able to describe the situations in which controls are used simultaneously [1], [3], [7]. In addition, it raises general questions about how the management control system i.e.,

coercive and enabling implementation with the automation system that leads firm performance. Following this, two specific research questions arise; (1) does management control the system i.e., enabling and coercive implementation with the automation that leads to firm performance? (2) to what degree the automation could be controlled by the user that leads firm performance? Based on these research question, the study aims to investigate the relationship management control system i.e., coercive control and enabling control in the manufacturing company, specific objectives are: (1) To investigate management control systems by using enabling and coercive with the automation in the manufacturing company. (2) To determine whether enabling control and coercive control mediates the relationship between the automation and firm performance. The study contributes to the field of accounting by means of its focus implementation of a management control system with automation in the manufacturing industry. Limited empirical studies that have attempted to test the relationship between the management control system proposed by Adler and Borys (1996) with the automation have also demonstrated the complex nature of this relationship is motivated this study. In addition, the study develops the instruments to measure the management control system i.e., coercive and enabling with the automation.

2 LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

Study management control system that operates in the organization has existed over the years. It departs from using the strategies to allocate and exploit the firm's resources to achieve organization objectives. In order to ensure company strategies run on the track, it needs the system that could support and control it. Management control systems are the element that enable organizations to track how they are performing[8]. This in turn is seen as part of the feedback cycle that enables particular performance outcomes. However, lack of clarity, wide variation and inconsistencies in how MCS have been conceptualized has created a number of problems in MCS research in regards to the interpretation of research results and the design of MCS [9]. For example, technology implementation that fits with current business environments. It is required variety of control systems should be applied accordingly. Technology and control involve human and machine interaction. technology works based on users' command while design and decision of control and monitor are relied on by the management. However, to what degree human participation and control on the technology still remains unexplored especially in the manufacturing industry. The Manufacturing industry uses advanced technology due to change manufacturing strategies and emphasizes market conditions such as product assortment, quality and delivery performance [10], in addition, the production becomes more flexible. Transformations into a flexible production environment are

generally expected to have implications for management control systems especially human-machine interaction. Adler and Borys (1996) proposed the implementation of MCS framework that could structure the problem simultaneously, especially the implementation of automation systems in the organization as it is a contingent factor to achieve firm performance. Adler and Borys (1996) argue that bureaucratic structures can take both a coercive and an enabling form [11]. they developed two type bureaucratic structure in analogy to deskilling and usability approaches to technology design [7], [12].

Under coercive form of MCS, management attempts to force employee effort and compliance by providing standardized procedures to regulate their behaviour, therefore, term of coercive to force instead support compliance [7]. It is in line with the character of the automation technology which includes rules, policy and regulation set up by the system and lets the users comply with it. The coercive control system sees humans as the source of problems to be eliminated in order to improve organizational performance [3], [12]. Moreover, the automation reduces the likelihood of control problems arising in daily operations (due to lack of direction or lack of motivation). In addition, it would eliminate the errors and improve the quality of the product. Thus, the first hypotheses are:

H1a: The coercive of MCS has relationship with Deskilling of automation and firm performance

H1b: The coercive of MCS has not relationship with Usability of automation and firm performance

Enabling form of MCS on the other hand, is type formalization that is encouraged by employees as they are seen to help facilitate task performance and innovation, and enable (support) employees to deal more effectively with contingencies [3]. It is related to usability rationale design that that automation can be designed with a usability and upgrading rationale in order to enhance user capabilities and to leverage their skills and intelligence. The user is a source of skill and intelligence to be supported, and equipment is seen as inherently limited; the design goal is therefore to ensure the operator can intervene effectively to rectify problems [3]. Thus, the second hypotheses are:

H2a: The enabling of MCS has no relationship with Deskilling of automation and firm performance

H2b: The enabling of MCS has a relationship with Usability of automation and firm performance.

Under enabling, Adler & Borys (1996) demonstrates four design principles to ensure high equipment usability namely, repair, internal transparency, global transparency and flexibility. Repair means the system is not totally programmable, it seeks to integrate repair processes

with routine operations. The employees are not only to be trusted but are also actively encouraged to discuss practical problems with organizational rules and standards, thereby contributing to their development in line with usability criteria [1], [6], [7]. for example, value chain of production process which refers to the sequences of business functions in which usefulness is added to the product of an organization, it allows the users to interact with electricity useful system in each batch of the manufacturer in two different ways manually ON of OFF the electricity outside of the schedule hours The users are given the autonomy to manipulate their system to manage energy efficiency by turning off batch of production which not use it than lead cost production efficiency. By enable repair feature of automation control system in the production, it leads to cost production efficiency, therefore the hypothesis is

H3: The enabling of MCS through repair feature has mediate the relationship between automation and organization performance

Second feature of enabling MCS is internal transparency. Internal transparency is related to repair in that it is concerned with the visibility of internal processes for organizational members. [7]. The information is provided sufficiently (not overload), therefore, the users are able to leverage their skills & manage the efficiency, improve product quality and reduce costs. (Ahrens & Chapman, 2009; Brown et.al., 2019). By having internal transparency, the employee is able to understand the internal system process and conduct repair when the trouble found during the production in addition, quality product improved and energy used efficiently. Therefore, the hypothesis is

H4: The enabling of MCS through internal transparency feature has mediate the relationship between automation and organization performance

Third feature of enabling MCS is global transparency. Global transparency refers to the understanding of where and how the local processes fit into the organisation as a whole [13]. through understanding the nature of the system, the employee is able to understand the broader system that they are working in. For example, equipment technologies are programmed to provide operators with comprehensive information on the status of the broader production process. therefore, the operators are able to execute their tasks and contribute to identifying opportunities for product improvement. By having data visibility from the technology, it provides dialogue between operator, manager operational and the accountant of the possibility and implication might be fruitfully unpacked, interrogated and developed such cost allocation and budgeting for the product making. Thus, the hypothesis is

H5: The enabling of MCS through global transparency feature has mediate the relationship between automation and organization performance

Fourth feature of enabling MCS is flexibility. Flexibility provides a degree of freedom for the employee how they might use the equipment. In addition, it also provides employees with the opportunity to operate the equipment/system to suit their preference. The employee allows for the setting variance options ranging from blocking specific action though automatic reporting option. By having flexibility, the users are able to find new strategies to improve the production process that improve product development therefore the quality of the product improved. It contributes positively to supporting users in their attempts to manage and so might be expected to enhance perceived success firm performance. Thus, hypothesis is

H6: The enabling of MCS through flexibility feature has mediate the relationship between automation and organization performance

Based on the discussion above, therefore, the conceptual framework of the study is shown in figure 1 below.

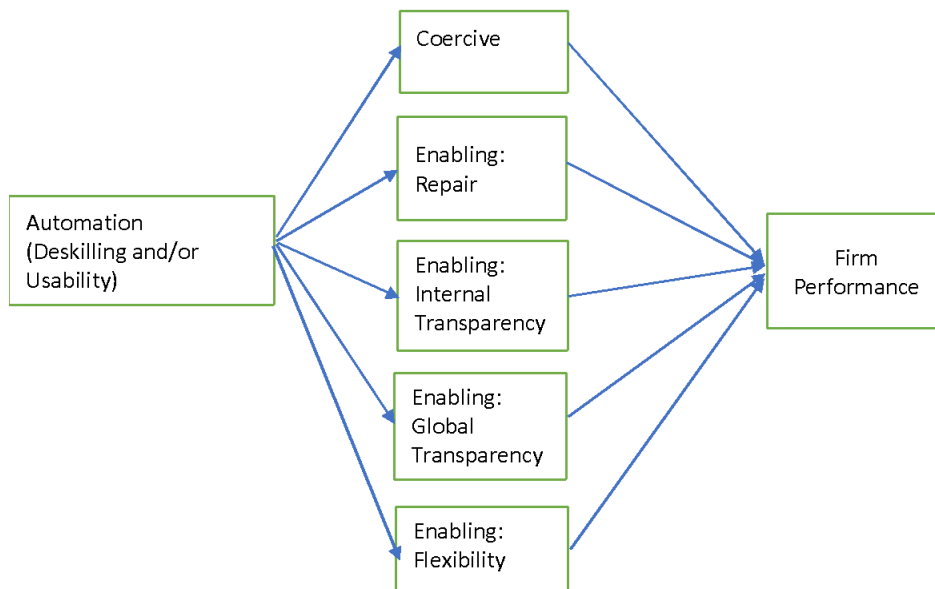


Fig. 1. Conceptual Framework

II. METHOD

A. Measurement Variable and Questionnaire Development

The study uses a quantitative method in which measurement is developed and the variables are tested empirically. Measurement of variables of the study develops from the literature. Once measurement of the variable is determined then the questionnaire is made and distributed to respective respondents. The study consists of one independent variable i.e., automation, two mediating variables i.e., coercive of the MCS and enabling of the MCS and one dependent variable i.e., organizational performance. The automation has two measurements i.e., deskillling and usability. The deskillling has five indicators with four items while usability has five indicators with four items. Coercive of the MCS has four indicators with five items while enabling of MCS consist of four principles and each principle has different measurement. Repair features have four indicators with six items, internal transparency has four indicators with four items, global transparency has two indicators with six items and flexibility has three indicators with six items. Organizational performance has four indicators with five items. Five points likert scale apply to the study

B. Sample and Data Collection

The unit analysis of the study is the manufacturing industry. The sample of study includes all sectors of manufacture industry. No specific manufacturing industry selected due to the industry uses the technology for system integration in the production process. In addition to controlling the activities. Data is collected through the questionnaire. Pre-test is conducted to enhance face validity before conducting actual data collection. Due to Covid 19 pandemic, the companies should be obligated to Indonesian healthcare protocol that prevent viruses from spreading globally, therefore the questionnaire for pre test is conducted through email and social media. The respondents of the pre test are manager operational and the academician. The manager operations considered as the practitioner who involved the production process and understood about technology implementation in the manufacturing company. Academician on the other hand to gain the inputs which related to study and to minimize measurement errors

C. Data Analysis

The study uses SPSS and PLS-SEM computer software for data analysis. Data screening, validity, reliability and factor analysis are tasted using SPSS before the hypotheses are tested using PLS-SEM. Data screening is undertaken to ensure reliability of data entering. Principal component analysis is conducted for construct validation. Reliability test of cronbach

alpha use to test consistency of the measure and further, the hypothesis is tested by using PLS-SEM. The purpose of using PLS-SEM is to examine the relationship between exogenous and indigenous and it also predicts the construct variable of the study.

REFERENCES

- [1] C. S. Chapman and L. A. Kihn, "Information system integration, enabling control and performance," *Accounting, Organization. Society.*, vol. 34, no. 2, pp. 151–169, 2009.
- [2] A. Liew, "Enhancing and enabling management control systems through information technology: The essential roles of internal transparency and global transparency," *International Journal Accounting Information System.*, vol. 33, pp. 16–31, 2019.
- [3] P. Brown, T. Ly, H. Pham, and P. Sivabalan, "Automation and management control in dynamic environments: Managing organisational flexibility and energy efficiency in service sectors," *British Account Review.* p. 100840, 2019.
- [4] C. B. Keating and P. F. Katina, "Complex system governance development: A first generation methodology," *International Journal System of System Engineering.*, vol. 7, no. 1–3, pp. 43–74, 2016.
- [5] A. Worster, Thomas R Weirich, and F. Andera, "Managing IT Change—Fully Integrated Manufacturing: Impacts on Manufacturing," *Journal of Corporate Accounting and Finance.*, pp. 69–74, 2016.
- [6] W. O'Grady, "Enabling control in a radically decentralized organization," *Qualitative. Research Accounting and Management.*, 2019.
- [7] T. Ahrens and C. S. Chapman, "Accounting for Flexibility and Efficiency: A Field Study of Management Control Systems in a Restaurant Chain," *Contemporary. Accounting. Research.*, vol. 21, no. 2, pp. 271–302, 2004.
- [8] G. Agyemang and J. Broadbent, "Management control systems and research management in universities : An empirical and conceptual exploration," *Accounting Audit and Accountability Journal.*, vol. 28, no. 7, pp. 1018–1046, 2015.
- [9] T. Malmi and D. A. Brown, "Management control systems as a package-Opportunities, challenges and research directions," *Management Accounting Research.*, vol. 19, no. 4, pp. 287–300, 2008.
- [10] P. van Veen-Dirks, "Complementary choices and management control: Field research in a flexible production environment," *Management Accounting Research.*, vol. 17, no. 1, pp. 72–105, 2006.

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- [11]C. Free, "Supply-chain accounting practices in the UK retail sector: Enabling or coercing collaboration?," *Contemporary Accounting Research.*, vol. 24, no. 3, pp. 897–933, 2007.
- [12]P. S. Adler and B. Borys, "Two types of bureaucracy: Enabling and coercive," *Administrative Science Quarterly.*, vol. 41, no. 1, pp. 61–89, 1996.
- [13]R. H. Chenhall, "Theorizing Contingencies in Management Control Systems Research," *Handbooks Management Accounting Research*, vol. 1, pp. 163–205, 2006.

Impact of Innovation & Certification to Sme Performance in F&B Sector

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Abstract

The government has planned the programme “UKM Naik Kelas” to increase the number of halal certification but the objective was not achieved by the poor performance of SME. The study aimed to test the effects of innovation and Halal certification on SME performance. The innovation is measured by five dimensions are design and atmosphere, food and beverages, technology application, responsible business and human resources. The Halal certification is measured by two dimensions: knowledge on Halal concept and practices on Halalan Tayyiba. The SME performance is measured by three dimensions are profitability, business growth, and customer satisfaction. The study is carried out in the context of restaurants and café industry by distributing questionnaires to 200 owners of SMEs. The multiple linear regressions are used of this study to test both partially and simultaneously effects. The results show that either partially or simultaneously there are significant and positive effects of innovation and Halal certification on SME performance. The benefits of innovation can affect an organization’s business processes, product performance, and human resources performance which can optimally encourage SME performance. Meanwhile the Halal certification can grow the level of consumer trusts towards the brand and then encourage them to increase customer satisfaction and loyalty.

Keywords: Innovation, Halal Certification, SME Performance, Bogor and Depok.

I. INTRODUCTION

In 2015, the ASEAN Economic Community (AEC) committed to narrowing the economic gap of SMEs in order to implement the three pillars of “Equitable Economic Development” by involving initiatives for regional economic integration. It is anticipated that the enhanced movement of goods, services, investment, capital, and skilled labor will enhance economic activities in ASEAN. This program is in line with the vision and mission statement of ASEAN SME which commit to promoting MSMEs in the region individually and collectively to realize the vision of globally competitive and innovative MSMEs.

Small and medium enterprises (SMEs) are commonly defined as reactive, flexible, and innovative organizations [23]. Small and medium enterprises (SMEs) is an activity economy that can produce products or services which are commercially traded. SMEs have big potential to advance Indonesia's economy, because of spread throughout the territory of Indonesia, so as to be able to prosper SMEs.

The growth of the small medium enterprises (SMEs) from 2016 to 2017 contain information about the number of business units and workers absorption. In 2016, the business unit had 61,651,177 combined from micro business, small business, and medium business, from three businesses that have absorbed a total of 112,828,610 workers. In 2017, it has slightly increased between two aspects from the business unit and the absorption of the workers. The business unit has increased to 62,922,617 which is around 2.02% higher rather than last year. Not only in terms of business, it has the number of workers also increased around 3.30% in total of 116,673,416 workers. The SMEs have a big portion to Micro business by 59.91 million units, followed by small business by 59.260 units, then the last category business only has 4.987 units. Contribution of MSME also open employment for 96.8% of workers, then contribute to export by 15.68%.

In order to increase SMEs business performances, innovation and Halal certification are some significant factors to be able to improve firm performances, especially in the context of the food and beverage industry in Indonesia. The significance of innovation for companies is related to better competitiveness that could be indicated by innovative firms. According to [6], innovation can bring the firm superior in the market and competition. Innovative firms are represented by the effectiveness and efficiency in each of its business activities. As an impact, it positively influences performance. There are previous studies that have reported the positive influences of innovation on firm performance. [7], [20], [40], [35], [38], [41], [12], [18], [45]. Meanwhile the significance of Halal certification for firms is related to their effects significantly on market performance of halal certified food companies (Normia Akmad Salindal, 2018). Also, the higher demand of Halal certified foods come from non-Muslims that are caused by

safety and freshness of food and higher quality of goods by implementation procedures of governmental control [1]. There are previous studies that have reported the positive influences of Halal certification on firm performance, including [5], [9], [10], [31], [32], [42].

Although there have been many previous studies that have reported the positive effects of innovation and Halal certification on firm performance, all of these studies examined the effects based on the consumer's perspectives. Therefore, this study is significant to conduct in order to develop the previous studies, which are focused on the owner's perspectives. Then, this study aimed to examine the effects of innovation and Halal certification on firm performance based on the owner's perspectives. Another difference is the current study combines qualitative and quantitative designs and approaches to answer research problems. The quantitative design and approach are generated from the analysis of statistical data sourced from distributed questionnaires, and the qualitative design and approach is generated from the analysis of interviews data, both of which are used to explain the effects of innovation and Halal certification on firm performance. The combination of design and approach used in this study gives advantage to the findings of the study. The statistical findings of this study can be confirmed in more detail through qualitative findings.

For SME, this study is expected to have significant implications for the importance of innovation and Halal certification to improve firm performance. As an expected impact, innovation and Halal certification can affect consumer behaviors; especially encouraging customer's buying interests, satisfaction and loyalty. With the result that SMEs business performance is better, more profitable and closer to consumers. Meanwhile, for academics, this study is expected to provide scientific contributions to theoretical developments relating to factors that can improve firm performance, through quantitative and qualitative design and approach combination, viewed from the perspectives of entrepreneurs.

2. LITERATURE REVIEW

A. Innovation

The concept of innovation illustrates a very broad meaning. This is because as stated [49], that the term of innovation is widely applied by many organizations, both profit and non-profit-oriented organizations. However, the concepts of innovation complement each other, which generally refer to efforts to improve quality towards something by creating something very new or improving the quality of something that already exists. It can refer to goods, services, public services, work processes, technology development, organizational systems, as well as communication and interaction ways. In profit-oriented organization, [45] in their study added that

marketing is the main key that drives innovation. Better marketing performance, which is supported by innovation, it can reflect that innovation has positive impacts on the firm performance. In addition, the success of the innovation is also influenced by organizational support to improve organizational capabilities that can encourage employee motivation towards innovations. [35]

In a SME context towards the food and beverages industry, the innovation concept of this study is adapted from the study [18] which measures innovation through five main dimensions, namely design and atmosphere, food and beverages, technology applications, responsible business and human resources. The dimension of design and atmosphere are measured through three main indicators namely interior and exterior appearances, color and music. The dimension of food and beverages are measured through three main indicators namely portion size, new ingredients, and organic foods. The dimension of the technology application is measured through two main indicators namely online reservations, and social media. The dimension of responsible business is measured through three main indicators namely social responsibility, eco-friendly packages and waste cycle. And the dimension of human resource is measured through two main indicators namely customer orientation and service climate.

There are several factors that affect the growth of the SMEs business unit. According to [4] the most important factor influencing the growth of the SMEs business in Indonesia is innovation performance. This is because SMEs that can survive, benefit and win the competition as well as play a major role in absorbing the workforce are innovative SMEs. There is a large and positive impact of innovation on SMEs business performance, especially increasing work effectiveness, cost efficiency, work productivity, and the quality of the work environment that can improve employee's work motivation, satisfaction and loyalty [34].

The business growth of SMEs in Indonesia is also driven by the government through easy access to capital [13]. Related to access to capital, Indonesia is one of the countries that is very concerned towards the development of SMEs, so there are many government programs that provide capital assistance to SMEs. According to [14] the government funds are intended to help improve the performance of SME innovations through low-interest loans. Thus, the funds are expected to be able to increase SME business growth and it can contribute positively to economic development, especially better employment and better public welfare.

The other innovative effort of SMEs is creating better unique selling points which could also improve restaurant performance. It could be seen at lots of restaurants or cafes in the area of Bogor and Depok that show uniqueness both in terms of menu concepts, buildings, services and ways of serving food as stated [24] as a way to create uniqueness and make it as the firm's competitive advantage. Research on food raw materials are carried out by the firm to create uniqueness that consumers can prefer and can increase sales. Therefore, these innovation factors can improve the performance of SME business, including product sales, business growth and profitability.

Another factor that also affects the business performance of SMEs in Indonesia is Halal certification, especially in the food and beverages industry [1].

B. Halal Certification

Halal certification is one of the types of certification that suitable for SMEs in food industry refer to Muslim requirement. Government program to support this certification as a basic standard for SMEs which focus on F&B industries.

In 1988, Tri Susanto from Brawijaya University found that derivative products from pork such as gelatin or lard in the food and beverage which become a national problem cause decrease of product sale around 20-30 percent. Indonesian Council of Ulama (MUI) solved the problem by establishing an institution in 1989 for the study of food and medicine which is known as LPPOM-MUI.

Halal certification still has become a voluntary scheme. In 2014, the President Republic of Indonesia endorsed the law No. 33 of 2014 concerning halal products. In recent years, then the regulation No. 31 of 2019 was endorsed, followed by PMA No. 26 of 2019. Then the regulation required to apply Halal Certification refer to the article 4, Law No. 33 of 2014.

Adopting the halal certification is concern of European export because this certification has made barriers for trade with Muslim countries. Commonly, the exporter of halal food to non-muslim countries are from small communities. In spite of, consuming the halal food not only for Muslim, non-muslim have felt the effect of halal food by safety, and freshness of food and have a good quality of products [10]. In addition, coordination of halal standard implementation of certification in Malaysia has a significant impact due to the government having established halal certification in 2012 on halal practices compliance in the processing stage. Moreover, Malaysia has increased the halal certification by creating an internal halal committee in 2015

which focuses on ensuring halal requirement, optimizing control and assurance for internal halal by organizational commitment [5].

Many people associate Halal to refer to food and beverage products. In fact, this terminology is applied in many aspects of life, not only referring to food and beverage, but for cosmetics, entertainment, tourism, and medicinal products [5]. According to [9], Halal means “permissible by Sharia law” or Islamic principles. Al-quran and Al-hadith are two main sources that contain rules for determining which is Halal and which is Haram based on Islamic principles. Halal means to be allowed according to Islamic principles, but Haram means to be prohibited according to Islamic principles.

Halal certification is an acknowledgment from the responsible authority to guarantee that the product or service meets Islamic principles [10]. According to [30], Halal certification represents three important things namely Halal concept, Halal Assurance System (HAS) and Halalan Tayyiba. Halal concept relates to the provider's knowledge that all raw materials, production processes, finished goods, storage, packaging, distribution and delivery of products meet Islamic principles. Halal Assurance System (HAS) is related to how providers can show evidence that can guarantee Halal products, through documentation by involving an internal Halal committee formed in the firm. Halalan Tayyiba is related to guarantees towards quality products from many aspects including raw materials qualities, processes, packaging, and distribution to shipping.

According to [10], Halal certification aims to provide assurances to Muslim-based consumers that all products, both raw materials and production processes meet the Shari'ah law. In many Muslim majority countries, Halal certification is usually issued by responsible authorities and controlled by the government. While in many Muslim-minority countries, the certification is usually issued by an independent Islamic body. The popularity of it continues to increase along with the higher demand towards Halal products and services, one of which is due to the Muslim population scattered throughout the world. These conditions encouraged many parties both the government and the Muslim communities around the world to provide halal certification in order to provide guarantees for Muslim-based consumers that all halal certified-products and services meet the Shari'ah law [42].

In a SME context towards the food and beverages industry, the Halal certification concept of this study is adapted from the study of [30] which measures halal food certification through two main dimensions, namely knowledge on Halal concept and

practices on Halalan Tayyiba. The dimension of knowledge on Halal concept is measured through two main indicators namely permissible food by Shari'ah law and forbidden food by Shari'ah law. The dimension of practices on Halalan Tayyiba is measured through three main indicators namely raw material, processing, and handling of food.

C. Small Medium Enterprises (SMEs) Performance

Performance is the firm's abilities to achieve organizational goals optimally. These organizational goals included financial and non-financial goals [37]. Therefore, then according to [23] that the measures of success of an organization's performance is very broad. According to [23] acceptance of the firm in the communities and customer's positive perception and satisfaction level towards the firm are some important factors that can determine the success of the firm's business performance in the long run

More specifically in the context of SME, [3] define SMEs performance as the firm's business procedures and processes to create values for its stakeholders, including owners, consumers, society and government. According to [3], the measurement of SMEs performance is based on seven main dimensions including finance performances, entrepreneurial orientation, market orientation, learning orientation, technology orientation, access to finance and business environments. The measurement of the firm's performance from the study of [3] shows a wider scope than the study of [23].

In this study, the definition and measurement of SMEs performance is adapted from the study of [23]. This is based on the concept of SMEs performance of the study of [23] is more focused on measuring performance goals, meanwhile the study of [3] is more focused on explaining performance processes. In this case, the measurement of SMEs performance of the study of [23] included three main dimensions, namely profitability, business growth and customer satisfaction. The dimension of profitability is measured through three main indicators namely product sales, net profit and employee welfare. The dimension of business growth is measured through three main indicators namely total assets, number of employees and number of branches. And the dimension of customer satisfaction is measured through three main indicators namely number of visitors, stays longer and more money to spend.

In Indonesia, according to the laws of SMEs number 20 of 2008, stated that the firms which could be classified into SMEs determined by the number of assets, employees and total income per year. The micro firm is categorized as part of SME having less than 5 employees, less than Rp. 300,000,000 in total income per year, and less than Rp. 50,000,000 in total assets (not included are lands and buildings). The small firm is categorized as part of SME having the ranges of 5 to 19 for employees, the ranges of Rp. 300,000,000 to Rp. 2,500,000,000 in total income per year, and the ranges of Rp. 50,000,000 to Rp. 500,000,000 in total assets (not included are lands and buildings). And the middle firm is categorized as part of SME having the ranges of 20 to 99 for employees, the ranges of 2,500,000,000 to Rp. 50,000,000,000 in total income per year, and the ranges of Rp. 500,000,000 to Rp. 10,000,000,000 in total assets (not included are lands and buildings). In this study, the restaurants chosen are classified into the small firm as the target of the questionnaire distributed. The reason, in Indonesia, the small firm is more numerous among other SME categories in the sector of the food and beverage industry, which facilitates the process of taking samples of this study. In addition, restaurants in the small firm category mostly understand the importance of Halal certificates to meet the demands of society towards products that are in accordance with Shariah-compliant processes and requirements.

The SMEs performance is influenced by several factors, some of which are innovation [7], [12], [35], [38], [40], [41], [18], [45] and Halal certification [31], [10], [42], [5], [39], [9], [22]. The effect of innovation on SMEs performance is because innovation can play a key role in improving SMEs business processes, better performance of product sales since organizational products have high competitiveness in the market, and the more conducive working atmosphere which can optimally encourage employee performance [40]. Meanwhile, Halal certification can improve the SMEs performance based on increasing consumer's trust [28], purchase interest [48], satisfaction [33], and customer loyalty [25] towards the firm, which ultimately affects the firm's better organizational performance [9].

D. The Effect of Innovation on SME Performance

Theoretically, innovation can be able to improve SME performance, both financially and non-financially. Financially, innovative performance can achieve financial goals, some of which can increase the SME net profit, employee salaries, firm taxes and the business growth of SME. Whereas non-financially, innovative performance can

achieve organizational goals more broadly, some of which can increase customer satisfaction, employee satisfaction towards the firm, better public acceptance towards the firm and the firm's brand is increasingly remembered by consumers. These are consistent with study findings from [7], [12], [35], [38], [40], [41], [18], [45] show that there is a significant relationship between innovation and firm performance. According to [40] that this relationship is based on the benefits of innovation that can affect an organization's business processes, better performance of product sales because organizational products have high competitiveness in the market, and the more conducive working atmosphere which can optimally encourage employee performance. Therefore, the hypothesis is:

H1(a): There is a significant effect of innovation on SME performance.

E. The Effect of Halal Certification on SME Performance

Also, there is a close relationship between Halal certification with consumer behavior. This is because the certification can provide a sense of security for consumers that the product is halal and in accordance with customer's beliefs. In addition, the product and service provider's halal claims and strengthened through the certification can grow the level of consumer trust towards the brand. These trusts can psychologically encourage consumers to spend more money to obtain the product and services. As a positive impact, product sales performance increases, and profits also increase. This is consistent with the study findings of [31], [10], [42], [5], [39], [9], [22] show that there is a significant relationship between Halal certification and firm performance. Therefore, the hypothesis is:

H2(a): There is a significant effect of Halal certification on SME Performance.

II.METHOD

The study combines quantitative and qualitative research designs and approaches, with descriptive study type. The quantitative design of this study is used to examine the effects of innovation and Halal certification on firm performance, based on analyzing statistical data from respondents' answers on distributed questionnaires. The questionnaire is prepared to ask respondents' views on innovation, Halal certification and firm performance. The list of questions about innovation on the questionnaire, adapted from [18] which explain innovation

measured from five main dimensions are design and atmosphere, food and beverage, technology application, responsible business, and human resources. The list of questions about Halal certification on the questionnaire, adapted from [30] which explain Halal certification measured from two main dimensions is knowledge on Halal concept and practices on Halalan tayyiban. And the list of questions about firm performance on the questionnaire, adapted from [23] which explain firm performance measured from three main dimensions are profitability, business growth, and customer satisfaction. The Likert scale is used to explain the choice of respondents' answers on the questionnaire, which ranges from strongly disagreeing to the score (1) to strongly agree to the score (5).

The questionnaires are distributed online to the samples, which are 200 restaurant and cafe entrepreneurs in the Depok and Bogor areas. The 200 subjects are determined through the sampling technique of Jacob Cohen. A sample will determine 200 owners with basic demographic samples then using purposive sampling by choosing the people based on the criteria, just anyone in the sample could not be selected. The sample criteria used of this study are that the respondents are SMEs owners who have managed their business for at least 1 year, have at least 5 employees, and a minimum average total income of Rp. 500,000,000 per year.

Data analysis technique to test the research hypotheses of this study is the multiple regression method. There are three key stages of testing: t-test, F-test and determinant coefficient (R^2). Before the study test hypotheses, then the descriptive statistical analysis is used of this study in order to illustrate the data measured from the mean, median, standard deviation, maximum and minimum scores. Also, demographic data and respondents' answers on the main variables discussed are processed using SPSS version 24 for Windows to obtain descriptive data. T-test is used to partially test the influence or relationship between independent and dependent variables. F-test is used to simultaneously test the influences of relationships between independent and dependent variables. Determinant coefficient testing (R^2) is used in this study in order to obtain the magnitude of the effects of independent variables on the dependent variable.

Meanwhile, qualitative analysis is generated through interview findings with three food business experts with in-depth interviews. The list of questions regarding innovation, Halal certification and firm performance are adapted from [18] for innovation, [30] for Halal certification and [23] for firm performance.

Research model consists of 2 independent variables which is Innovation with 5 dimensions and Certification with 2 dimensions with one dependent variable SME performance with 3 dimensions.

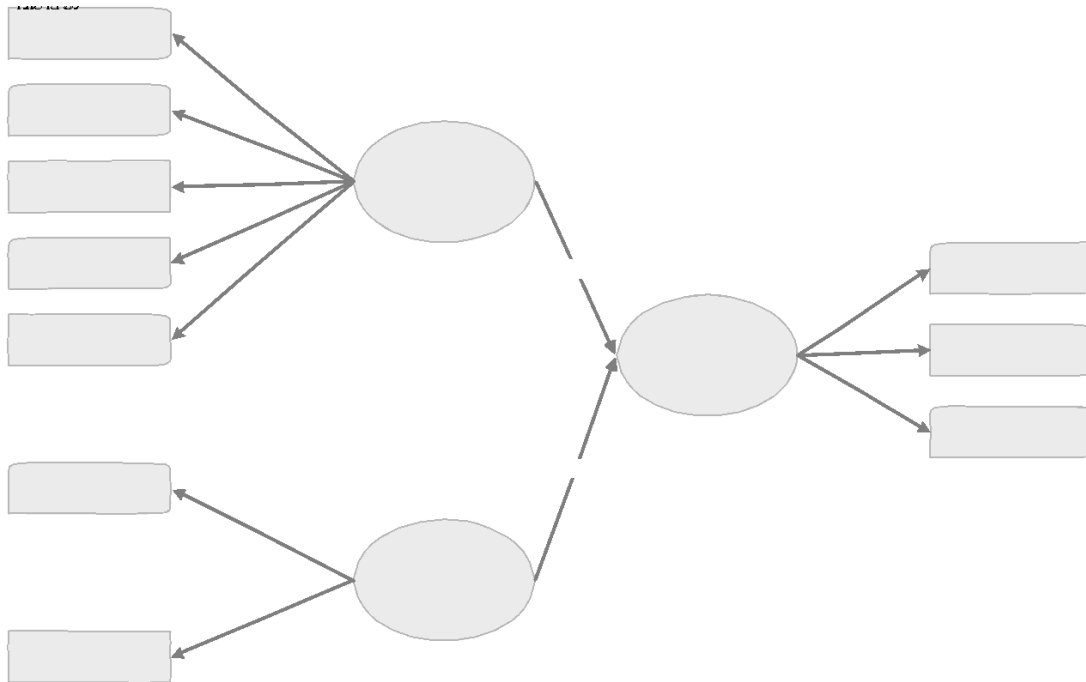


Figure 1. Research Model

III. RESULT AND DISCUSSION

The classical assumption test is used in this study to evaluate whether there are problems with the classical assumptions in the linear regression model. The stages in the classical assumption test used in this study include normality, heteroscedasticity and autocorrelation tests. The normality test is intended to evaluate groups of data, whether the data is normally distributed or not. The standard to determine normality can be seen from the distribution of data according to the histogram chart and normal probability plots. The heteroscedasticity test is intended to evaluate whether there are inconsistencies of residual variants for all observations in the regression model. The standard to determine the heteroscedasticity test can be seen from the data distribution in a scatterplot graph. And the autocorrelation test is intended to evaluate whether there are deviations in autocorrelation that occur between one observation and another. The standard measuring autocorrelation test used in this study is Durbin Watson. The test results are as follows:

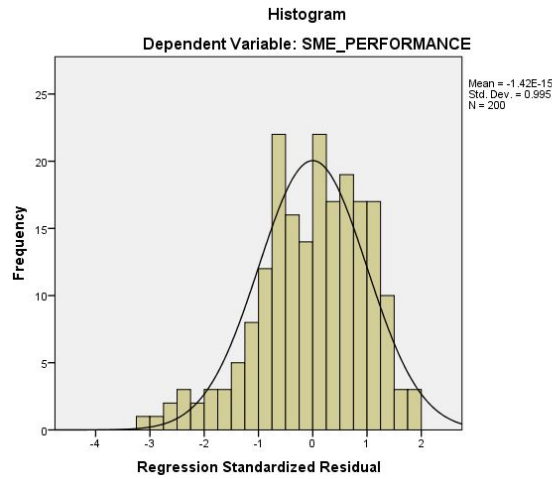


Figure 2. Histogram Chart

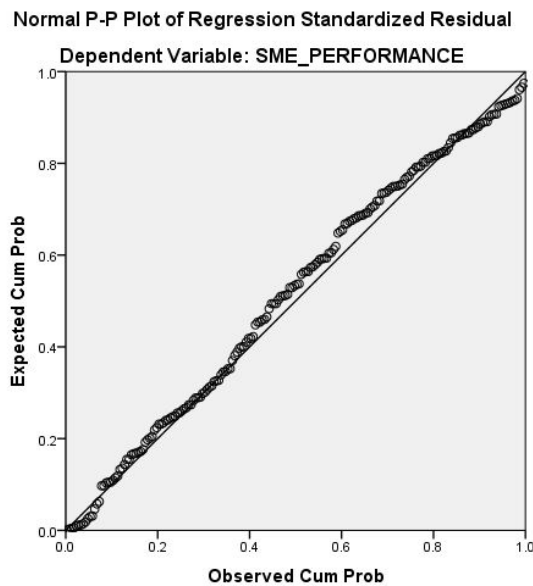


Figure 3. Normal Probability Plots

Based on the histogram chart above, it can be seen that the curve lines are formed perfectly or in other words, such as forming a mountain with symmetrical legs, which can be concluded that the data in this study are normally distributed. The picture of normal probability plots also shows that the dots follow a diagonal line, which means that the data in this study are normally distributed. Based on the two chart indicators, it can be concluded that the normality test in this study is fulfilled

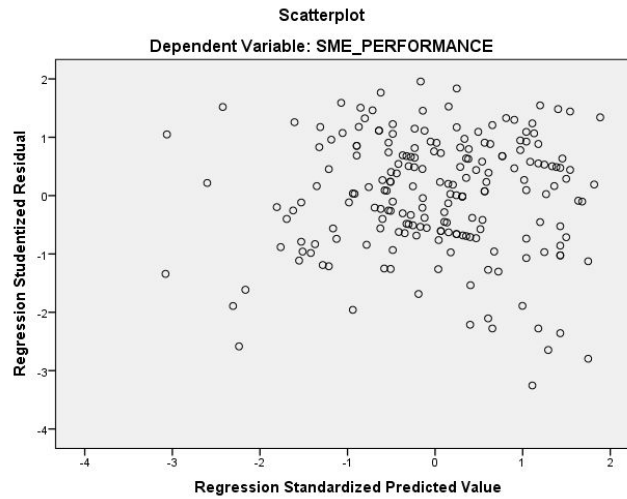


Figure 4. Scatter Plots

Based on the scatterplots chart above, it can be seen that the dots spread out in all directions, and do not form certain patterns or images. This means that there are no heteroscedasticity symptoms in this study, and it can be concluded that the heteroscedasticity test is fulfilled.

Model Summary

Model	Durbin-Watson
1	2.008

- a. Predictors: (Constant), HALAL_CERTIFICATION, INNOVATION
- b. Dependent Variable: SME_PERFORMANCE

Table 1. Autocorrelation Test

Based on the table above, it can be shown that the Durbin-Watson (DW) score is 2.008, and the standard to determine the autocorrelation test can be obtained through the formula of $dU < DW < 4-dU$. According to the Durbin Watson table, it can be indicated that the dU score is 1,7990 and $1,7990 < 2,008 < 2,201$. Based on that, it could be concluded that the autocorrelation test is fulfilled.

Demographically, this study shows that male respondents (66.5%) dominate more than females. This indicates that the owners of SMEs in Depok and Bogor areas are more dominated by males compared to females. This is influenced by cultural, socioeconomic and gender characteristics related to risk taking. According to [43] culturally, although Depok and Bogor areas are cities which can be classified as developed cities and are directly bordered by Jakarta as the Capital of Indonesia, there are still many people who position men as more

responsible for meeting the economic needs of households than women. Economically and socially, these conditions require more men to make a living than women, and one of them is establishing an SME. Meanwhile, according to [36] women are often positioned as taking care of the household, such as caring for children, preparing food for the family and others. Besides that, based on the risk-taking characteristics, generally in developing countries such as Indonesia, males are braver than females to take business risks [43]

The study also shows that the owners of SMEs in Bogor and Depok areas are more dominated by subjects with ages between 17-40 years old as much as 78,5%. This indicates that the owners of SMEs in Bogor and Depok areas are relatively young, and these ages are still very productive for work. This is influenced by the characteristics of SMEs in Indonesia, in which most of the business processes and work methods are highly dependent on physical labor compared to the use of advanced technology. For SMEs, according to [13] most of the owners besides leading the company are also often involved in direct business processes and activities. Especially for the food and beverages sector, owners are often involved in making certain unique menus that are superior to their cafes, and it should not be known in detail by their employees both the cooking process and the raw material components.

This study also shows that the majority of subject education levels (66.5%) are senior high school graduates and above. This shows that the owners of SMEs in Bogor and Depok areas are more dominated by subjects with senior high school and college education levels. This is influenced by very tighter competition between prospective workers in these cities. Bogor and Depok are cities that border directly with Jakarta as the capital of Indonesia, and those cities are industrial-dense. Even though it is industrial-dense, the high level of urbanization from other cities to Bogor and Depok has resulted in intense competition in finding jobs [46]. As an impact, people with higher and secondary levels of skill and education are looking for other ways to earn a living and one of them is setting up a restaurant or cafe

This study also shows that the majority of respondents (83%) run their businesses more than 5 years old. This indicates that the owners of SME of this study are very experienced in running their business and are quite skilled in dealing with various business environments that are quite dynamic and challenging. This is influenced by very tight competition between SMEs in Bogor and Depok areas. According to [15], this condition causes many new and less skilled and inexperienced SMEs to go bankrupt on the one hand, and on the other hand, only skilled and experienced SMEs can finally survive. Therefore, as evidenced by this study, the firms are more dominated by SMEs with more than 5 years old experiences. This study shows that male respondents (66.5%) dominate more than females, more dominated by subjects with ages between 17-40 years old as much as 78,5%, the majority of subject education levels (66.5%)

are senior high school graduates and above, and the majority of respondents (83%) run their businesses more than 5 years old.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.358	.337		1.063	.000
INNOVATION	.886	.108	.648	4.202	.000
HALAL_CERTIFICATIO N	.651	.171	.392	3.804	.000

a. Dependent Variable: SME_PERFORMANCE

Table 2. t-Test Results

The table shows that the significance score is $0.000 < 0.050$ for the partial effect of innovation on SME performance in one-tailed tests. It means that the hypothesis (H_a) is accepted and (H_o) is rejected, which proves that there is a significant effect of innovation on SME performance. The effect coefficient is positive based on the score B indicates positive sign, which proves that there is a positive effect of innovation on SME performance. In other words, better innovation can improve the quality of SME performance.

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	15.198	2	778.599	80.919	.000 ^b
Residual	9983.109	197	48.098		
Total	24.307	199			

a. Dependent Variable: SME_PERFORMANCE

b. Predictors: (Constant), HALAL_CERTIFICATION, INNOVATION

Table 3. ANNOVA

The table shows that the significance score is $0.000 < 0.050$ for the simultaneous effects of innovation and Halal certification on SME performance in one-tailed tests. It means that the hypothesis is accepted, which proves that there is a simultaneously significant effect of innovation and Halal certification on SME performance.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.802 ^a	.663	.533	1.87799

a. Predictors: (Constant), HALAL_CERTIFICATION, INNOVATION

b. Dependent Variable: SME_PERFORMANCE

Table 4. Determinant Coefficient Testing Results

The score of Adjusted R Square is 0.533 and it means that the SME performance of this study has been affected by all independent variables (innovation and Halal certification) by 53,3% and the remaining 46,7% is affected by other variables which are not examined in this study.

The result of statistical analysis has shown that the innovation has positive and significant effects on SME performance. In other words, better innovation can improve SME performance. There are several factors that confirm the positive effects of innovation on SME performance, including organizational learning [19], access to capital [14], use of technology [43] and better unique selling points [24]. According to [19] organizational learning is indicated by the knowledge and insights that are continuously learned by SME owners in order to deal with increasingly fierce competition. Innovative efforts to improve employee skills in serving consumers, better supply of raw materials, and conduct research and trial menus are forms of organizational learning in order to meet customer expectations and create customer satisfaction. Related to access to capital, Indonesia is one of the countries that is very concerned towards the development of SMEs, so there are many government programs that provide capital assistance to SMEs. According to [13] the government funds are intended to help improve the performance of SME innovations through low-interest loans. Thus, the funds are expected to be able to increase SME business growth and it can contribute positively to economic development, especially better employment and better public welfare. Related to adoption of technology, SMEs in Indonesia, especially at the small firm level, use of technology is relatively low, but even so, the use of technology is gradually increasing. The impact of the internet affects the use of these technologies [43], mainly related to lighting techniques, room arrangement, use of technology for cooking and other technologies related to restaurants or cafes that can improve the quality of work on the one hand, and on the other hand it is attractive and increases consumer satisfaction.

The other innovative effort of SME is creating better unique selling points which could also improve restaurant performance. It could be seen at lots of restaurants or cafes in the area of Bogor and Depok that show uniqueness both in terms of menu concepts, buildings, services and ways of serving food as stated by [24] as a way to create uniqueness and make it as the firm's competitive advantage. Research on food raw materials are carried out by the firm to create uniqueness that consumers can prefer and can increase sales. Therefore, these innovation factors can improve the performance of SME business, including product sales, business growth and profitability.

Based on these explanations, then the innovation has positive and significant effects on SME performance. The finding of this study is consistent with the findings of [7], [12], [35], [38], [40], [41], [18], [45] show that there is a significant relationship between innovation and firm performance. According to [38] these positive effects could be measured by process, product, and organizational innovations. This is confirmed by [40] that this relationship is based on the benefits of innovation that can affect an organization's business processes, better performance of product sales because organizational products have high competitiveness in the market, and the more conducive working atmosphere which can optimally encourage employee performance.

Statistical analysis also shows that Halal certification has positive and significant effects on SME performance. In other words, Halal certified products can improve SME business performance. There are three main factors that confirm the positive effects of Halal certification on SME performance, including better community religiosity [2], government regulations [21], and consumer behavior [47]. The social culture of community religiosity is very strong, especially in the areas of Bogor and Depok. According to [2], this affects communities' behavior, not only related to religious ceremonies, but also the economy and consumption patterns which are attached to Islamic values and principles. In addition, according to [21] because of Indonesia is a country with the largest Muslim population in the world, the values and principles of Islam affect government regulations, one of which is the provision to obtain Halal certificates from the authorities for product providers that target the Muslim community as target consumers, including cafes and restaurants.

On the other hand, consumer behavior towards Halal certified products also increased, not only from Muslim consumers but also non-Muslims. This is because according to [47] the

concept of Halal which not only requires providers to process food in accordance with Islamic values and principles, but also requires that food sources are Toyiban means high quality products both from freshness, health and the quality of raw materials. Based on these explanations, these factors can improve SME performance.

Based on these explanations, then the Halal certification has positive and significant effects on SME performance. The finding of this study is consistent with the findings of [31], [10], [42], [5], [39], [9], [22] show that there is a significant relationship between Halal certification and firm performance.

IV. CONCLUSIONS

Quantitative findings show that the innovation has positive and significant effects on SMEs performance. And based on qualitative findings show that the positive effects of innovation on SMEs performance are based on organizational learning, access to capital, use of technology, and better unique selling points. Organizational learning is indicated by the knowledge and insights that are continuously learned by SME owners in order to deal with increasingly fierce competition. Innovative efforts to improve employee skills in serving consumers, better supply of raw materials, and conduct research and trial menus are forms of organizational learning in order to meet customer expectations and create customer satisfaction. Related to access to capital, Indonesia is one of the countries that is very concerned towards the development of SMEs, so there are many government programs that provide capital assistance to SMEs. The government funds are intended to help improve the performance of SME innovations through low-interest loans. Thus, the funds are expected to be able to increase SME business growth and it can contribute positively to economic development, especially better employment and better public welfare. Related to adoption of technology, SMEs in Indonesia, especially at the small firm level, use of technology is relatively low, but even so, the use of technology is gradually increasing. The impact of the internet affects the use of these technologies, mainly related to lighting techniques, room arrangement, use of technology for cooking and other technologies related to restaurants or cafes that can improve the quality of work on the one hand, and on the other hand it is attractive and increases consumer satisfaction. The other innovative effort of SME is creating better unique selling points which could also improve restaurant performance. It could be seen at lots of restaurants or cafes in the area of Bogor and Depok that show uniqueness both in terms of menu concepts, buildings, services and ways of serving food as a way to create uniqueness and make it as the firm's competitive advantage. Research on food raw materials

are carried out by the firm to create uniqueness that consumers can prefer and can increase sales. Therefore, these innovation factors can improve the performance of SME business, including product sales, business growth and profitability.

Based on quantitatively findings show that Halal certification has positive and significant effects on SMEs performance. And based on qualitative findings, findings show that the positive effects of Halal certification on SMEs performance are based on better community religiosity, government regulations, and consumer behavior. The social culture of community religiosity is very strong, especially in the areas of Bogor and Depok. This affects the community's behavior, not only related to religious ceremonies, but also the economy and consumption patterns which are attached to Islamic values and principles. In addition, because of Indonesia is a country with the largest Muslim population in the world, the values and principles of Islam affect government regulations, one of which is the provision to obtain Halal certificates from the authorities for product providers that target the Muslim community as target consumers, including cafes and restaurants. On the other hand, consumer behavior towards Halal certified products also increased, not only from Muslim consumers but also non-Muslims. This is because the concept of Halal which not only requires providers to process food in accordance with Islamic values and principles, but also requires that food sources are *Toyyiban* means high quality products both from freshness, health and the quality of raw materials. Based on these explanations, these factors can improve SME performance.

Recommendation

For SMEs, this study found that the extremely fierce competition level had encouraged skilled and sufficiently experienced SMEs who had successfully survived with a business age over 5 years old. Therefore, for newly established SMEs, it is recommended to increase their organizational learning capacities in order to increase the firm's competitive advantages, which is associated with market potential and consumer behavior to survive and be profitable. For the government, this study found that Halal-certified products affect the performance of SMEs and therefore it is recommended to the government, especially the authorities, to facilitate access to SMEs to obtain Halal certification but with very strict supervision to prevent violations. And For future researchers, it is recommended to use more subjects, more cities, more different methods besides quantitative approaches, and involve many independent variables besides innovation and Halal certification in order to test their effects on SME performance.

REFERENCES

- [1] Aisyah, M., Suzanawaty, L., & Said, M. (2019). The Demand for Halal Certified Restaurants in Indonesia. *International Journal of Supply Chain and Management*, 8(5), 86-98.
- [2] Aji, H. M. (2018). The Effect of Knowledge about Halal and Islamic Religiosity on Attitude toward Halal Label. *Comprehensive Islamic Management Accounting and Economics*, 1, 1-8.
- [3] Aminu, I. M., & Shariff, M. N. M. (2015). Determinants of SMEs Performance in Nigeria: A Pilot Study. *Mediterranean Journal of Social Sciences*, 6(1), 156-164.
- [4] Anton, S. A., Muzakan, I., Muhammad, W. F., Syamsudin, & Sidiq, N. P. (2015). An Assessment of SME Competitiveness in Indonesia. *Journal of Competitiveness*, 7(2), 60-74.
- [5] Baharuddin, S. A., & Ismail, R. M. (2018). Halal compliance impact on organizational performance: The role of religiosity. *International Journal of Supply Chain Management*, 7(5), 455–460.
- [6] Brem, A., Maier, M., & Wimschneider, C. (2016). Competitive advantage through innovation: the case of Nespresso. *European Journal of Innovation Management*, 19(1), 133–148. <https://doi.org/10.1108/EJIM-05-2014-0055>
- [7] Canh, N. T., Liem, N. T., Thu, P. A., & Khuong, N. V. (2019). The impact of innovation on the firm performance and corporate social responsibility of Vietnamese manufacturing firms. *Sustainability (Switzerland)*, 11(13). <https://doi.org/10.3390/su11133666>
- [8] Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences*, second edition. New York University: Lawrence Erlbaum Associates.
- [9] Dubé, F. N., HaiJuan, Y., & Lijun, H. (2016). Halal certification system as a key determinant of firm internationalisation in the Philippines and Malaysia. *Asian Academy of Management Journal*, 21(1), 73–88.
- [10] Giyanti, I., & Indriastiningsih, E. (2019). Impact of Halal Certification on the Performance of Food Small Medium Enterprises. *Jurnal Ilmiah Teknik Industri (In Press)*, 18(2), 1–8. <https://doi.org/10.23917/jiti.v18i2.7242>
- [11] Gomes, G., & Wojahn, R. M. (2017). Organizational learning capability, innovation and performance: study in small and medium-sized enterprises (SMES). *Revista de Administração*, 52(2), 163–175. <https://doi.org/10.1016/j.rausp.2016.12.003>
- [12] Greco, M., Grimaldi, M., & Cricelli, L. (2016). An analysis of the open innovation effect on firm performance. *European Management Journal*, 34(5), 501–516. <https://doi.org/10.1016/j.emj.2016.02.008>

-
- [13] Gunawan, J., & Fraser, K. (2016). Exploring Young and Green Entrepreneurship in Indonesia: An Introduction. *Asian Economic and Social Society*, 6(9), 185-194.
- [14] gunawan, D. S., Widyaningsih, N., & Barokatuminalloh. (2017). The Strategy Development of SMEs Metal. *Journal of Economics and Policy*, 10(1), 121-137.
- [15] Hamzani, U., & Achmad, D. (2018). Bankruptcy Prediction: SMEs Case Study in Pontianak, Indonesia. *Accounting and Finance Review*, 3(1), 09-15.
- [16] Hanvanich, S., Sivakumar, K., & Hult, G. T. M. (2006). The relationship of learning and memory with organizational performance. *Journal of Marketing*, 34, 600–612.
- [17] Indarti, N., Utami, T. L. W., Sitalaksmi, S., & Makodian, N. (2017). The Effect of Knowledge Sources on Innovation Capabilities among Restaurants and Café Business in Indonesia. *Journal of Indonesian Economy and Business*, 32(1), 33-50.
- [18] Ivkov, M., Blesic, I., Simat, K., Demirovic, D., Bozic, S., & Stefanovic, V. (2016). Innovations in the restaurant industry: An exploratory study. *Ekonomika Poljoprivrede*, 63(4), 1169–1186. <https://doi.org/10.5937/ekopolj1604169i>
- [19] Kasim, A., Hussain, K., & Altinay, L. (2018). Impact of Market Orientation, Organizational Learning and Market Conditions on Small and Medium Size Hospitality Enterprises. *Journal of Hospitality Marketing & Management*, 1-40.
- [20] Kim, M. K., Park, J. H., & Paik, J. H. (2018). Factors Influencing Innovation Capability of Small and Medium Sized Enterprises in Korean Manufacturing Sector: Facilitators, Barriers and Moderators. *International Journal of Technology Management*, 76(3/4), 214-235.
- [21] Krisharyanto, E., Retnowati, E., & Hastuti, N. T. (2019). Regulation and Provisions for Supervision of Halal Products in Indonesia. *Journal of Legal, Ethical and Regulatory Issues*, 22(1), 1-10.
- [22] Kusriani, E., Qurtubi, Q., & Fathoni, N. H. (2018). Design Performance Measurement Model for Retail Services Using Halal Supply Chain Operation Reference (SCOR): A Case Study in a Retail in Indonesia. *Journal of Advanced Management Science*, 6(4), 218–221. <https://doi.org/10.18178/joams.6.4.218-221>
- [23] Lee, C., Hallak, R., & Sardeshmukh, S. R. (2016). Innovation, entrepreneurship, and restaurant performance: A higher-order structural model. *Tourism Management*, 53, 215–228. <https://doi.org/10.1016/j.tourman.2015.09.017>
- [24] Majid, M. A. A., Samsudin, A., Noorkhizan, M. H. I., Zaki, M. I. M., & Bakar, A. M. F. A. B. (2018). Service Quality, Food Quality, Image and Customer Loyalty: An Empirical Study at a Hotel Restaurant. *International Journal of Academic Research in Business & Social Sciences*, 8(10), 1433-1446.

-
- [25] Masudin, I., Fernanda, F. W., & Widayat. (2018). Halal Logistics Performance and Customer Loyalty: From the Literature Review to a Conceptual Framework. *International Journal of Technology*, 5, 1072-1084.
- [26] Mehrad, A., & Zangeneh, M. H. T. (2019). Comparison between Qualitative and Quantitative Research Approaches: Social Sciences. *International Journal of Research in Educational Studies*, 1-7.
- [27] Minawo, K., Kinabalu, K., Perniagaan, F., & Kinabalu, K. (2019). Islam the effect of halal certification approach on performance among small and medium enterprises (smes) in malaysia. *Jurnal Hadhari*, 11(January), 119–138.
- [28] Minolfi, G., & Resciniti, R. (2018). The Influence of Ethnocentrism and Halal Trust on Attitudes toward Products from Non-Muslim Countries: A Study of Moroccan Consumers. *Research Paper*, 652-665.
- [29] Mohajan, H. (2018). Qualitative Research Methodology in Social Sciences and Related Subjects. *Journal of Economic Development, Environment and People*, 7(1), 23-48.
- [30] Nurlatifah, A. S., Sharifudin, M. S., & Mariam, A. L. (2019). Evaluation of knowledge and practices of halal certification among food processing companies in Sabah, Malaysia. *International Food Research Journal*, 26(1), 295–304.
- [31] Othman, B., Shaarani, S., Bahron, A., & Hudani, N. (2019). The Effect of Halal Certification Approach on Performance among Small and Medium Enterprises (SMEs) in Malaysia. *Jurnal Hadhari*, 11(1), 119-138.
- [32] Pratisti, C., & Maryati, S. (n.d.). Halal Marketing and Financial Performance : Study in Cosmetic Companies in Indonesia Institute of Informatics and Business Darmajaya Institute of Informatics and Business Darmajaya. 15–27.
- [33] Putra, E. H., Hati, S. R. H., & Daryanti, S. (2016). Understanding Muslim Customer Satisfaction with Halal Destinations: The Effects of Traditional and Islamic Values. *International Conference on Business and Economics*, 1-10.
- [34] Rahadi, R. A. (2016). Opportunities and Challenges for Micro-Small and Medium Business in Indonesia Facing ASEAN Economic Community. *JMK*, 18(1), 45-53.
- [35] Rajapathirana, R. P. J., & Hui, Y. (2018). Relationship between innovation capability, innovation type, and firm performance. *Journal of Innovation and Knowledge*, 3(1), 44–55. <https://doi.org/10.1016/j.jik.2017.06.002>
- [36] Rita, Rabiah, A. S., & Fahlevi, M. (2019). Women Entrepreneur in Indonesia. *Journal of Research in Business, Economics and Management*, 13(2), 2416-2425.

- [37] Selvam, M., Gayathri, J., Vasanth, V., Lingaraja, K., & Marxiaoli, S. (2016). Determinants of Firm Performance: A Subjective Model. *International Journal of Social Science Studies*, 4(7), 90–100. <https://doi.org/10.11114/ijsss.v4i7.1662>
- [38] Soon, N. G., Chan Wei, K., & Hairul Rizad Md, S. (2017). SMES Are Embracing Innovation for Business Performance. *Journal of Innovation Management in Small and Medium Enterprises*, 2017, 1–17. <https://doi.org/10.5171/2017.824512>
- [39] Sugibayashi, K., Yusuf, E., Todo, H., Dahlizar, S., Sakdiset, P., Arce, F. J., & See, G. L. (2019). Halal cosmetics: A review on ingredients, production, and testing methods. *Cosmetics*, 6(3), 1–17. <https://doi.org/10.3390/cosmetics6030037>
- [40] Suhag, A. K., Solangi, S. R., Larik, R. S. A., Lakho, M. K., & Tagar, A. H. The Relationship of Innovation with Organizational Performance. *International Journal of Research Granthaalayah*, 5(2), 292-306.
- [41] Sutapa, S., Mulyana, M., & Wasitowati, W. (2017). The Role of Market Orientation, Creativity and Innovation in Creating Competitive Advantages and Creative Industry Performance. *Jurnal Dinamika Manajemen*, 8(2), 152–166. <https://doi.org/10.15294/jdm.v1i1.12756>
- [42] Talib, M. S., Ai Chin, T., & Fischer, J. (2017). Linking Halal food certification and business performance. *British Food Journal*, 119(7), 1606–1618. <https://doi.org/10.1108/BFJ-01-2017-0019>
- [43] Tambunan, T. T. H. (2017). Women Entrepreneurs in SMEs in Indonesia: Their Motivations and Main Constraints. *International Journal of Gender and Women's Studies*, 5(1), 88-100.
- [44] Tambunan, T., & Busnetti, I. (2018). Small Business Use of the Internet: Findings from Indonesia. *Asian Journal of Agricultural Extension, Economics and Sociology*, 28(1), 1-5.
- [45] Tuan, N., Nhan, N., Giang, P., & Ngoc, N. (2016). The effects of innovation on firm performance of supporting industries in Hanoi – Vietnam. *Journal of Industrial Engineering and Management*, 9(2), 413–431. <https://doi.org/10.3926/jiem.1564>
- [46] Wilonoyudho, S., Rijanta, R., Keban, Y. T., & Setiawan, B. (2017). Urbanization and Regional Imbalances in Indonesia. *Indonesia Journal of Geography*, 49(2), 125-132.
- [47] Yani, M. T., & Suryaningsih, S. A. (2019). Muslim Consumer Behavior in Consuming Halal Products. *Al-Uqud: Journal of Islamic Economics*, 3(2), 161-173.
- [48] Zakaria, Z., Majid, M. D. A., Ahmad, Z., Jusoh, Z., & Zakaria, N. Z. (2017). Influence of Halal Certification on Customer Purchase Intention. *Journal of Fundamental and Applied Sciences*, 9(5), 772-787.

-
- [49]Zawawi, N. F., Abd Wahab, S., Al-Mamun, A., Sofian Yaacob, A., Kumar AL Samy, N., & Ali Fazal, S. (2016). Defining the Concept of Innovation and Firm Innovativeness: A Critical Analysis from Resource-Based View Perspective. *International Journal of Business and Management*, 11(6), 87. <https://doi.org/10.5539/ijbm.v11n6p87>

Optimization Hotel Staff in Uncertain Condition Using Integer Linear Programming

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Abstract

Nature and man-made disasters have a significant impact on the tourism sector, either immediately or in the long term, disrupting the sustainability of tourism. Even decent planning has been carried out on the basis of previous experience, there is still a new challenge to be met as an impact of reducing sales. One of the problems is the number of hotel workers who have to stay in the tourism crisis. The goal is to provide a defined planning so that hotel managers and staff can prepare for the fluctuation of hotel occupancy. Modelling the demand of hotel guests and the availability of hotel staff is based on the method of aggregate production planning with the optimization result of integer linear programming. The effect is the number of hotel workers for each time , taking into account no disappointment on the part of hotel guests and reducing the cost of recruitment and lay-off of hotel staff. Case study is taken from the hotel occupancy in Bali before and during the Covid-19 pandemic, to demonstrate how the model works to quantify the number of workers required.

Keywords: *disaster tourism, sustainability tourism, integer linear programming, hotel staff, covid-19*

I. INTRODUCTION

Sustainable tourism will continue to exist if tourism is able to meet the needs of the visitor sector, the tourism industry and the local community on an ongoing basis. This word would refer to good quality practice between natural resources and human resources. The four fundamental principles for sustainable tourism are integrated planning and decision-making, the conservation of habitats, the preservation of human and natural resources and the creation of a framework that can exist in the long term.

Indonesia is a country with abundant natural resources, a wealth of cultural arts, customs and historical heritage, so this is a potential that can be built in the tourism sector. Indonesia 's tourism potential, which has approximately 17,508 islands with a coastline of 81,000 km and an area of approximately 3.1 million km², stores potential resources[1].

The growth of the tourism sector can be demonstrated by a number of indicators, namely foreign exchange earnings and the number of tourists arriving in Indonesia. Both are showing a growing pattern. In 2015, 10.23 million international tourists came to Indonesia, and by 2019 the number rose to 16.11 million. The Indonesian tourism sector was the fastest growing sector in 2018, namely the 9th in the world, the 3rd in Asia and the 1st in the South East Asia region, according to the Minister for Tourism [2]. In addition, the ranking of Indonesia 's tourism competitiveness index in the world rose from 42 in 2017 to 40 in 2019 from 140 countries, based on the Travel & Tourism Competitiveness Survey of the World Economic Forum in 2019. Indonesia's global tourism competitiveness index rose from 42 in 2017 to 40 in 2019 from 140 countries [3].

The advanced tourism sector must be supported by the availability of appropriate support facilities. Tourist service services include the provision of hotels , restaurants and accommodation. The accommodation company is a building or part of a building that is specially furnished, and anyone can stay, eat and get services and other facilities with payment. Hotels / inns are one form of tourism support for accommodation. In addition to the number of accommodations / rooms / beds, the hotel room occupancy rate is another metric that can be used to see the tourism performance in the region. The occupancy rate is a comparison of the number of room nights used and the number of room nights available. This indicator can offer an idea of how much tourists are interested in certain hotel accommodations in the region. In addition, the occupancy rate can be used as an initial indicator to determine the state of tourist accommodation in the region in order to increase tourist attractiveness.

However, behind Indonesia 's ability and attractiveness in the tourism field, Indonesia has risks and hazards that can be dangerous. According to Undang-undang Republik Indonesia No 24 (2007) on Disaster Management, the concept of a disaster is an occurrence or sequence that threatens and disrupts the life and livelihood of the society, either by natural or non-natural causes. The United Nations International Strategy for Disaster Mitigation (2002) describes the forms of natural disasters that include hydro-meteorological disasters such as hurricanes, typhoons, flash floods , droughts and landslides; geophysical disasters in the form of earthquakes , tsunamis and volcanic activity; and biological disasters are epidemics, plant and animal diseases. How to deal with the disaster has been developed by the government through crisis management. Coles [4] and Rittichai Kuwait, Nelson, and Rahmafritria[5] described the government's intervention to prevent the disaster risk on tourism. More detailed case studies include Kim and Marcouiller [6] on hurricane disasters in Honduras, Nuzura [7] on tsunamis in Aceh, or Pyke, De Lacy, Rule, and Jiang [8] on bushfires in Australia. Non-natural disasters are disasters that have resulted from events or a sequence of non-natural events, such as technological failure, failed modernisation, epidemics and infectious diseases. Malaria [9], SARS [10], avian influenza [11], swine flu [12], ebola [13], and beginning in 2019 is the corona epidemic that ruins the business field. Social catastrophe is a catastrophe triggered by events or a sequence of human events that include social tension between groups or societies and terror. In Indonesia, such disasters mostly range from a small impact to a major impact.

The spread of the pandemic to numerous countries around the world has had a significant impact on all aspects of the economy. The tourism industry is one of the industries that is heavily affected. This is because many countries have closed airports and tourist attractions to avoid the spread of the virus. With the existence of a government policy on physical distance (maintaining physical distance) and the advice to stay at home in an attempt to minimize the spread of the virus, the tourism sector has been sluggish and almost collapsed. The downturn in the tourism sector in Indonesia has already begun long before the first positive case was discovered in March 2020. Covid-19 has made it impossible for foreign tourists to visit Indonesia because a number of countries have locked themselves in and requested their people not to fly abroad. According to the World Tourism Organization (WTO) report , global travel in 2020 will be in the range of 58 to 78 percentage points [4]. In fact, the report notes that the losses incurred by the tourism sector could surpass US\$ 1 trillion. In Indonesia, tourist arrivals also began to decline rapidly in February, when the first Covid-19 cases had not yet occurred. Even in April, the

fall in international tourist arrivals reached 87.44% year on year. In that month, also three major entrances, namely Ngurah Rai, Soekarno-Hatta and Batam, had decreased to more than 99 per cent year on year [15][16]. The Indonesian Employers' Association (Apindo) said that the domestic tourism industry had sustained a loss of at least US \$1.5 billion from January to April 2020, equivalent to IDR 21 trillion [17]. In addition to the decrease in tourism visits, the spread of the pandemic is expected to endanger 13 million employees in the tourism sector and 32.5 million employees who are indirectly connected to tourism deposits. The existence of a government policy to enforce Large-Scale Social Restrictions (PSBB) has also had an effect on the closure of all Indonesian tourist destinations. In addition to having an impact on foreign exchange earnings, the spread of Covid-19 also forced thousands of hotels, hundreds of restaurants and travel agents to leave business during the pandemic. Assaf [18] clarified the impact of declining tourist arrivals on hotel operators in Asia Pacific, as well as Wang and Ritchie [19] on the housing industry in Australia.

The Association of Indonesian Hotels and Restaurants (PHRI) said that by April 2020, 1,674 hotels and 500 restaurants in Indonesia had ceased to operate. In fact, many hotels have begun offering leave to lay off staff in order to preserve the stability of their cash flow, in particular the cost of paying workers' salaries. The Government, through the Ministry of Tourism and Creative Economy, has taken steps to mitigate the impact of Covid-19 on the crisis in the tourism sector.

The effect of the pandemic on corporate income varies depending on the size of the business (micro, small, medium and large). However, it is believed that the position of the company and the business sector also influences the extent of revenue shifts. In general, 8 out of 10 businesses are expected to experience reduced sales. Approximately 82.29 per cent of UMB and 84.20 per cent of UMK experienced a decline in profits. Food and beverage accommodation was the sector most affected at 92.47 per cent due to a decrease in demand of 87 per cent [20].

The decision to maintain, decrease or even raise the number of employees is a move that the organization must take to adapt to a pandemic situation that has an impact on the operations of the company. The food and beverage housing industry cuts its workers by 50.52% in the midst of a pandemic. Reduction of workers is comparatively more common in medium and large businesses.

76 out of every 100 businesses currently running as normal, the number of employees continues to be steady. There have been numerous efforts by businesses to maintain their employees even as the company's operations have been seriously

impacted by the pandemic. The decision to lay off is likely to be a final step in the direction of its workforce. Reducing working hours by 32.66 per cent is a move that businesses have taken comparatively more than they have chosen.

Others include being laid off (unpaid, partially paid, and fully paid) or laid off for a short period of time. The reduction in working hours was the strategy most sought by businesses currently functioning as normal, accounting for 24.59 per cent of the total number of respondents. The strategy that was often followed at the time was that staff should be laid off (not paid) and laid off by 14.04 per cent in a short period of time. Accommodation and food and drink are included in three sectors of the business which lay off staff in a short period of time, namely 17.63 per cent.

The same condition also occurred at Soekarno-Hatta Airport, Juanda Airport, and Hang Nadim Airport where foreign tourists' visits continued to decline by up to 50 percent month to month. The decline in foreign tourist arrivals to Indonesia is due to restrictions on travel by almost all countries in the world to prevent the spread of the Covid-19 pandemic. Impact of travel restrictions was even more pronounced when the Chinese government officially announced a policy to ban its citizens from traveling abroad at the end of January. This has greatly reduced the number of foreign tourists visiting Indonesia, considering that foreign tourists from China are one of the three countries with the highest number of foreign tourists visiting. It has been recorded that more than 10,000 trips from China to Indonesia have been canceled. The majority of the trip cancellations came from Wuhan where the first report and subsequent outbreak was from a cluster of novel human pneumonia cases in Wuhan City, China, since late December 2019 [25]. Moreover, in March, international tourists arriving at Ngurah Rai Airport had only reached 155.85 thousand or decreased by 56.50 per cent compared to the previous month.

The goal of this paper is to plan the emergency situation as part of staff scheduling crisis management. The confusion in the case of a catastrophe or a catastrophe must first be expected, which starts with the decision as to how many hotel workers who must stay in charge of all. The lack of staff will influence the satisfaction of the guest, while the overworked will increase the cost of the salary. In order to get successful planning, the forecast demand becomes the input of the optimization of workers scheduling. Aggregate planning is an approach for deciding the quantity and time required for the output of products by operating managers over a certain period of time. In the range of production planning, aggregate planning is medium-term capacity planning, typically having a two-to 12-month time horizon. Such preparation is useful for organisations with seasonal or fluctuating demand or capability. The goal of aggregate planning is to establish an

efficient production plan using organizational resources to meet the expected demand. The optimization approach that will be used in this paper is a whole linear programming model. This model is used because it is difficult to account for the validity of the management coefficient approach. The goal of the formulation of integer linear programming is to minimize the overall cost. This paper would take the hotel workers in Bali as a case study as part of the management decision that needs to be taken. This paper is a guideline on how to assess the number of workers on the basis of demand, not only for hotels, but also for all elements of the tourism industry that have often been affected by disasters. At the end of this article, future studies will be addressed in order to deal with more uncertain variables.

II. METHOD

All the data used here are from secondary data from Badan Pusat Statistik [8] with 34,559 respondents. Data was compiled from 10 to 26 July 2020. Respondents represent all areas of industry, bar government, employer household operations and foreign organizations. Data was obtained using Computer Aided Web, Self Interview (CASWI) and Survey Online. The approach is a sampling method with a probability sampling of 24,000 samples chosen from the 2020 Statistical Business Registry (SBR) framework, while non-probability sampling or voluntary sampling was achieved by submitting survey links to network associations and other types of business associations.

According to Heizer, Make, and Munson [26] the goal of aggregate forecasting is to satisfy the need for future projections and reduce costs over the planning phase. This strategy may include smoother work rates, lower inventory levels and better service levels for customers. Aggregate planning would create an average production level of demand with fluctuating potential demand. Forecasting is used in the manufacturing process to estimate the amount of customer orders for a commodity.

Approach the case study of tourism using aggregate planning:

1. Accessible capability (staff) can be represented in person equal to the need (demand).
2. The overall time horizon forecasting capability must be equal to the total prediction requirements, if not the same, the dummy would be used as far as the unit cost difference = 0 (zero).
3. All of the cost interactions are linear.

4. Calculate in advance the overall demand for all visitors who stay in the hotel over the planning period.

5. Optimize the production plan for each period within the planning horizon, starting with the early period of the last period.

Many aggregate preparation strategies specify a schedule that minimizes costs. Costs cover hiring costs, termination costs, overtime and undertime costs (less and more personnel needs), inventory and backorder costs, and subcontracting (personnel from other hotels). As there is no commodity in the tourism case study, the inventory and backorder will not be included and will be substituted by time and time costs. All data is taken from various sources as feedback for the entire linear programming model. The model itself should be used for any data that the consumer has for a more reliable and feasible outcome.

III. RESULTS

We used data from Kementerian Pariwisata and Ekonomi Kreatif Republik Indonesia for tourists arriving at Ngurah Rai International Airport in 2018 and 2019 to find the overall number of international tourists arriving each year[15][16]. Bali has top priorities for all provinces in Indonesia. There are numbers of hotels run in 2018 and 2019 to serve visitors, assuming they are for foreign tourists only. The number of hotels operated yearly is equal to the number of hotels operated on a monthly basis.

By subdividing total foreign visitors arriving per month with an average number of hotels served each month equal to the number of hotels served in the year (1), we have total guests staying in the hotel for a month (2). The total guest will not arrive at the same time, so we need to know how many tourists will stay at the same time (3). First of all, we need to figure out how long the visitor lives in the hotel. Table 1 displays the details for the total number of hotel guests staying.

$$\frac{\sum_{t=1}^T H_t}{n} = H_m \quad (1)$$

$$G_m = \frac{T_m}{H_m} \quad (2)$$

$$L = 365 \text{ days} / [T_t / (B_t \times P_t)] \quad (3)$$

While:

Pt = percentage bed occupied

Bt = total beds available per year
Tt = total international tourist arrived per year
n = number of years
Tm = total international tourist arrived per month
Gm = total guest per hotel per month
Ht = total hotels available per year
Hm = total hotels available per month
L = time to stay in days

Table 1. Hotel Guest's Length of Stay

Year	International Tourist from Ngurah Rai Airport	Occupancy Rate	Total Beds	Capacity fulfilled	Total Hotels	Length of Stay
2018	6,025,760	64.72	78,801	51,000	551	3.08
2019	6,239,543	59.58	97,099	57,851	507	3.38
Average				4,535.45	529	3.23

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$$F_m = 30 \text{ days}/L \quad (4)$$

$$G = G_m/F_m \quad (5)$$

While:

Fm = frequent guest hotel stay in a month

Gm = total guest per hotel per month

G = total guest per hotel in the same time

We used integer linear programming to reduce overall costs. The total cost shall be collected from the multiplication of each cost element, such as the total cost of the salary, the total cost of the staff recruited, the total cost of the staff laid off and the total cost of the staff under time (1). Time is a condition in which the number of staff available is higher than the number of staff needed so that the salary is overpaid. The drawback is that the amount of workers available must be greater than and equal to 70% of the overall guest (7). There is a balance limitation for workers available this month with staff available in the previous month, staff hired and staff laid off this month (8). Another balance limitation is

that under time workers come from the gap between the staff required and the staff expected, which is 70 percent of the guest (9). Both decision variables are integer (10).

$$\text{Min } TC = \sum_{m=1}^M C_S S_m + C_R SR_m + C_L SL_m + C_U SU_m \quad (6)$$

$$G \leq \frac{S_m}{0.7} \quad (7)$$

$$S_m = S_{m-1} + SR_m - SL_m \quad (8)$$

$$SU_m = S_m - (0.7G) \quad (9)$$

$$S_m, SR_m, SL_m, SU_m \geq 0 \text{ and integer} \quad (10)$$

While:

Sm = total staff used per hotel per month

SRm = total staff recruited per hotel per month

SLm = total staff layoff per hotel per month

SUm = total staff under time per hotel per month

CS = salary cost per staff per month

CR = recruitment cost per staff

CL = layoff cost per staff

CU = under time cost per staff

According to Keputusan Gubernur Bali 2019, based on details from the Head of the Badung Industry and Manpower Office, the pay of hotel workers in Bali with a 3-year operating cycle is 5 % higher than the Bali UMR[30]. UMP Bali is IDR 2,493,523.00, so the hotel workers pay is IDR 2,618,199.15. Recruitment costs per worker include the applicant workers database, the distribution of work openings records, the administrative collection of job vacancies, recruitment facilities and the selection method. The overall recruiting fee for each hire is IDR 2,292,000.00. For UU Tenaga Kerja UU Severance Pay No. 13 2003 consists of Severance Pay for more than 3 years of service, time of employment, medical and accommodation money, then Severance Pay (4 x 2 x IDR 2,618,199.15) + (2 x IDR 2,618,199.15.) + 15% (10 x IDR 2,618,199.15.) = IDR 30,109,289.65. In the meantime, the time-limited fee comes from the Bali UMP for a month multiplied by the excess amount of the staff, which is IDR 2,618,199.15.

The outcome in Table 3 indicates that the decision factors are open to workers, to hire, to lay off, and to time row. Each month, the management must decide on the number of hotel staff who must be employed to ensure the satisfaction of the guest. Management must reduce the overall cost by changing the minimum capacity, such as training, and by

laying off hotel workers, since all such actions entail higher costs. That's why, in a month, hotel workers would be more than needed to accommodate the guest. For example, from January to August 2019 (except for July 2019) the hotel has more staff than it is needed by recruiting and not to lay off the staff. This hotel was struggling to hold 80 hotel employees, even though the guess was that it was fluctuating. But as of February 2020, as the pandemic spread further and there were many reminders not to fly around the world, the hotel had to make the workers leave the company. This situation deteriorated in March 2020 after the first case of Corona occurred in Bali this month, with the death of a UK tourist with a positive corona. It lets several countries publish their travel warnings to Bali. The hotel must have the other staff laid off.

Table 2. Total Hotel Guest to be served

Year	Month	Total Guest	Total Guest/Hotel	Total Guest/Hotel/Day
2019	1	451,078	853	85
	2	436,266	825	82
	3	441,707	835	83
	4	476,104	900	90
	5	483,928	915	91
	6	549,483	1,039	103
	7	604,310	1,142	114
	8	602,457	1,139	113
	9	589,984	1,115	111
	10	565,966	1,070	106
	11	492,904	932	93
	12	544,726	1,030	102
2020	1	526,823	996	99
	2	358,254	677	67
	3	155,851	295	29

However, this model makes the staff preparation easier to do and the hotel management will get the best result compared to overall expense. This model is looking for some likelihood of retaining the available workers, adding or reducing the number. All of the mix produces successful preparation that will give effect to further preparation. For example, the manager can determine how to implement the budget either to personnel compensation in financial planning, to upgrade services or to retain expenses each year.

IV. CONCLUSIONS

For Bali itself, some natural and non-natural disasters have forced the government to focus more on crisis management and disaster risk reduction[27][28][29][30][31]. This pandemic has become one of the challenges that the government needs to address. The situation is pandemic because the hotel must have plans to experience the difficulties. One of the difficulties is the number of staff that the hotel management must retain while demand is fluctuating. With the optimization process, we will find an optimal number of hotel workers to guarantee hotel guest satisfaction at a minimal rate. The decision recognizes the consistency of the number of employees in order to reduce increased expenses for training and removal of employees, but the implications are added costs for overpaid jobs when they work beyond their abilities.

For future studies, more comprehensive data are required to adjust demand if the variations are more frequent. It is safer if the cost is more reliable than if the exact data is used. Another factor is that this paradigm is acceptable where the administration is employed by non-permanent workers. It is more difficult for a hotel with permanent staff to implement because the layoff costs are usually very high. The model needs to improve in real conditions and constraints. However, this model can be applied in a broader region, e.g. to quantify how many hotel workers are needed to provide support services in Bali or in other regions, such as the calculation of fast food outlet staff.

Table 3. Measuring the number of hotel staff

Variables	2019							
	1	2	3	4	5	6	7	8
Hotel Guest	85	82	83	90	91	103	114	113
Staff available	60	79	79	79	79	79	80	80
Staff hired	60	19	0	0	0	0	1	0
Staff fired	0	0	0	0	0	0	0	0
Staff excess	(1)	(22)	(21)	(16)	(15)	(7)	(0)	(1)
Work force balanced	0	0	0	0	0	0	0	0
Staff cost/person	2.618.199	2.618.199	2.618.199	2.618.199	2.618.199	2.618.199	2.618.199	2.618.199
Hiring cost/person	2.292.000	2.292.000	2.292.000	2.292.000	2.292.000	2.292.000	2.292.000	2.292.000
Firing cost/worker	30.109.290	30.109.290	30.109.290	30.109.290	30.109.290	30.109.290	30.109.290	30.109.290
Undertime cost/unit/week	2.618.199	2.618.199	2.618.199	2.618.199	2.618.199	2.618.199	2.618.199	2.618.199
Total cost	295.921.049	306.938.834	261.558.095	248.728.919	246.896.180	224.903.307	212.271.572	211.812.311
	2019				2020			
Undertime cost/unit/week	2.618.199	2.618.199	2.618.199	2.618.199	2.618.199	2.618.199	2.618.199	Min. TC =
Total cost	215.477.790	224.641.487	248.467.099	231.972.445	237.470.663	1.116.923.738	839.656.452	5.123.639.942

REFERENCES

- [1] Dahuri, R., Rais, J., Ginting, S.P., Sitepu, M.J.: *Pengelolaan Sumber Daya Wilayah Pesisir dan Lautan Secara Terpadu*. Jakarta: Pradnya Paramita. (2001)
- [2] <https://www.thejakartapost.com/news/2018/10/23/indonesian-tourism-set-to-beat-thailand-in-5-years.html>
- [3] <https://travel.kompas.com/read/2019/09/05/173751627/indeks-daya-saing-pariwisata-indonesia-tahun-2019-naik?>
- [4] Coles, T: A Local Reading of a Global Disaster. *Journal of Travel & Tourism Marketing*. Vol. 15:2-3, 173-197. (2004) doi: 10.1300/J073v15n02_10
- [5] Rittichai Kuwait, B., Nelson, R., Rahmafritra, F.: Applying the perceived probability of risk and bias toward optimism: Implications for travel decisions in the face of natural disasters. *Tourism Management*. Vol. 66, 221-232. (2018). doi:10.1016/j.tourman.2017.09.013.

-
- [6] Kim, H., Marcouiller, D.W.: Considering disaster vulnerability and resiliency: the case of hurricane effects on tourism-based economies. *The Annals of Regional Science*. Vol 54, 945–971. (2015). doi:10.1007/s00168-015-0707-8
- [7] Nuzura: Analisis penilaian wisatawan bencana terhadap citra pariwisata Aceh (survey pada wisatawan Museum Tsunami tahun 2017). Universitas Syiah Kuala. (2017)
- [8] Pyke, J., De Lacy, T., Law, A., Jiang, M.: Building small destination resilience to the impact of bushfire: A case study. *Journal of Hospitality and Tourism Management*. Vol. 28, 49-58. (2016). doi:10.1016/j.jhtm.2016.04.003.
- [9] Modrek, S., Liu, J., Gosling, R. et al.: The economic benefits of malaria elimination: do they include increases in tourism? *Malar J*. Vol. 11, 244. (2012). doi:10.1186/1475-2875-11-244
- [10] Min, J.C.H., Lim, C., Kung, H.: Intervention analysis of SARS on Japanese tourism demand for Taiwan. *Qual Quant*. Vol. 45, 91–102 (2011). doi:10.1007/s11135-010-9338-4
- [11] Lee, C., Chen, C.: The reaction of elderly Asian tourists to avian influenza and SARS. *Tourism Management*. Vol. 32, Issue 6, 1421-1422. (2011). doi:10.1016/j.tourman.2010.12.009.
- [12] Haque, T., Haque, O.: The swine flu and its impacts on tourism in Brunei. *Journal of Hospitality and Tourism Management*. Vol. 36. (2017) doi:10.1016/j.jhtm.

Price Manipulation During the Indonesian Presidential Election of 2019: does it Matter Toward Return, Volatility and Liquidity?

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Abstract

The main purpose of this research is to evaluate if stocks indicated political content during the 2019 Indonesia's presidential election in the form of price manipulation. This study uses a quantitative method by employing an independent sample t-test to test the hypothesis. Sample formation is divided into two broad categories which are affiliated company stocks and non-affiliated company stocks. Data gathered in this study are return, volatility, and liquidity from March 23 to April 17, 2019. The results show that there is no evidence of price manipulation during the presidential election in those three variables including return (0.0870), volatility (0.5630) and liquidity (0.0800). The overall null hypothesis cannot be rejected since the t-statistics is smaller than the t-table (2.0243). However, there is an indicative of the stock price decrease which occurred during a period of observation from the 2019 presidential election. Although the price manipulation is not evidence during the election, yet strengthening the stock market regulation is necessary in order to improve investor's confidence to invest in Indonesia in particular during political events

Keywords: presidential election, price manipulation, return, volatility, liquidity.

I. INTRODUCTION

Political events are non-economic risks that exist in the capital markets, caused by the dynamics of the political situation which may affect a country's economy. Various political events such as regional elections or presidential elections create a major impact towards the economy and market movement. Both policies and regulations taken by the government may affect companies as well. Therefore, the presidential election as the political power transformation affects not only political conditions but social and economic conditions. According to Indonesia's Ministry of Finance, Sri Mulyani, the government is able to anticipate a political surge that disrupts economic stability and financial markets. Similarly, The Director of Indonesia Stock Exchange, I Gede Nyoman Yetna in an interview with CNN Indonesia, stated that the 2019 presidential election would not affect the Indonesian Stock Market Index (IHSG) since it stayed in the green zone [2].

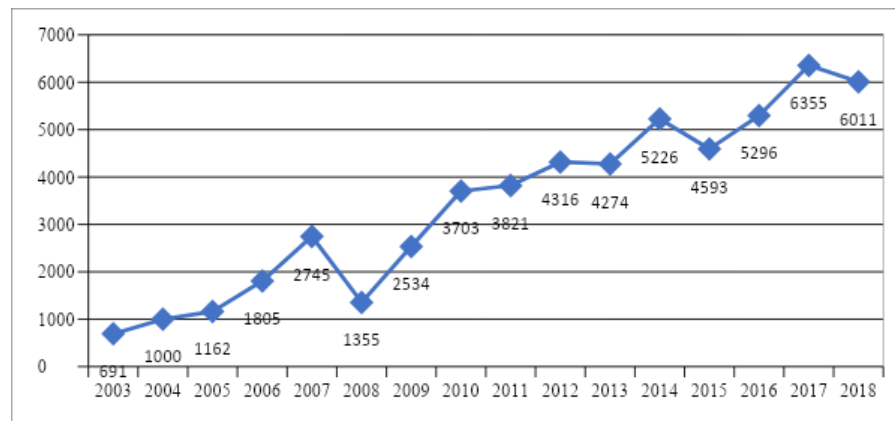


Fig 1. IHSG movement for the year 2003 to 2018

As can be seen in Figure 1, the IHSG movement in every presidential election shows an upward trend. In the year of 2003 to 2004, it increased from 691 to 1000 or about 44.56% while in the year of 2008 to 2009 it increased from 1035 to 2534 or about 86.98%. However, the increase during the election year was started by the decrease in the stock market index in the previous year (such as 2008 and 2018). This condition might be attributed to financial and economic conditions since there were a lot of costs incurred during the process of pre-presidential election. Such as in May 2019, when the real count of presidential elections began, the IHSG started to decline. The sectoral index of consumer goods as main contributor of IHSG, fell 3.8%. In turns, the IHSG also declined 1.46% to 5,826.87. Stock from the consumer goods sector mostly experienced negative return such as PT. HM Sampoerna Tbk./HMSP (-6.33%), PT. Unilever Indonesia

Tbk./UNVR (-4.2%), PT. Gudang Garam Tbk/GGRM (-3.09%), PT. Indofood Sukses Makmur Tbk./INDF (-2.93%), and PT Indofood CBP Sukses Makmur Tbk./ICBP (-2%). The decline in IHSG was related to seasonal movement of investors selling action which commonly took place in April and bought again in October.

In every presidential election, it is common for investors to wait and hold their investment until the presidential election process finishes. This pattern can be seen in the beginning of the presidential campaign until a new president has officially announced. During this time, the investors will observe the presidential candidates and stay away from the market, such as in the 2019 presidential election. In addition, what was attracted more during the 2019 presidential election is the political figures who were involved in the election. These political figures were also well-known and have substantial influence on the stock markets. For example, Sandiaga Salahudin Uno as founder and majority shareholder of PT. Saratoga Invenstama Sendaya who at that time ran as vice presidential candidate number 02. Meanwhile, the Chairman of the National Victory Team of presidential candidate 01, Jokowi-Ma'ruf, was Erick Tohir or the owner of Club Inter Milan and founder of PT. Mahaka Media. Similarly, Hary Tanoe, the chairman of MNC Group, conducted the Coalition of Indonesia Maju to support presidential candidate 01. On the other hand, in the Coalition of Indonesia Adil-Makmur as the supporters of presidential candidates 02, there is the son of the late President Suharto owner of PT. Humpus which engaged in investment and property. The involvement of these company's owners during the 2019 presidential election has resulted in heightened market sentiment towards their shares in the stock market. The market sentiment itself can be interpreted as an overall investor's attitude towards stock price movement under certain conditions in the capital market or in other words defined as investor risk aversion [3]. The risky stock is the stock with the high volatility [4]. The high volatility of those company stocks can be related to issue statements thrown into the public by each of the strongholds accompanied by high expectations of investors of predicting the winner of the presidential election. These high stock price fluctuations are also prone to capital market crime known as 'price manipulation'.

Price manipulation is an action by some investors and even brokers to control the share price which has the effect of disrupting market efficiency [5]. Price manipulation can be in a form of price abnormality [6]. Some other call price as a component of price manipulation. In addition, market manipulation is a form of threat of market trust and integrity to the capital market through mispricing and market imperfections [7]. Therefore, it can be concluded that price manipulation is an integral part of market manipulation.

Indications of price manipulation can be seen from the amount of return and excess volatility [6]. A study on the Hong Kong Stock Exchange of 40 incidents of stock market manipulation revealed that there was a link between market manipulation and investors' overreaction [8]. On the other hand, excess volatility remains as an unexplained fluctuation in the share price with available discount factors and cannot be fundamentally justified [6]. Particularly in emerging markets, excess market volatility is often seen as a sign of market manipulation [9]. Another study, reviewed the closing price in the Paris Bourse and found there was a significant increase in volatility and volume that occurred mainly in the last minute of trading and this was associated with manipulation [10]. Some studies suggest there is a relationship between volatility and liquidity. Like [11] indicates that the variation in liquidity across stocks depends on the price level, volume, and volatility, while [12] finds common ground in liquidity shows greater during times of high market volatility. This confirms the relationship between volatility and liquidity. Stock liquidity itself can be seen from an asset's point of view and defined as the characteristics of an asset or "asset (individual) liquidity" or "market liquidity" depending on whether the focus is on the balance sheet or the market [13]. The market is considered liquid if an asset can be sold immediately within market hours without causing price movements and by losing the minimum value [14].

Since price manipulation is considered as a crime then avoidance through market monitoring should be regulators' wide concerns. In particular, price manipulation tends to be evidence in developed countries such as in previous studies toward price manipulation during presidential election events [10], [5], [15], [1], [16], [17]. Concerning results in the previous studies, this research's main contribution is to re-examine and detect the evidence of price manipulation during Indonesia's 2019 presidential election. As an addition to previous study, this research enhances the evaluation through three levels of variables including return, liquidity, and volatility. In addition, this research is also focusing on samples of company's stock that are associated with both presidential candidates' teams and make comparison with other companies in the same sectors that do not have any relationship.

II. METHOD

This research uses a quantitative approach by collecting quantitative data and applying statistical calculations. Malhotra in [18] suggest that quantitative research aims to quantify data and obtain research results that can be generalized by using statistics as data analysis tools while [19] explained that quantitative methods are based on the philosophy of positivism and used to research on specific populations or samples, data collection using research instruments, quantitative/statistical data analysis with the aim of testing established hypotheses. Research using quantitative methods such as [20], [21], and [22].

The population in this study is 555 stocks. By employing a purposive sampling method, the sample is then constructed into two sample groups. The first sample consisted of stock from a company that was associated with the presidential success team by considering their owner's support to one of presidential candidates which stated through the media. As many as 27 stocks can be included into this group. However, due to data availability, it is then reduced into 20 stocks. The second sample as comparison to the first group, is constructed based on the chosen 20 stocks in group 1. This second group is selected with criteria such comparable assets size and sector similarity with group 1. In total, there are 40 stocks used as samples, including mining, trade, services and investment, finance, infrastructure, utilities, and transportation. Data collection period is from the period of 23 March 2019 as the starting date of presidential campaign until 17 April 2019 or the election date. The variables used in this study are return, volatility, and liquidity. Daily return is then calculated using the price difference while daily volatility is calculated with Parkinson volatility. Similarly, daily liquidity of each stock is also calculated using Amihud's Illiquidity The null hypothesis aimed in this study is there is no difference between group 1 and group 2 in terms of return, volatility and liquidity or in other word there is no price manipulation during the period of observation. Sample of those two groups is then analyzed using an independent sample t-test method to check the differences between two groups by comparing their mean of return, volatility and liquidity.

III. RESULT

A series of independent sample t-tests are conducted towards samples. In order to run this t-test, previously the normality test as well as should be carried out as a normality test and homogeneity test. Results of the normality and homogeneity test for return, volatility and liquidity of all sample are listed in Table 1

Table 1. Normality and Homogeneity test results

Normality test						
	N	Mean	Std. Deviation	Z	p-value	Description
Return	20	-0,0017	0,0088	1,3810	0,4400	normal distribution
Volatility	20	0,1211	0,1050	1,3660	0,4800	normal distribution
Liquidity	20	0,1277	0,1924	1,6130	0,1100	normal distribution

Homogeneity test						
	Levene's Statistic	.d1	.d2	p-value	Hypothesis	Description
Return	0,0670	1	38	0,7970	H ₀ Accepted	Homogenous
Volatility	1,0270	1	38	0,3170	H ₀ Accepted	Homogenous
Liquidity	0,0000	1	38	0,9980	H ₀ Accepted	Homogenous

Normality tests are performed to determine whether or not the data is normally distributed. Using two tailed tests, the p-value obtained from the normality test is then compared with a significant level of 5%. If $\alpha > 0.05$ then the data is normally distributed, otherwise if $\alpha < 0.05$ then the data is not normally distributed. Based on data in Table 1 the p-value of each variable is greater than 0.05 which include return (0.4400), volatility (0.4800), and liquidity (0.1100). Thus, it can be concluded that the data is normally distributed for those three variables.

Similar to the normality test, a homogeneity test is also necessary to be conducted before using an independent sample t-test. This test is aimed to check if variations in data from the sample have the same variance. If variance is homogenous, then the t-test will be performed using Equal Variance Assumed (or assumed the same variance). Conversely, if variance is not homogenous, then the t-test will be performed using Equal Variance Not Assumed. From table 1, it can be seen that the p-value of all variables including returns, volatility, and liquidity exceed the significance level of 0.05, thus all variables have the same or homogeneous variances.

Table 2. Independent Sample t-test Results

	Return	Volatility	Liquidity
Independent Sample t test of two groups			
n : 40	-0,0002	-0,0188	0,0049
Mean Differences	0.0870	0.5630	0.0800
t-statistics			
t-table (2.0243)			

Since all variables are normally distributed, the analysis is then continued by conducting the independent sample t-test for both affiliated stocks or group 1 and non-affiliated stocks or group 2. The complete results for the three variables tested can be seen in Table 2. The independent test of the t-test sample is one of the parametric statistical tests, to find out if the average difference is by comparing two mean groups from two different samples (scaled interval or ratio data). As can be seen in table 2, for all three variables including return, volatility and liquidity, the t-statistics is less than the t-table (2.0243) in which for return is 0.0870, volatility is 0.5630. Since there is no difference between group 1 of affiliated stocks and group 2 of non-affiliated stocks during the period of estimation, then the null hypothesis of no price manipulation in terms of return, liquidity and volatility cannot be rejected. In other words, there is not enough evidence to conclude that there is an indication of price manipulation in the stock of companies that support the presidential candidates.

In order to see the results consistency, analysis is also conducted for each sector of stocks in samples. Samples in group 1 (affiliated stocks) and 2 (non-affiliated stocks) can be classified into four sectors including mining (8 stocks), trade, services and investment (24 sectors), finance (4 sectors), infrastructure, utilities, and transportation (4 sectors). This test is aimed to see whether the impact of market sentiments from political events such as the presidential election that may induce price manipulation can be detected at a sectoral level. The complete results of independent t-test of each sector for all variables including return, liquidity and volatility can be presented in Table 3.

Table 3. Independent t-test Results t-test for Each Sector

Sectors	N	t-table	t-statistics		
			Return	Volatility	Liquidity
Mining	8	2.4469	0,0690	4,6850*	1,0180
Trade, Services, and Investment	24	2.0738	0,2410	0,3610	0,4940
Finance	4	4.3026	0,6070	0,6160	0,6100
Infrastructure, Utilities, and Transportation	4	4.3026	1,6230	0,0510	0,6600

Similar to the results in Table 2, it can be observed in Table 3 that in general the t-statistics is less than the t-table or the null hypothesis of no price manipulation cannot be rejected. Only one variable in the Mining Sector, which is volatility (4,6850), that shows significant results. This result indicated that for the mining sector there is an indication of price manipulation in terms of volatility. However, in terms of return and liquidity, there is no evidence to support the existence of price manipulation.

In addition to the t-test results presented in table 1, there are also mean differences for each variable including return, volatility and liquidity. A negative mean return difference indicates that the average return of non-affiliated stocks (group 2) is greater than the average return of affiliated stocks (group 1). The negative average return in both samples (group 1 and 2) indicates an unfavorable market movement during the period of presidential election which is as predicted previously in which stocks prices tend to fall. Furthermore, it is also found that the average volatility of affiliate stocks (group1) is lower than non-affiliated stocks (group 2) as indicated by the negative mean differences in volatility. However, in liquidity, the mean difference is positive. This implies that the average liquidity of affiliated stocks (group 1) is lower than the non-affiliated stocks (group 2). The low liquidity may impact the low return and volatility too [23].

Previous research suggests that price manipulation occurs when market sentiment is so great in which prices rise during periods of manipulation and fall after periods of deceit [23]. Market sentiments during the presidential election in Indonesia is also suggested to indicate this phenomenon which became the main motivation of this study. However, after a series of independent t-tests, there is evidence of low return, volatility and liquidity which may be due to negative sentiment in the market. In addition to the low market performance during the period of election, the rupiah is also weakening against the dollar, which is in contrast to market expectations. The heightened public sentiments towards the election process has caused investors to be cautious to take action. Investors tend to wait and hold their investment until the voting results have been collected and announced officially rather than just utilize the market conditions. The strong political sentiments such

as during the debate of president candidates eventually do not have impact towards the stock market as a whole.

IV. CONCLUSIONS

Based on results discussed in the previous section, it can be concluded that there is no indication of price manipulation practice in Indonesia's stock market during the presidential election in terms of return, volatility and liquidity. The intensive 'war of statements' seems to happen only in the media and not directly affect the investors' action. Regarding findings in this research, it is expected to have implications towards theoretical understanding as well as suggestions for market practitioners. Firstly, from the theoretical standpoint, although limited, this study is able to extend the price manipulation detection in three important variables including return, volatility and liquidity. This extension can be tested in other events that may contain price manipulation such as economic crisis, natural disaster or recent pandemic lockdown. Secondly, from the practitioner's standpoint including government and capital market supervisory such as OJK, it is expected to synergize and strengthen the market control in order to create a healthy investment environment. Although, price manipulation is not evidence during the presidential election but an effective monitoring system as well as clearer laws and regulations is important to promote so that public confidence to invest in Indonesia can be improved. Despite the results, this study is also not without limitations. Simple independent t-test in this study may be improved in future studies by employing other methodology including modeling the volatility by employing time series data. Extending the samples is also suggested for further understanding of price manipulation. In addition, detection in each variable may be carried out intensively to gain more insights on price manipulation.

REFERENCES

- [1] S. Hoe and S. Nippani, "2016 U.S. Presidential Election and Stock Markets in China," *Int. J. Econ. Financ.*, vol. 9, no. 7, p. 32, 2017.
- [2] D. A. Muthmainah, "Mencermati Gerak IHSG saat Pilpres Semakin Dekat," *CNN Indonesia*, 2018. [Online]. Available: <https://www.cnnindonesia.com/ekonomi/20180803133928-92-319220/mencermati-gerak-ihsg-saat-pilpres-makin-dekat>.
- [3] T. G. Bali and N. Cakici, "World market risk, country-specific risk and expected returns in international stock markets," *J. Bank. Financ.*, vol. 34, no. 6, pp. 1152–1165, 2010.
- [4] C. Comerton-Forde and T. J. Putniņš, "Measuring closing price manipulation," *J. Financ. Intermediation*, vol. 20, no. 2, pp. 135–158, 2011.
- [5] C. Chaturvedula, N. P. Bang, N. Rastogi, and S. Kumar, "Price manipulation, front running and bulk trades: Evidence from India," *Emerg. Mark. Rev.*, vol. 23, pp. 26–45, 2015.
- [6] M. R. Maxim and A. S. M. Ashif, "A new method of measuring stock market manipulation through structural equation modeling (SEM)," *Invest. Manag. Financ. Innov.*, vol. 14, no. 3, pp. 54–61, 2017.
- [7] M. Siering, B. Clapham, O. Engel, and P. Gomber, "A taxonomy of financial market manipulations: Establishing trust and market integrity in the financialized economy through automated fraud detection," *J. Inf. Technol.*, vol. 32, no. 3, pp. 251–269, 2017.
- [8] D. Gerace, C. Chew, C. Whittaker, and P. Mazzola, "Stock market manipulation on the Hong Kong Stock Exchange," *Australas. Accounting, Bus. Financ. J.*, vol. 8, no. 4, pp. 105–140, 2014.
- [9] J. Y. Uppal and I. U. Mangla, "Market volatility, manipulation, and regulatory response: A comparative study of bombay and karachi stock markets," *Pak. Dev. Rev.*, vol. 45, no. 4, pp. 1071–1083, 2006.
- [10] P. Hillion and M. Suominen, "The manipulation of closing prices," *J. Financ. Mark.*, vol. 7, no. 4, pp. 351–375, 2004.
- [11] T. Chordia, A. Sarkar, and A. Subrahmanyam, "Joint dynamics of liquidity, returns and volatility across small and large firms," *Fed. Reserv. Bank New York Staff Reports*, no. 207, 2005.
- [12] G. A. Karolyi, K. H. Lee, and M. A. Van Dijk, "Understanding commonality in liquidity around the world," *J. financ. econ.*, vol. 105, no. 1, pp. 82–112, 2012.

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- [13] F. A. Longstaff and E. S. Schwartz, "A Simple Approach to Valuing Risky Fixed and Floating Rate Debt," *J. Finance*, vol. 50, no. 3, pp. 789–819, 1995.
- [14] S. J. Grossman and M. H. Miller, "Liquidity and Market Structure," *J. Finance*, vol. 43, no. 3, pp. 617–633, 1988.
- [15] D. G. Wirama, I. G. Bagus Wiksuana, Z. Mohd-Sanusi, and S. Kazemian, "Price Manipulation by Dissemination of Rumors: Evidence from the Indonesian Stock Market," *Int. J. Econ. Financ. Issues*, vol. 7, no. 1, pp. 429–434, 2017.
- [16] Savita and A. Ramesh, "Return Volatility Around National Elections: Evidence from India," *Procedia - Soc. Behav. Sci.*, vol. 189, pp. 163–168, 2015.
- [17] B. M. Blau, T. G. Griffith, and R. J. Whitby, "Information in stock prices: the case of the 2016 U.S. presidential election," *Appl. Econ.*, vol. 51, no. 40, pp. 4385–4396, 2019.
- [18] M. Anshori and S. Iswati, *Metodologi Penelitian Kuantitatif*. Surabaya: Airlangga University Press, 2009.
- [19] Sugiyono, *Business Research methods, quantitative approaches, qualitative, combinations, and R&D*. Bandung: Alfabeta, 2018.
- [20] A. Siahaan, I. A. Ekaputra, and B. Wibowo, "The impact of information transmission and liquidity toward Indonesian corporate bond yield spread," *Pertanika J. Soc. Sci. Humanit.*, vol. 26, no. August, pp. 213–226, 2018.
- [21] Y. Bustaman and A. Hamid, "Liquidity using Corwin and Schultz approach and stock returns in the Indonesian capital market," *Pertanika J. Soc. Sci. Humanit.*, vol. 25, pp. 85–98, 2017.
- [22] N. Krisnawati, E. T. Sule, E. Febrian, and M. Hassan, "Do the brand image and customer loyalty determine the competitive strategy of chain hotels," *Acad. Strateg. Manag. J.*, vol. 15, no. Specialissue3, pp. 114–125, 2016.
- [23] R. K. Aggarwal and G. Wu, "Stock market manipulations," *J. Bus.*, vol. 79, no. 4, pp. 1915–1953, 2006.

Technology Acceptance Model (TAM) Approach in the Financial Services Platform for Msme Sector

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Abstract

This report aims to explore the determinants of Indonesia's financial service industry. Trust element is the qualitative component of financial technology implementation. According to the Technology Adoption Model (TAM), action is determined by the decision to use a given device, which in turn is determined by the expected utility and ease of usage of the method. Study models and questionnaires were planned and administered to 175 small and medium business owners in Bogor, West Java, Indonesia. A Structural Equation Model (SEM) study was used. Results found that the dimensions of vector confidence (benevolence, honesty, reputation, problem-solving orientation) have a major impact on the decision to use financial technology explicitly and indirectly by perceived utility, perceived user-friendliness, and financial technology attitude. The managerial consequences of this study are that Indonesia's financial services industry leaders should recognize the impact of technology adoption actions not only by improving perceived user-friendliness and utility, but also by fostering honesty, reputation, benevolence, and problem-solving orientation

Keywords: Trust, financial service, financial technology, TAM.

I. INTRODUCTION

Today's market background forces companies , particularly small and medium-sized enterprises (SMEs), to be creative, periodically evaluate their methods, adapt their approach to their evolving environment[1] and keep close eye on their performance[2]. The study aim is to understand how the Indonesian financial service industry builds trust with individual consumers, a significant topic that encourages customer-supplier business relationships. In this report, we use owners of small and medium-sized businesses in the Bogor area as consumer participation to capture experiences and knowledge sharing between consumer and financial services industry while addressing product portfolio and service content.

This research utilizes confidence to determine a customer's degree of trust after financial institution initial contact[3]. Trust is foundational in customer-supplier partnerships as part of social capital, therefore, trust is a primary source of partnership worth. For consumers, faith occurs as part of their properties by co-created value[4]. Trust offers a foundation for establishing trust: handling partnerships, risk, opportunities and other business processes. The analytical perspective conflicts with the neoclassical perception that confidence must be understood and is thus cognitive and calculative. Confidence is mostly automatic, utilizing experiential and psycho-motor learning[4]. Confidence relates to the scope and certainty of feelings based on inconclusive facts, and is a core element of the exchange relationship[5].

The Technology Acceptance Model (TAM)[6] seems to be the most generally agreed among IS researchers. According to the TAM, adoption activity is defined by the decision to use a specific method, which is defined by the perceived utility and perceived ease of usage of the system. While IT researchers researched and repeated the TAM and agreed to its validity in forecasting the individual's acceptance to different corporate information technology, the fundamental constructs of the TAM do not completely reflect the particular influences of technical and usage-context considerations that alter consumer acceptance[7]. This research explores and discusses a theoretical model incorporating confidence factors in TAM to include a more detailed model of acceptance of financial service.

2 LITERATURE REVIEW and RESEARCH HYPOTHESIS

A. Trust

Provided faith as the core determinant of partnerships, one perceives the other party as trustworthy. It's a volitional weakness that influences a person to agree

to certain interaction[8]. McKnight et al. (1998)[9] suggest that customers go through phases of confidence in determining whether or not to explore an online enterprise. Confidence is at the core of partnerships of all sorts, it is an essential catalyst in many transactional relationships, and it decides the essence of many businesses[10]. In the sense of the financial services sector, the position of technology confidence and internet confidence has also been recognized[11]. People will overcome their doubt about other people's motivations, goals, and prospective behavior with better confidence[12]. Confidence has a vital impact on users' ability to participate in online money sharing and confidential personal information[13]. A technology acceptance model with more social dimensions must include confidence, particularly when relationships include social instability and risk, as in internet banking[14]. Pavlou (2003)[15] notes trust drives intentions by optimistic mindset. Alsajjan and Dennis (2010)[16] consider that confidence has a beneficial impact on users' perceived utility and attitude towards embracing internet banking. Thus, faith impacts personal expectations regarding the user-friendliness and utility of the financial services industry and determines mindset towards the usage of the financial services industry, which in turn contributes to behavioural intent to use the financial services industry. And it's hypothesized:

H1. Trust has a positive effect on perceived usefulness.

H2. Trust has a positive effect on perceived ease of use.

B. Technology Acceptance Model (TAM)

Davis(1986) built the TAM model[17]. It's an extension of Reasonable Behavior Theory (TRA), precisely adapted to model IS consumer adoption. TAM 's aim is to include an overview of general machine adoption determinants, capable of illustrating consumer activity through a diverse variety of end-user software applications and user populations. Specifically, TAM is focused on two particular values, perceived utility and perceived user-friendliness as the key antecedents of machine acceptance. TAM believes that machine usage is dictated by behavioral intent to use, and perceived utility influences behavioral intent to use. Davis (1989)[17] showed that perceived utility and user-friendliness exert a heavy effect on behavioral intent. Perceived utility is the main factor that specifically influences behavioral purpose, defines a significant proportion of mood, and mediates the

impact of perceived user-friendliness on behavioral intent[18]. And it's hypothesized:

H3. Perceived ease of use has a positive effect on attitude use of the internet.

H4. Trust has a positive effect on attitude use of the internet.

H5. Perceived ease of use usefulness has a positive effect on attitude use of internet

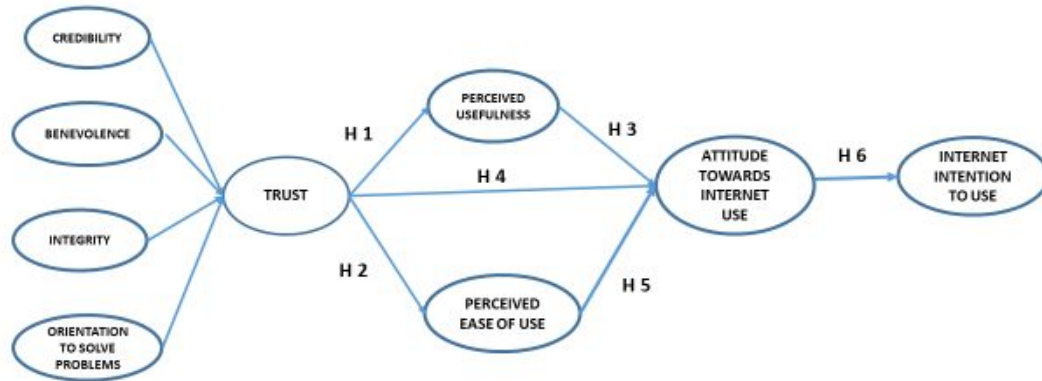
H6. Attitude use of internet has a positive effect on internet intention to use

II. METHOD

Small and medium-sized enterprises (SMEs) in Bogor, West Java, using a descriptive and insightful survey approach of unit study. Collecting data in a cross-sectional time frame. According to Biro Pusat Statistik 2018, the micro-business population in the Bogor area is 689,101 units, small business 41,341 units, medium business 5,993 and large business 1,339. Using non-probability sampling methodology to collect representative results. Research respondents were members of small and medium-sized businesses (SMEs) in Bogor.

Data was collected by distributing questionnaires directly to 175 owners of SMEs in the Bogor area. In this analysis, the metrics included in the questionnaire were indexed using previous Scopus studies and a five-point Likert scale. Analyzed the data using AMOS Structural Equation Simulation. According to Ghazali (2012)[19], AMOS Structural Equation Modeling Analysis is a powerful tool because it can be applied to any data scale (nominal, ordinal, interval , and ratio) form. Outlier checking is performed to see which data deviation, missed meaning review to see whether data is missing or incomplete. Outliers and incomplete details show both metrics and dimensions.

A research design was built by modifying pre-analysis measures to ensure scale material validity[20].



Modified from: Kaouther Ben Mansour (2015), Journal of Business & Industrial Marketing 31/8 (2016) 982–994.

Figure 1. : Research Model.

A. Data analysis

- Analysis of Measurement Model

This thesis used Structural Equation Model (SEM) to evaluate research results. Due to its ability, SEM was ideal for evaluating the research hypothesis to calculate latent variables and assess the causal association between variables. The program used was AMOS 23. Validity checking was done to see how well the indicator would calculate a construct, thus evaluating reliability to see the accuracy of variables in measuring latent build. According to Ghazali (2012) (20), a vector is said to have strong latent validity if: (1) loading factor (π) = 0.5, (2) T-Statistics > 1.96. Results indicate that each indicator used in this analysis is accurate, since it satisfies the criteria.

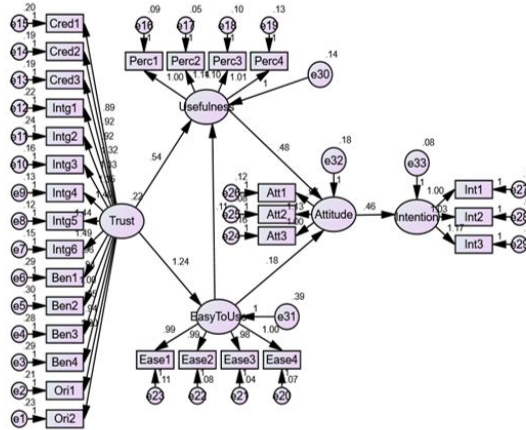


Figure 2. Analysis of Measurement Model

Figure 2 is a measurement model of 175 respondents that have been screened. Validity and reliability testing had been done using AMOS version 23 software. The result showed that all indicators are valid because they met the requirement. According to Hair et al., (2010) [21] a variable is valid if the standardized loading factor ≥ 0.50 . And the reliability test, using the criteria for the value of AVE ≥ 0.50 and CR ≥ 0.70 .

Table 1 Validity Test

		Estimate
Ori2	<--- Trust	.679
Ori1	<--- Trust	.651
Ben4	<--- Trust	.687
Ben3	<--- Trust	.702
Ben2	<--- Trust	.673
Ben1	<--- Trust	.646
Intz6	<--- Trust	.913
Intz5	<--- Trust	.943
Intz4	<--- Trust	.887
Intz3	<--- Trust	.866
Intz2	<--- Trust	.775
Intz1	<--- Trust	.779
Cred3	<--- Trust	.656
Cred2	<--- Trust	.681
Cred1	<--- Trust	.654
Perc1	<--- Usefulness	.831
Perc2	<--- Usefulness	.898
Perc3	<--- Usefulness	.869
Perc4	<--- Usefulness	.805
Ease4	<--- EasyToUse	.945
Ease3	<--- EasyToUse	.944
Ease2	<--- EasyToUse	.975
Ease1	<--- EasyToUse	.936
Att3	<--- Attitude	.806
Att2	<--- Attitude	.913
Att1	<--- Attitude	.830
Int1	<--- Intention	.698
Int2	<--- Intention	.807
Int3	<--- Intention	.727

Table 2 Reliability Test

Construct Reliability			
	Construct Loading	measurement error	Construct Reliability
Trust	11.192	6.491	0.951
Perceived Usefulness	3.403	1.100	0.913
Perceived Easy To Use	3.800	0.389	0.974
Attitude	2.549	0.828	0.887
Intention	2.232	1.333	0.789

Variance Extracted				
	Standard Loading	Kuadrat	measurement error	VE Construct
Trust	8.509		6.491	0.567
Perceived Usefulness	2.900		1.100	0.725
Perceived Easy To Use	3.611		0.389	0.903
Attitude	2.172		0.828	0.724
Intention	1.667		1.333	0.556

Validity Discriminant		
	VE Construct	AVE
Trust	0.567	0.753
Perceived Usefulness	0.725	0.851
Perceived Easy To Use	0.903	0.950
Attitude	0.724	0.851
Intention	0.556	0.745

B. Analysis of Structural Model

Structural model research was performed to evaluate the connection between constructs in the proposed model and then determine the course of significant paths between constructs. The structural model's overall fit was adequate, with all applicable fit indices above 0.90. GFI is 0.820; AGFI is 0.747; TLI is 0.937. The structural path study outcome shows the structural path of the construct. Five of the models are relevant statistically at 0.05 amount. After the outcome of structural route analysis matched with the hypothesis, six hypotheses (H1, H2, H3, H4, H5, and H6) were endorsed.

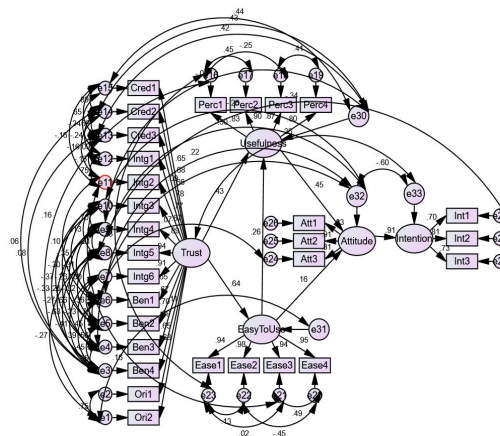


Figure 3 Structural Model

Table 3 Goodness Of Fit Index

<i>Goodness of fit Index</i>	<i>Cut of value</i>	<i>Result</i>	<i>Criteria</i>
CMIN/DF	≤ 2,0	1,945	Good Fit
GFI	≥ 9,0	0,820	Marginal
AGFI	≥ 9,0	0,747	Marginal
TLI	≥ 9,5	0,937	Good Fit
CFI	≥ 9,5	0,952	Good Fit
RMSEA	≤ 0.80	0.074	Good Fit

Table 4 Hypothesis Test Result

		Estimate	S.E.	C.R.	P	Label
Easy.To.Use	<-- Trust	1.219	.146	8.340	***	
Usefulness	<-- Trust	.468	.097	4.812	***	
Usefulness	<-- Easy.To.Use	.149	.045	3.333	***	
Attitude	<-- Easy.To.Use	.102	.040	2.528	.011	
Attitude	<-- Usefulness	.497	.086	5.758	***	
Intention	<-- Attitude	.600	.106	5.660	***	
Ori2	<-- Trust	1.000				
Ori1	<-- Trust	.934	.056	16.558	***	
Ben4	<-- Trust	1.028	.125	8.211	***	
Ben3	<-- Trust	1.071	.127	8.443	***	
Ben2	<-- Trust	1.001	.123	8.148	***	
Ben1	<-- Trust	.973	.120	8.074	***	
Intz6	<-- Trust	1.640	.146	11.258	***	
Intz5	<-- Trust	1.612	.151	10.646	***	
Intz4	<-- Trust	1.489	.137	10.835	***	
Intz3	<-- Trust	1.452	.137	10.590	***	
Intz2	<-- Trust	1.367	.139	9.805	***	
Intz1	<-- Trust	1.359	.138	9.828	***	
Cred3	<-- Trust	.900	.107	8.392	***	
Cred2	<-- Trust	.930	.107	8.701	***	
Cred1	<-- Trust	.892	.106	8.378	***	
Perc1	<-- Usefulness	1.000				
Perc2	<-- Usefulness	1.120	.058	19.263	***	
Perc3	<-- Usefulness	1.127	.099	11.382	***	
Perc4	<-- Usefulness	1.007	.091	11.082	***	
Ease4	<-- Easy.To.Use	1.000				
Ease3	<-- Easy.To.Use	.968	.031	31.251	***	
Ease2	<-- Easy.To.Use	1.030	.049	20.888	***	
Ease1	<-- Easy.To.Use	1.011	.054	18.570	***	
Att3	<-- Attitude	1.000				
Att2	<-- Attitude	1.146	.086	13.352	***	
Att1	<-- Attitude	.974	.080	12.242	***	
Int1	<-- Intention	1.000				
Int2	<-- Intention	1.107	.121	9.158	***	
Int3	<-- Intention	1.255	.148	8.458	***	

The confidence element influences TAM structures. Credibility, benevolence, problem-solving orientation, and honesty have a major effect on perceived utility, perceived user-friendliness, attitude towards internet usage, and internet purpose. H1: Confidence influences presumed utility. Significance value on trust 's effect on perceived usefulness is 0.000 or (* * *) such that the sense value is lower than 0.01 and it may be inferred that trust 's influence on perceived usefulness may be viewed with 99 percent

trust. The average worth is 0.468, implying a favorable impact indicates the greater the confidence the expected utility would also be. H2: Trust 's impact on ease-of-use. The meaning value of trust effect on perceived easy to use is 0.000 or (* * *) such that the meaning value is lower than 0.01 and it can be inferred that with a belief level of 99 percent, it can be interpreted that trust affects perceived ease. The average meaning of 1,219 which implies optimistic impact means that the higher the confidence, the higher the perceived user-friendly would be. H3: The perceived impact on perceived utility. The meaning value on the impact of perceived easy to use on perceived usefulness is 0.000 or (* * *) such that the meaning value is lower than 0.01 and it may be inferred that the perceived easy to use effect on perceived usefulness may be viewed with a 99% trust level. The estimated meaning of 0.149, which implies a favorable impact, means that the higher perceived user-friendliness would also increase. H4: The perceived attitude-friendly influence. The meaning value on the impact of perceived ease of use on attitude is 0.011 such that the meaning value is lower than 0.05 and it can be inferred that an impact of perceived ease to use on attitude can be viewed with a 95% trust level. The average meaning is 0.102, which implies a favorable impact implies that the higher perceived user-friendly personality would also be higher. H5: Attitude Perceived Usefulness Effect. Significance significance on the impact of perceived usefulness on attitude is 0.000 or (* * *) such that the sense value is lower than 0.01 and it may be inferred that the effect of perceived usefulness on attitude may be viewed with 99 percent trust. The average meaning is 0.497, which implies the higher expected utility implies the better mindset. H6: Attitude impact on purpose. Significance significance on the influence of attitude on intention is 0,000 or (* * *) because the sense value is lower than 0.01 and it can be inferred that with a trust level of 99 percent it can be perceived that attitude influences intention. The estimated value is 0.600, indicating positive impact implies better mood, better purpose. We infer that H1, H2 H3, H4, H5 and H6 are supported.

III. DISCUSSION

Confidence dimensions, honesty, benevolence, problem solving orientation, and competence have a direct effect on internet intention to use by perceived utility and perceived user-friendliness to implement the internet in the financial service industry. Reid and Levy (2008)[22] showed a clear confidence impact on TAM 's perceptual variables. Internet usage in the financial services industry is entirely voluntary and that the target consumer community consists of conscientious companies of diversified backgrounds, the

results of this study indicate that to draw more internet users in the financial services industry, it would not be enough to render the framework convenient to communicate with and useful.

These findings offer useful lessons for financial services sector administrators who should be conscious of the value of diverse views regarding perceptions of consumers. Managers should suggest shaping Internet actions not only by cultivating user-friendliness and usefulness values, but also by fostering reputation, benevolence, problem-solving orientation and honesty. They can, of course, develop informative applications for future adopters to include open Internet financial services industry portals, simple page updates, fast checkout times, convenient applications, a broad range of financial products / services customized to particular market demands, customer-friendly platform to regular usage rewards for active customers. Practitioners should also pay special attention to preventing internet users from experiencing access difficulties, device failures, dropouts, service delays and system malfunctions which ultimately decrease their trust.

As safety and protection are of greater importance to consumers whilst the financial services sector is online, administrators can also aim to attract consumers by reflecting on and communicating the credibility of the financial services industry and demonstrate how the financial services industry has ensured data confidentiality and security. The financial services industry should strive to create a stable and inventive image and receive endorsements and good word-of - mouth that should boost the understanding of the trustworthiness of the financial services industry and increase the understanding of prospective users of the website's usefulness.

The analysis also shows that the belief – attitude – intention – use stream is still successful in forecasting the conduct of the business' internet financial services industry. Results suggest that perceived user-friendliness has a major impact on perceived utility and attitude towards Internet use. Perceived utility defines mindset and purpose to use internet banking. This is compatible with results from previous research in which the action and attitude of purpose of consumers depends on their assessment of technology benefits[23].

IV. CONCLUSION

A multidimensional confidence variable (benevolence, honesty, reputation, problem-solving orientation) was suggested to substantially affect the decision to use internet banking explicitly and indirectly by perceived utility, perceived ease of usage, and attitude towards internet use in the financial services industry.

This study's benefits to financial services sector executives are twofold. Second, the confidence variable was found to be a significant determinant of perceived utility, attitude towards internet access and plan to use the internet. Second, it implemented the expanded TAM in a new knowledge sense. Users' belief that e-transactions are simple and controllable is important for the acceptance of the financial services sector, as simplicity of usage and faith build expectations of controllability and usability.

This scientific analysis has limits. Second, the research results and conclusions are drawn from a single study that explored a specific technology background and addressed a specific consumer audience. Second, this review took a snapshot analysis approach. This reduces this study's potential to represent temporal shifts in research constructs, particularly as internet use of financial services industry experiences increases.

REFERENCES

- [1] Ates, A., Garengo, P., Cocca, P., and Bititci, U. (2013), "The development of SME managerial practice for effective performance management", *Journal of Small Business and Enterprise Development*, Vol. 20 No. 1, pp. 28-54.
- [2] Cocca, P. and Alberti, M. (2010), "A framework to assess performance measurement systems in SMEs", *International Journal of Productivity and Performance Management*, Vol. 59 No. 2, pp. 186-200.
- [3] Koufaris, M. and Hampton-Sosa, W. (2004), "The development of initial trust in an online company by new customers", *Information and Management*, Vol. 41 No. 3, pp. 377-397.
- [4] Smyth, H., Gustafsson, M. and Ganskau, E. (2010), "The value of trust in project business", *International Journal of Project Management*, Vol. 28 No. 2, pp. 117-29.
- [5] Ennew, C., Kharouf, H. and Sekhon, H. (2011), "Trust in UK financial services: a longitudinal analysis", *Journal of Financial Services Marketing*, Vol. 16 No. 1, pp. 65-75.

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- [6] Davis, F.D., Bagozzi, R.P. and Warshaw, P.R. (1989), "User acceptance of computer technology: a comparison of two theoretical models", *Management Science*, Vol. 35 No. 8.
- [7] Ezzi, S.Z. (2014), "A theoretical model for internet banking: beyond perceived usefulness and ease of use", *Archives of Business Research*, Vol. 2 No. 2, pp. 31-46.
- [8] Mayer, R.C., Davis, J.H. and Schoorman, F.D. (1995), "An Integrative Model Of Organizational Trust", *The Academy of Management Review*, Vol. 20 No. 3, pp. 709-734.
- [9] McKnight, D.H., Cummings, L.L. and Chervany, N.L. (1998), "Initial trust formation in new organizational relationships", *Academy of Management Review*, Vol. 23 No. 3, pp. 472-490.
- [10] Popoola, N.F. and Ibn Arshad, M.D.R. (2015), "Strategic approach to build consumers' trust in adoption of internet banking in Nigeria", *Journal of Internet Banking and Commerce*, Vol. 20 No. 1.
- [11] Yu, P.L., Balaji, M.S. and Khong, K.W. (2015), "Building trust in internet banking: a trustworthiness perspective", *Industrial Management & Data Systems*, Vol. 115 No. 2, pp. 235-252.
- [12] Kramer, R.M. (1999), "Trust and distrust in organizations: emerging perspectives, enduring questions", *Annual Review of Psychology*, Vol. 50 No. 1, pp. 569-598.
- [13] Alalwan, A.A., Dwivedi, Y.K., Rana, N.P., Lal, B. and Williams, M.D. (2015), "Consumer adoption of internet banking in Jordan: examining the role of hedonic motivation, habit, self-efficacy and trust", *Journal of Financial Services Marketing*, Vol. 20 No. 2 (1 June), pp. 145-157
- [14] Gefen, D., Karahanna, E. and Straub, D.W. (2003), "Trust and TAM in online shopping: an integrated model", *MIS Quarterly*, Vol. 27 No. 1.
- [15] Pavlou, P.A. (2003), "Consumer acceptance of electronic commerce: integrating trust and risk with technology acceptance model", *International Journal of Electronic Commerce*, Vol. 7 No. 3.
- [16] Alsajjan, B. and Dennis, C. (2010), "Internet banking acceptance model: across – market examination", *Journal of Business Research*, Vol. 63 No. 9, pp. 0148-2963.
- [17] Davis, F.D. (1986), *A Technology Acceptance Model for Empirically Testing New End-User Information Systems: Theory and Results*, Massachusetts Institute of Technology, Cambridge, MA.
- [18] Chen, Y.H. and Barnes, S. (2007), "Initial trust and online buyer behaviour", *Industrial Management & Data Systems*, Vol. 107 No. 1, pp. 21-36.

-
- [19]Ghozali, I. (2015). Partial Least Squares, Konsep, Teknik dan Aplikasi Menggunakan Program SmartPLS 3.0: Semarang: Badan Penerbit Universitas Diponegoro.
- [20]Kaouther Ben Mansour (2015), Journal of Business & Industrial Marketing 31/8 (2016) 982–994.
- [21]Hair, J.F (2010), Multivariate Data analysis: A Global Perspective, Upper Saddle River, Pearson.
- [22]Reid, M. and Levy, Y. (2008), “Integrating trust and computer self-efficacy with TAM: an empirical assessment of customers’ acceptance of Banking Information Systems (BIS)inJamaica”,JournalofInternetBankingandCommerce, Vol. 13 No. 3, pp. 1-19.
- [23]Ezzi, S.Z. (2014), “A theoretical model for internet banking: beyond perceived usefulness and ease of use”, Archives of Business Research, Vol. 2 No. 2, pp. 31-46.

The Effect of Behavioral Factors in Investor's Investment Decision

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Abstract

Behavioral finance theories are based on psychology, it is an attempt to understand how emotions and cognitive errors influence individual investor's behaviors. This study investigated the role of behavioral finance towards investor psychology during their investment decision-making at the Indonesian Stock Exchange. To collect the data needed, a descriptive survey design was chosen. The questionnaires designed have both open-ended and closed-ended questions which use 5-point Likert measurements. Cronbach's Alpha Test was used to test the internal consistency and reliability. Factor analysis and descriptive analysis was used to analyze the data.

The study established that behavioral factors such as availability bias, overconfidence, loss aversion, mental accounting and market factors affected the decisions of the investors operating at the IDX. However, herding behavior shows moderately low results within the investors of IDX.

Keywords: Behavioral Finance, Heuristic Theory, Prospect Theory, Herding Behavior, Market factors, Investor Psychology.

I. INTRODUCTION

There are various ways in which investors choose to or make their portfolio based on the risk and the return they expect when they are investing in the stock market: portfolio allocation based on expected return and risk. Pricing of contingent claims, CAPM, and the Miller- Modigliani theorem and its augmentation by the theory of agency.

The theory stated above however only applies in which the market is efficient and that everyone in the market is a rational investor or in the situation that fits the Efficient Market Hypothesis (EMH). Efficient Market is a situation in which there are always plentiful buyers and sellers and the market prices will reflect all information available to the market. Many of the traditional finance models are based on the theory of EMH, which the market is always efficient, that the investors are all rational and they will always strive to maximize profit. This belief in the efficient market could affect the financial model's ability to make an accurate prediction.

When investing, there are a lot of things that could affect investor's investment decision making outside the historical and fundamental analysis. External factors such as economic crash, changes in government regulation, political instability, economic recession or slowing down could affect the stock market greatly.

Aside from the external factors listed above, there are internal factors, an investor's individual decision that could affect the investment decision of the investors. A lot of these internal factors are affected by cognitive illusion and human errors that could lead investors to make an illogical investment decision.

Explaining the anomalies in the stock market such as an unexpected bubble or burst in the stock market could be done by using one of the branches of Behavioral Economic, Behavioral Finance. "Behavioral finance is the study of the influence of psychology on the behavior of financial practitioners and the subsequent effect on markets" (Subrahmanyam, 2007).

Within behavioral finance, it is assumed that the characteristics of market participants and the information structure will affect investor's investment decisions. Behavioral finance attempts to fill the gap by combining scientific insights into individual's reasoning with traditional financial theory.

The Indonesian stock exchange (IDX) has been growing rapidly in the past few years. Based on the data provided by PT Kustodian Sentral Efek Indonesia (KSEI) on 19 November 2018, there was 628.491 Single Investor Identification (SID) in 2017. It grew by 31,97% to 829.426 single investors in 2018. By 2019, IDX claimed that on the 29th of August 2019 that there are over a million investors in the stock exchange market, rising

over 25% from the previous year and is projected to reach 1,25 million investors by the end of the year (CNN, 2019).

The trend of stock trading is an increasing trend in Indonesia. There are over 178.000 new investors and the trading frequency has increased by 32% compared to previous years (CNN, 2019).

Most behavioral finance studies have been carried out in developed markets. Only a few studies have been completed in Indonesia with the most being done on Herding Behavior. There is lack of research on the behavioral finance in Indonesia, emphasis on the biases or cognitive illusion effect on the investors of Indonesia Stock Exchange (IDX)

Behavioural finance specifically studies various psychological biases that humans possess. These biases often lead to irrational investment decisions. There are a lot of form of Behavioural Factors that could affect investment decision, however this paper focuses on the Anchoring, Overconfidence, Availability Bias, Loss Aversion, Regret Aversion, Mental Accounting, Herd Behaviour and Market Factors. The purpose of this paper is to show and analyse the Financial biases that affect the Indonesian Investor that is actively trading in the Indonesia Stock Exchange (IDX).

2. LITERATURE REVIEW

A. Behavioral Finance

Behavioral finance is an attempt to explain the reasoning patterns of investors, including how much it influences the investors and the emotional processes involved during the decision making process. Essentially, it tries to explain the 'what, why, and how' of investing from a human perspective. (Victor Ricciardi, 2000)

Described by Meir Statman, Behavioral finance has normal people in it. Standard finance, on the other hand, is finance that has rational people in it. He stated that normal people are not irrational, but sometimes they are affected by cognitive errors and emotions. (Statman, 2014)

B. Heuristic

Heuristics is a mental shortcut that ease the cognitive load of decision making. (Myers, 2010). It is a practical problem solving method that is not guaranteed to be optimal, perfect or rational but could speed up the process of finding a quick and easy solution. People usually use heuristics when facing a problem, finding an optimal solution is hard and time consuming.

Heuristics are rules of thumb that are used to make a decision when there is a complex situation and uncertainty. Decision making is not strictly rational because the information collected is objectively evaluated, the decision maker might take a mental shortcut. (Kahneman D, 1979). Examples of illusions resulting from the use of heuristics include: Anchoring, Overconfidence and Availability Bias

C. Anchoring

Anchoring bias is the tendency of people to use irrelevant or false information as a reference for evaluating an unknown value. "it is a mental process by which people give more importance to their previous views or predictions to the detriment of new information" (Edwards, 1968).

People generally begin by visualizing some initial value or an "anchor" which they then adjust to reflect subsequent information and analysis (Pompian, 2006). Investors are expecting that earning trend to be similar to the historical trend. (Kannadhasan, 2015)

D. Overconfidence

Overconfidence is the tendency to hold a misleading assessment of a person's ability, skills, intellect, or talent. Overconfidence tends to appear when the uncertainty is high and a correct judgement is hard to form (Hirshleifer D. , 2014).

In investment, the ability to recognize profitable investment is perhaps misunderstood by investors that has overconfidence bias (Javed, Bagh, & Razzaq, 2017)

E. Availability Bias

Availability bias is a heuristic that investors use to estimate the likelihood of an outcome based on how familiar they are to the situation. Investors that have this bias perceive the recurring as being more likely to happen again compared to other prospects that are harder to comprehend. (Pompian, 2006)

F. Prospect theory

Prospect theory states that people value losses and gains differently, and they in turn will make investment decisions based on what they perceive to be gains instead of losses. Given two choices, individuals will choose the one presented with potential gains over the term with possible losses.

“People overweight outcomes that are probable in comparison with those that are certain”. He also stated that “People also respond differently to equivalent situations depending on whether they are presented in the context of losses or gains” (Kahneman D, 1979).

The theory proposes that several states of mind could affect people's decision-making processes. Prospect theory also subjectively observes how investors mentally “frame” the predicted outcomes, (Pompian, 2006). The key concepts include: Loss aversion, mental accounting, and herd behavior.

G. Loss Aversion

Loss aversion refers to the situation in which investors prefer to avoid loss compared to gain. The emotional impact from a loss was shown to be 2,5 times the impact of a gaining profit. (Kamran Sairafi, 2008). It is the bias in which as described by Daniel Kahneman and Amos Tversky, the developer of the original prospect theory as in the situation in which “losses loom larger than gains” (Kahneman D, 1979).

H. Mental Accounting

According to the original developer Richard Thaler, “Mental Accounting is a set of cognitive operations used by individuals to organize, evaluate, and keep track of their financial activities.” (Thaler, 1999).

Regarding mental accounting, Robert Shiller said that “Investors tend to treat each element of their investment portfolio separately, which can lead to inefficiency, and inconsistency in making investment decisions” (Shiller R.J., 2000).

I. Regret Aversion

Regret aversion refers to the emotion investors experienced after knowing that the decision they took turns out to be bad or inferior. Investors who are influenced by this bias are most likely to take less risk because they are afraid of making bad decisions. (H. Kent Baker, 2014)

This theory could explain investor's reluctance to sell onto losing investments to avoid admitting errors or realizing losses. Investors that have this bias avoid taking decisive actions because they fear that whatever course of action they take will be less than optimal. (Pompian, 2006).

J. Herding Behavior

Herd behavior refers to the situation in which people follow the trend without any further thought regarding the situation. Herd effect refers to the phenomenon that individuals give up their own opinions, change their original attitude and adopt the behavior consistent with the majority under the pressure of social groups. (Liu Xiaqing, 2019).

It also refers to the fact that investors are struggling to make accurate forecasts on the market due to insufficient information. In this case, the investor's information is often observed from the behavior of the crowd, and the information will be strengthened continuously, finally resulting in a herd behavior. In the herd effect, the individual behavior may be rational, but it may lead to collective irrational behavior (Zhou, 2012).

K. Market Factors

Market Factors refer to the situation in which financial markets are affected by investors' behaviors. Thus by looking at the price changes, the market information and other market factors, it could be said that investor's decision making is influenced by market factors. (De Bondt & Thaler, 1995).

II.METHOD

A. Introduction

This chapter explains the procedures that were used to collect data. The study will involve various individual investors that have been involved in the Indonesian Stock Exchange (IDX). The research focuses on how behavioral finance affects investor's decisions regarding their investment in IDX.

B. Research Design

This study is categorized as exploratory study. To achieve the studies' exploratory nature of research, descriptive survey design was used for data collection. This method is suitable due to its ability to show how the investor's decision making and behavior in reality is consistent with the existing theories.

C. Population and Sample planning

- Population

The study involved surveying individual investors who trade at the Indonesian Stock Exchange so as to understand their decision making processes. There are 1.567.869 active investors in IDX (PT BURSA EFEK INDONESIA, 2018).

- Sample

Out of the investors trading at the Indonesian Stock Exchange, a sample of 36 individual investors was chosen using a random sampling method. This was due to the limitations of time, number of investors trading, financial constraints and limited human resource in undertaking the study.

C. Data Collection

Primary data was collected using survey; questionnaires were made using both closed and open ended questions to capture the important information about the population.

In general, works treating behavioral finances are based on questionnaires because by doing so researchers are able to interpret the psychology beliefs of the investors (Mustapha Chaffai, 2014).

The questionnaire incorporated into three sections with the first section focusing on the respondent's background information, the second section focusing on the investor's financial background, while the third part consisted of the economic scenarios related to the studies. This research was based on the theories of behavioral finance: Heuristic theory. Prospect theory, and Herding theories factors on investors' decision making.

A 5-point Likert rating scale was used to ask the individual investors to evaluate the degrees of their agreement with the impacts of behavioral factors on their investment decision. The 5 points in the scale are respectively from 1 to 5: extremely disagree, highly disagree, neutral, highly agree, and extremely agree.

D. Data Analysis and Validity

The data was analyzed using SPSS and the content analysis was used in summarizing the finding. Descriptive statistics was used to summarize the data using tables and graphs to present the data. Factor analysis was used to test the reliability of the items in the multi-item scales. Cronbach's Alpha Test was used to test the internal consistency reliability of measurements.

To ensure the reliability and validity, the score of Cronbach's alpha test should be at least 0.7 (Nunnally, 1975). However, many statisticians believe that it can be acceptable if Cronbach's alpha is over 0.6 (Nelson Waweru, 2008).

III. RESULTS

The Cronbach's alpha was used to measure reliability random errors. The reliability coefficient of all indicators of industrial performance was 0.74 which indicated the high reliability. The demographic and individual investor choices summary is shown on table 4.1. The sample consisted of 36 respondents.

Table 4.1 Demographic and Individual Choice Summary

Table 4.1 Demographic and Individual Choice Summary

<u>Title</u>	<u>Category</u>	<u>%</u>
Gender	Male	86.11%
	<u>Female</u>	<u>13.89%</u>
Age	26-35	50.00%
	36-45	11.11%
	<u>>45</u>	<u>38.89%</u>
Educational	Highschool	5.56%
Qualification	Diploma	13.89%
	Bachelor	50.00%
	Master	25.00%
	<u>PhD</u>	<u>5.56%</u>
Monthly	Rp. 7,000,000 - Rp. 12,000,000	19.14%

Income	Rp. 12,000,000 - Rp. 17,000,000	11.11%
	Rp. 17,000,000 - Rp. 22,000,000	16.67%
	<u>>Rp. 22,000,000</u>	<u>52.78%</u>
Employment	Formal Employment	72.22%
	<u>Self-Employment</u>	<u>27.78%</u>
<u>Title</u>	<u>Category</u>	<u>%</u>
Trading	<1 year	5.56%
Duration	1-3 years	52.78%
	3-5 years	16.67%
	<u>>5 years</u>	<u>25.00%</u>
Purchasing	Financial Knowledge and Experience	55.56%
Motivation	Friends	30.56%
	<u>Others</u>	<u>13.89%</u>
Type of Investors	Short Term	25.00%
	Long Term	22.22%
	<u>Both</u>	<u>52.78%</u>
Sell part or all of the Portfolio	Yes	86.11%
	No	13.89%

Source: Author

A. Impact Levels of Behavioral Factors on the Individual Investment Choices

The impact levels of behavioral factors on the individual investment decision are identified by calculating the values of sample mean of each variable. Using mean of likert scale is recommended when researchers are attempting to measure less concrete concepts (Sullivan & Artino, 2013). The mean values of these variables can decide their impact levels on the investment decision making (Nelson Waweru, 2008).

Because 5-point scales with 1 to 5 score of: extremely disagree, highly disagree, neutral, highly agree, and extremely agree. The grading system will be the following:

1. Range formula: highest score minus the lowest score = (5-1=4)
2. Length of the cell formula: Range ÷ number of levels = length of the cell (4÷5 = 0.8)
3. Add the value of the length of the cell (0.8) to the beginning of the scale to determine the upper limit for the first cell Meaning that:
 - Mean values from 1 to 1.8 shows that the variables have very low impacts
 - Mean values from 1.81 to 2.6 shows that the variables have low impacts
 - Mean values from 2.61 to 3.2 shows that the variables have moderate impacts
 - Mean values from 3.21 to 4 shows that the variables have high impacts
 - Mean values from 4,1 to 5 shows that the variables have very high impacts

Source: Areiqat, Abu-Rumman, Al-Alani, & Alhorani, 2019, Modified by Author

B. Impact of Heuristics Factors

The heuristic factors that might affect investor individual decisions are anchoring, overconfidence and availability bias. The impact of the mentioned behavior factors is shown in table 4.2

Table 4.2 Impact of Heuristics Factors

Factors	Q u e s t i o n s	Mean	Median	Mo de	Std. Dev iation
Anchoring	I buy 'hot' stocks and avoid stocks that have performed poorly in the recent past	3.31	3	3	1.167
	I forecast the changes in stock prices in the future based on the recent stock prices.	3.11	3	3	1.116
Overconfidence	I believe that my skills and knowledge of the stock market can help me to outperform the market.	3.81	4	4	0.856
Availability Bias	I prefer to buy local stocks than international stocks because the information of local stocks is more available.	3.56	4	4	1.275

Source: Author

Based on the results above, it could be said that within the heuristics factors, overconfidence (with 3.81 mean) has the highest impact towards the investment decision of the investors. Most respondents do agree that to some degree, their ability could outperform the market which indicates their confidence in their skill. These results are in line with Chen & Rui (2011) and Javed (2017).

Anchoring has a high impact towards the investment decision of investors. Most people are neutral on both the questions regarding the anchoring bias. On the variable A1 it has slightly higher impact (3.31) compared to A2 (3.11). The results of mental accounting are consistent with Waweru (2008), Hadbaa (2019).

Availability bias has a mean of 3.56 which shows relatively high impact towards the investment decision compared to the anchoring bias. Most respondents do agree that they prefer stock with more available information. This is constant with Waweru (2008) and Javed (2017).

As such, among the heuristic factors, overconfidence has the strongest impact on investors when they do stock trading. This means that the respondents rely on their analysis and knowledge of the stock market.

C. Impact of Prospect Variables

The prospect factors that might affect investor individual decisions are regret aversion, loss aversion and mental accounting. The impact of these behavior factors is shown in table 4.3

Table 4.3 Impact of Prospect Factors

Factor	Questions	Mean	Media	Mo	Std.
s			n	de	Deviation
Loss Aversi on	After a prior loss, I become more risk averse.	3.17	3	4	1.183
Regret Aversi on	I avoid selling shares that have decreased in value and readily sell shares that have increased in value.	2.81	2.5	2	1.215
Mental Accou	I tend to treat each element of my investment portfolio separately.	3.61	4	4	0.964

ning

I ignore the connection between different investment possibilities	2.39	2	2	0.803
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Source: Author

Based on the results above, loss aversion shows moderate impact and has a mean of 3.17. Most investors agree that to some degree loss aversion affects their investment decision. The result for loss aversion is in line with Chaffai & Medhioub (2014), Hadbaa (2019).

Regret aversion has a moderate impact with a mean of 2.81. most of them disagree about the regret aversion affecting them. The result of the regret aversion is in line with Kengatharan (2014), and

Mental Accounting (MA) shows a high impact towards investment decisions (3.61) on (MA1). MA1 have 3.61 mean and have a high impact towards their decision, this could be interpreted that the respondent chooses to sacrifice efficiency to ensure that they could perform better in the market. Most people do agree that they treat each element of their portfolio separately. MA2 has a 2.39 mean and has a moderate impact on the investments decision, this shows that investors are not avoiding other possibilities of investment in case one of their investments is not in a good situation. These results are in line with Waweru (2008), Hadbaa (2019) that found mental accounting to have a positive and significant impact on investment decisions. As such, amongst the prospect factors, mental accounting has the most significant impact on investment decisions. The answer indicates that the investors take more time and consideration when making their portfolio.

D. Impact of Herding Behavior

The herding behaviour that will be identified in this aspect including the type of stocks, volume of stocks and buying-selling decision of other investors and the respondent speed to react to the market. The impact of herding behavior will be shown in table 4.4

Table 4.4 Impact of Herding Factors

Factors	Questions	Mean	Median	Mode
Herding Behavior	Other investors' decisions of choosing stock types have an impact on my investment decisions.	2.89	3	4
	Other investors' decisions of the stock volume have an impact on my investment decisions.	2.92	3	4
	Other investors' decisions of buying and selling stocks have an impact on my investment decisions.	2.81	3	4
	I usually react quickly to the changes of other investors' decisions and follow their reactions to the stock market.	2.47	2	2

Source: Author

Based on the results above, it could be said that herding behavior has a moderate impact towards the investment decision of the respondent. The stock type (2.89), volume (2.92) and transaction (2.81) shows a moderate impact while the market trend (2.47) has the lowest impact towards the investment decision. Most people are neutral towards the other investor's investment decision but they disagree that they will react fast to the trend. As such, it could be said that herding behavior has relatively moderate to low impact towards the investment decision of investors. These results are in line with Kengatharan (2014).

E. The Impact of Market Factors

The market factors that will be identified in this aspect including price changes, market information and past trends of stock. The impact of market factors could be seen in table 4.5

Table 4.5 Impact of Market Factors

Factors	Questions	Mean	Median	Mode
Market Factors	I consider carefully the price changes of stocks that I intend to invest in.	3.92	4	4
	Market information is important for my stock investment.	4.22	4	4
	I put the past trends of stocks under my consideration for my investment.	3.69	4	4

Source: Author

Based on the result above it shows that the market factors have a really high impact towards the investment decisions of the investors. The market information specifically has a very high impact towards the investment decision (4.22), followed by the change of stock price (3.92) and past trends (3.69) which have a high impact. Based on the trend most people do agree that the market factors affect their investment decision. It could be concluded that the market information has the most significant impact within the market factors. This is in line with (Nelson Waweru, 2008) and (Kengatharan & Kengatharan, 2014)

IV. CONCLUSION

These studies examine the effect of behavioral factors on investment decisions. The study was conducted by spreading questionnaires to investors that are actively trading in IDX. Based on the findings, this study points out several conclusions:

Behavioral factors significantly affect an investor's decision making process. Market Factors, Heuristic Factors and Prospect Factors highly affect the investor's investment decision, however the investors also show that they are not prone to herding behavior.

Market Factors, Overconfidence, Availability Bias and Mental Accounting are the behavioral factors that affect the investment decision the most.

Heuristics factors are divided into 3, Anchoring, Overconfidence and Availability Bias. Both Overconfidence and Availability bias shows a high impact and Anchoring has a lower but still high impact to investment decisions.

Prospect factors are divided into 3, Regret Aversion, Loss Aversion and Mental Accounting. Mental accounting and Loss Aversion, while lower shows high impact. Regret aversion shows moderate impact towards investment decisions.

Herding behaviors that are investigated in this include: type of stock, trade volume, buy and sell of other investors and reaction time to the market. All of the herding variables that were researched shows a moderate result.

Market factors that are investigated including: price change, market information, and past trend of stock. Market information shows a very high impact to the market, while both price changes of stock and past trends shows a high impact to the market.

REFERENCES

- [1] Bodie, Z. K. (2007). Essentials of Investment 6th Edition. New York: McGraw-Hill.
- [2] CNN. (2019, 8 29). Retrieved from BEI Optimis Investasi Saham Bertambah sampai Akhir 2019: <https://www.cnnindonesia.com/ekonomi/20190829143834-92-425783/bei-optimis-investasi-saham-bertambah-sampai-akhir-2019>
- [3] Edwards, W. (1968). Conservatism in human information processing.
- [4] Fama, E. F. (1970). Efficient Capital Market: A Review of Theory and Empirical work.
- [5] Froot, F. a. (1991). Exchange Rate Forecasting Techniques, Survey Data, and the Implications for the Foreign Exchange Market.
- [6] H. Kent Baker, V. R. (2014). How Biases Affect Investors. The European Financial Review.
- [7] Hirshleifer, D. (2014). Behavioral Finance.
- [8] Hakka Hadbaa, R. B. (2019). Behavioral Biases Influencing the Decision Making of Portfolio Managers of Capital Securities and Traders in Morocco .
- [9] Kahneman D, T. A. (1979). 'Prospect theory: an analysis of decision-making.
- [10] Kontan. (2012). Frensidi. Budi.

-
- [11]Kostoulas, A. (2013, 2 13). On Likert scales, ordinal data and mean values. Retrieved from Achilleas Kostoulas: <https://achilleaskostoulas.com/2013/02/13/on-likert-scales-ordinal-data-and-mean-values/>
- [12]Liu Xiaqing, L. B. (2019). Analysis of Herd Effect of Investor's Behavior from the Perspective of Behavioral Finance .
- [13]Mustapha Chaffai, I. M. (2014). Behavioral Finance: An Empirical Study of the Tunisian Stock Market. International Journal of Economics and Financial.
- [14]Myers, D. G. (2010). Social psychology tenth edition. New York. Nelson Waweru, E. M. (2008). The effects of behavioural factors in investment decision-making: a survey of institutional investors operating at the Nairobi Stock Exchange. International Journal of Business and Emerging Markets.
- [16]Nunnally, J. C. (1975). Psychometric Theory — 25 Years Ago and Now.
- [17]Pompian, M. M. (2006). Behavioral Finance and Wealth Management. New Jersey: Wiley Finance.
- [18]PT BURSA EFEK INDONESIA. (2018, November 22). Press Release Detail. Retrieved from IDX.co.id: <https://www.idx.co.id/berita/press-release-detail/?emitenCode=1002>
- [20]Republika. (2019, June 12). Perencana Keuangan Jelaskan Biaya Hidup Ideal di Jakarta. Retrieved from Republika.co.id: <https://gayahidup.republika.co.id/berita/gayahidup/tips/psya8v370/perencana-keuangan-jelaskan-biaya-hidup-ideal-di-jakarta>
- [21]Saunders, M. L. (2009). Research Methods for Business Students.
- [22]Shefrin. (2000). Beyond Greed and Fear.
- [23]Shiller R.J., S. A. (2000). Inefficient Markets: An Introduction to Behavioural Finance.
- [24]Statman, M. (2014). Behavioral finance: Finance with normal people. Borsa Istanbul Review.
- [25]Subrahmanyam, A. (2007). Behavioural Finance: A Review and Synthesis.
- [26]Thaler, R. H. (1999). Mental Accounting Matters. Journal of Behavioral Decision Making.
- [27]U.S. Securities and Exchange Commission. (2013, June 25). "Pump-and-Dumps" and Market Manipulations. Retrieved from SEC.gov: <https://www.sec.gov/fast-answers/answerspumpdumphtm.html>
- [28]Victor Ricciardi, H. K. (2000). What is Behavioral Finance?
- [29]Business, Education and Technology Journal.
- [30]Zhou, F. (2012). Learn Wealth Management after 18 Years' Old. Golden City Press.
- [32]Andrianto, Y., & Mirza, A. R. (2016). A Testing of Efficient Markets Hypothesis in Indonesia Stock Market. Procedia -

- [33] Social and Behavioral Sciences, 219, 99–103.
<https://doi.org/10.1016/j.sbspro.2016.04.048>
- [34] Areiqat, A. Y., Abu-Rumman, A., Al-Alani, Y. S., & Alhorani, A. (2019). Impact of behavioral finance on stock investment decisions applied study on a sample of investors at Amman Stock Exchange. *Academy of Accounting and Financial Studies Journal*, 23(2), 1–17.
- [35] Chaffai, M., & Medhioub, I. (2014). Behavioral finance: An empirical study of the Tunisian stock market. *International Journal of Economics and Financial Issues*, 4(3), 527–538.
- [36] Chen, G., Kim, K. A., Nofsinger, J. R., & Rui, O. M. (2011).
- [37] Trading Performance, Disposition Effect, Overconfidence, Representativeness Bias, and Experience of Emerging Market Investors. *SSRN Electronic Journal*, (August 2018).
<https://doi.org/10.2139/ssrn.957504>
- [38] De Bondt, W. F. M., & Thaler, R. H. (1995). Financial Decision- Making in Markets and Firms: A Behavioral Perspective. *Handbooks in Operations Research and Management Science*, Vol. 9, pp. 385–410. [https://doi.org/10.1016/S0927-0507\(05\)80057-X](https://doi.org/10.1016/S0927-0507(05)80057-X)
- [39] Hadbaa, H. (2019). Behavioral Biases Influencing the Decision Making of Portfolio Managers of Capital Securities and Traders in Morocco. *Financial Markets, Institutions and Risks*, 3(1), 92–105. [https://doi.org/10.21272/fmir.3\(1\).92-105.2019](https://doi.org/10.21272/fmir.3(1).92-105.2019)
- [40] 105.2019
- [41] Javed, H., Bagh, T., & Razzaq, S. (2017). Herding Effects, Over Confidence, Availability Bias and Representativeness as Behavioral Determinants of Perceived Investment Performance: An Empirical Evidence from Pakistan Stock Exchange (PSX). *Journal of Global Economics*, 06(01). <https://doi.org/10.4172/2375-389.1000275>
- [42] Kannadhasan, M. (2015). ROLE OF BEHAVIOURAL FINANCE IN INVESTMENT DECISIONS Faculty , BIM , Trichy.
- [43] ResearchGate, (July). Retrieved from
https://www.researchgate.net/publication/265230942_ROLE_OF_BEHAVIOURAL_FINANCE_IN_INVESTMENT_DECISIONS
- [44] OF_BEHAVIOURAL_FINANCE_IN_INVESTMENT_D DECISIONS
- [45] Kaur, R. (2018). Financial Decision Making: Does Gender Really Matter? Article ID: JOM_05_03_002 *Journal of Management*, 5(3), 9–14. Retrieved from <http://www.iaeme.com/JOM/index.asp>
<http://www.iaeme.com/JOM/issues.asp?JType=JOM&VType=5&IType=3> Journal allImpactFactor%0Awww.jifactor.com<http://www.iaeme.co>.

The Impact of Constitutional Court Ruled on the 2019 Presidential Election Toward Indonesian Stock Market

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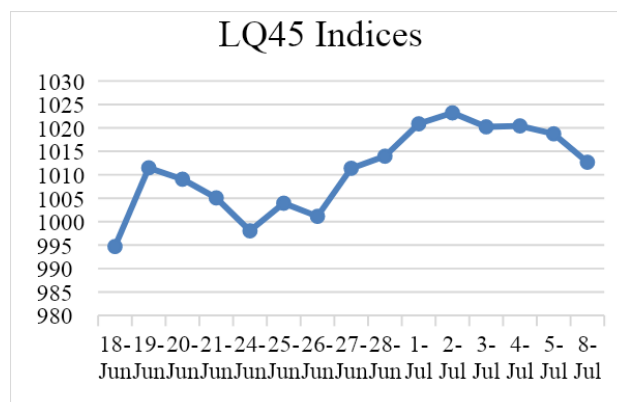
Abstract

The main purpose of this study is to examine the efficiency of the Indonesian capital market as a result of The Impact of Constitutional Court Ruled On The 2019 Presidential Election Toward Indonesian Stock Market. This study uses the event study method with a research period of 7 days before and 7 days after the Constitutional Court ruled on the 2019 presidential election. The data normality test shows that the data is not normally distributed then the research hypothesis uses a non-parametric test, the Wilcoxon Paired Sample test. By using the abnormal return as a variable, the results of the study show that there is no significant difference in the average abnormal return both before and after the Constitutional Courts ruled on the 2019 presidential election lawsuit.

Keywords: abnormal return, event study, EMH, LQ45.

I. INTRODUCTION

Some time ago the Indonesian's democratic party was over. On June 24, 2019, the General Election Commission determined the pair number 01, Jokowi-Ma'ruf, to become president and vice president for the period 2019-2024. However, the result of the decision of the General Election Commission was rejected by pair number 02, Prabowo-Sandiaga and filed a lawsuit to the Constitutional Court. Then, on June 27, 2019 at 21.15 the Constitutional Court decided to reject the entire lawsuit of Prabowo-Sandiaga. Political events like this are quite interesting to study. Because political events always served an interesting side for every circle of society ranging from ordinary people, scholars, researchers, and the state elite. One reason is because political events always bring significant effect on all sides of society lives, starting from the economic, social, and cultural, especially the capital markets. In relation to the Efficient Market Hypothesis, capital markets are generally said to be efficient if prices do not only reflect price information from the past and published information, but also information obtained from certain analyzes and information that is not or not yet published [1]. The reaction is reflected in the form of abnormal returns. Some evidence shows that there have been many researchers in Indonesia who associate with changes in stock prices that occur at the Stock Exchange. One of them was conducted who examined the influence of the 2014 Presidential Election whose results showed that there was no difference in the average abnormal return before and after the Presidential Election [2]. However, it is different result who examined in the same topic, but in different political event which explained that there were significant differences in abnormal return [3]. This is the next question, whether in the 2019 Presidential Election there are also indications of results that support one of these studies. Moreover, in the 2019 Presidential Election there is also a mechanism for filing a lawsuit against the results of the Presidential Election in the



Constitutional Court.

More specifically, the real contribution of the study is if the observations were made in stocks listed as forming the LQ45 indices on the Indonesia Stock Exchange. The following is a picture of the movement of the LQ45 indices during the period 18 June 2019 - 8 July 2019.

From the picture above, it can be seen that there is an indication of the effect of the Constitutional Court's decision on the lawsuit of the 2019 Presidential Election. June 2019. As on June 19, 2019 which at that time was at 1011.48 points weakened by 0.24% to 1009.05 points dated June 20, 2019. Then, it continued to deteriorate until June 21 and 24, 2019 with weakening respectively 0.39% and 0.70%. It was strengthened on June 25, 2019 however, it weakened again on June 26, 2019 to 0.28%. However, on June 27, 2019 the LQ45 index was recorded to strengthen again by 1.02% at 1011.38 points and followed by reinforcement to dated July 2, 2019. From the explanation of the previous picture, there was also a statement from the Head of Research at MNC Sekuritas, Edwin Sebayang that the victory of Jokowi-Ma'ruf Amin made the market unnecessary anxious about the continuation of infrastructure development projects. Which means that construction shares such as WIKA, WSKT, and PTPP which are also listed as shares forming the LQ45 indices need to be considered by investors [4].

If we study the concept of an efficient market, we will focus on its origins, Eugene Fama. Capital markets are generally said to be efficient if prices do not only reflect price information from the past and information that has been published, but also information obtained from certain analyzes and information that is not or not yet published [1]. This is also that competitive financial markets utilize all available information in shaping stock prices [5]. That is, the stock price formed is a reflection of all the information that affects the stock price either new information or sudden or surprising information. Just like other researchers who referred to Fama's efficient market hypothesis and then, to verify the theory it can be used as an event study approach. Event study is a method for measuring an economic event against the value of a company. Its usefulness is seen in the efficiency of a market that the impact of an event will soon be reflected in a company's asset prices [6]. Some studies have tested the effect of an event or information coming from outside the company, there is a study from Egypt, whose research is quite unique because it uses political events with 3 different events. His research also uses the VAR-EGARCH model to determine the results of the volatility of the effects of events that occurred in Egypt at the time. For abnormal returns using the t-Test method with significant results before and after the event date [7]. On the other hand, a study case in the USA that examines stocks

in the financial sector, which are listed on the New York Stock Exchange with the result that there are significant abnormal returns before and after the event date [8]. Therefore, by using 44 sample shares of companies forming the LQ45 indices and using the event study approach, this study tries to find out how much effect this event has on the capital market. This study selected LQ45 Indices because LQ45 has representative best stocks in all sectors. The difference in abnormal return becomes a proxy measured in this study.

II. METHOD

This study uses an event study approach and conducts a hypothesis test by analyzing numerical data in its calculations. This study uses secondary data in the form of closing prices of shares forming the LQ45 indices. Observations were made 7 days before and 7 days after the Constitutional Court's decision on the 2019 Presidential Election lawsuit. During the observation period, there were 44 companies that met the criteria for sampling. Then there are 1 company doing corporate action. This research lasted for 14 days of trading activities, 7 days before and 7 days after the event. Observations to examine the influence of the Constitutional Court's ruling on the 2019 Presidential Election lawsuit against changes in stock prices used 1 proxy, namely abnormal return. Therefore, the number of observations in this study were 616 observations with 1 research proxy, namely abnormal return. This study also tries to analyze the contribution made by each sector by comparing each sector with the LQ45 indices itself. Abnormal return is calculated as the difference between actual return and expected return measured daily [9]. Individual actual stock return is calculated using the following formula:

$$R.it = Ln\left(\frac{P_{it}}{P_{it-1}}\right) \quad (1)$$

The formula above is Actual Return, which is the return that has occurred and calculated using historical data, can also be used as a measurement of company performance. While Expected Return is the return expected by investors. Expected returns in this study are calculated using the Market-Adjusted Model, which is an adjustment model that assumes that the best predictor for estimating the return of a security is the market indices return at that time [10]. Abnormal returns are calculated using the following equation:

$$AR_{it} = R_{it} - R_m \quad (2)$$

III. RESULTS

During the observation period, there were 44 companies that met the criteria for sampling. This study also tries to compare the results of each sector. The LQ45 forming shares in the February 2019 - August 2019 period was formed by a number of shares from each of the 9 sectors on the IDX, represented by a number of company shares, but for 3 of the 9 sectors namely agriculture, misc-industry, and infrastructure were not analyzed due to the number of samples less than 5, while processing data using the SPSS application can process data with a sample size of more than 5. Before going in the hypothesis test, the data that have been collected must go through the normality test. Its result can be seen at the table in this below.

Table 1. Normality Test

	N	Normal Parameters ^{a,b}		Most Extreme Differences			Test Statistic	Asym p. Sig. (2-tailed)
		Mean	Std. Deviation	Absolute	Positive	Negative		
tminus7	4	-0,001	0,028	0,210	0,210	-0,142	0,210	,000
tminus6	4	0,004	0,021	0,162	0,162	-0,112	0,162	,005
tminus5	4	0,006	0,038	0,203	0,203	-0,200	0,203	,000
tminus4	4	-0,002	0,014	0,081	0,081	-0,063	0,081	,200
tminus3	4	0,005	0,031	0,254	0,254	-0,214	0,254	,000
tminus2	4	0,010	0,043	0,320	0,320	-0,199	0,320	,000
tminus1	4	0,001	0,021	0,224	0,224	-0,098	0,224	,000
t	4	-0,001	0,019	0,135	0,093	-0,135	0,135	,044
tplus1	4	-0,004	0,012	0,121	0,121	-0,101	0,121	,109
tplus2	4	0,009	0,025	0,168	0,168	-0,131	0,168	,003
tplus3	4	-0,002	0,019	0,148	0,148	-0,086	0,148	,016

tplus4	4 4	-0,0 06	0,023	0,214	0,214	-0,126	0,214	,000
tplus5	4 4	0,00 1	0,017	0,130	0,130	-0,120	0,130	,058
tplus6	4 4	-0,0 02	0,022	0,229	0,229	-0,112	0,229	,000
tplus7	4 4	-0,0 03	0,016	0,111	0,093	-0,111	0,111	,200

The results of the normality test for forming the LQ45 indices state that the data are not normally distributed, therefore the test used is the Wilcoxon Paired Sample test. However, if sorted in each sector indicates that the data is normally distributed, then the test used is the Paired Sample test.

Table 2. Summary of Hypothesis Testing Results (*t*-statistics)

Period	Mean	Mean dif.	Media n	Median dif.	p-value	Conclusion
t-7 vs t+1	-0,0008 (-0,0042)	-0,0034	-0,0032 (-0,0026)	0,0006	0,466	No difference of AR
t-7 vs t+2	-0,0008 (0,009)	0,0098	-0,0032 (0,0007)	0,0039	0,076	No difference of AR
t-7 vs t+3	-0,0008 (-0,0022)	-0,0014	-0,0032 (-0,0048)	-0,0016	0,411	No difference of AR
t-7 vs t+4	-0,0008 (-0,0059)	-0,0051	-0,0032 (-0,0021)	0,0011	0,223	No difference of AR
t-7 vs t+5	-0,0008 (0,0011)	0,0019	-0,0032 (-0,0002)	0,003	0,294	No difference of AR
t-7 vs t+6	-0,0008 (-0,0019)	-0,0011	-0,0032 (-0,0032)	0	0,620	No difference of AR
t-7 vs t+7	-0,0008 (0,0032)	0,004	0,0032 (0,0000)	-0,0032	0,739	No difference of AR
t-6 vs t+1	0,0043	-0,0085	0,0002	0,0028	0,097	No difference of AR

	(-0,00 42)		(-0,00 26)			
t-6 vs t+2	0,004 3 (0,009)	0,0133	0,000 2 (0,000 7)	0,0005	0,44 1	No difference of AR
t-6 vs t+3	0,004 3 (-0,00 22)	-0,006 5	0,000 2 (-0,00 48)	-0,005	0,18 3	No difference of AR
t-6 vs t+4	0,004 3 (-0,00 59)	-0,010 2	0,000 2 (-0,00 21)	-0,0023	0,07 0	No difference of AR
t-6 vs t+5	0,004 3 (0,001 1)	-0,003 2	0,000 2 (-0,00 02)	0	0,77 9	No difference of AR
t-6 vs t+6	0,004 3 (-0,00 19)	-0,006 2	0,000 2 (-0,00 32)	-0,0034	0,13 8	No difference of AR
t-6 vs t+7	0,004 3 (0,003 2)	-0,001 1	0,000 2 (0,000 0)	-0,0002	0,07 4	No difference of AR
t-5 vs t+1	0,005 7 (-0,00 42)	-0,009 9	0,001 7 (-0,00 26)	-0,0043	0,14 3	No difference of AR
t-5 vs t+2	0,005 7 (0,009)	0,0147	0,001 7 (0,000 7)	-0,001	0,85 6	No difference of AR
t-5 vs t+3	0,005 7 (-0,00 22)	-0,007 9	0,001 7 (-0,00 48)	-0,0065	0,15 8	No difference of AR
t-5 vs t+4	0,005 7 (-0,00 59)	-0,011 6	0,001 7 (-0,00 21)	-0,0038	0,04 2	No difference of AR
t-5 vs t+5	0,005 7 (0,001 1)	-0,004 6	0,001 7 (-0,00 02)	-0,0019	0,59 9	No difference of AR
t-5 vs t+6	0,005 7 (-0,00 19)	-0,007 6	0,001 7 (-0,00 32)	-0,0049	0,22 0	No difference of AR
t-5 vs t+7	0,005 7	-0,002 5	0,001 7	-0,0017	0,27 3	No difference of AR

	(0,003 2)		(0,000 0)			
t-4 vs t+1	-0,002 4 (-0,00 42)	-0,001 8	-0,002 5 (-0,00 26)	-0,0001	0,49 8	No difference of AR
t-4 vs t+2	-0,002 4 (0,009)	0,0066	-0,002 5 (0,000 7)	0,0032	0,05 4	No difference of AR
t-4 vs t+3	-0,002 4 (-0,00 22)	0,0002	-0,002 5 (-0,00 48)	-0,0023	0,86 1	No difference of AR
t-4 vs t+4	-0,002 4 (-0,00 59)	-0,003 5	-0,002 5 (-0,00 21)	0,0004	0,12 5	No difference of AR
t-4 vs t+5	-0,002 4 (0,001 1)	0,0035	-0,002 5 (-0,00 02)	0,0023	0,34 1	No difference of AR
t-4 vs t+6	-0,002 4 (-0,00 19)	0,0005	-0,002 5 (-0,00 32)	0,0007	0,78 8	No difference of AR
t-4 vs t+7	-0,002 4 (0,003 2)	0,0056	-0,002 5 (0,000 0)	0,0025	0,78 8	No difference of AR
t-3 vs t+1	0,005 2 (-0,00 42)	-0,009 4	0,001 8 (-0,00 26)	-0,0044	0,04 9	No difference of AR
t-3 vs t+2	0,005 2 (0,009)	0,0038	0,001 8 (0,000 7)	-0,0011	0,41 4	No difference of AR
t-3 vs t+3	0,005 2 (-0,00 22)	-0,007 4	0,001 8 (-0,00 48)	-0,0066	0,08 6	No difference of AR
t-3 vs t+4	0,005 2 (-0,00 59)	-0,011 1	0,001 8 (-0,00 21)	-0,0039	0,00 9	There is difference of AR
t-3 vs t+5	0,005 2 (0,001 1)	-0,004 1	0,001 8 (-0,00 02)	-0,002	0,79 7	No difference of AR
t-3 vs t+6	0,005 2	-0,007 1	0,001 8	-0,005	0,05 9	No difference of AR

	(-0,00 19)		(-0,00 32)			
t-3 vs t+7	0,005 2 (0,003 2)	-0,002	0,001 8 (0,000 0)	-0,0018	0,13 5	No difference of AR
t-2 vs t+1	0,009 9 (-0,00 42)	-0,014 1	-0,002 1 (-0,00 26)	-0,0005	0,46 9	No difference of AR
t-2 vs t+2	0,009 9 (0,009)	-0,000 9	-0,002 1 (0,000 7)	0,0028	0,70 9	No difference of AR
t-2 vs t+3	0,009 9 (-0,00 22)	-0,012 1	-0,002 1 (-0,00 48)	-0,0027	0,77 0	No difference of AR
t-2 vs t+4	0,009 9 (-0,00 59)	-0,015 8	-0,002 1 (-0,00 21)	0	0,12 1	No difference of AR
t-2 vs t+5	0,009 9 (0,001 1)	-0,008 8	-0,002 1 (-0,00 02)	0,0019	0,68 3	No difference of AR
t-2 vs t+6	0,009 9 (-0,00 19)	-0,011 8	-0,002 1 (-0,00 32)	-0,0011	0,14 6	No difference of AR
t-2 vs t+7	0,009 9 (0,003 2)	-0,006 7	-0,002 1 (0,000 0)	0,0021	0,54 4	No difference of AR
t-1 vs t+1	0,001 4 (-0,00 42)	-0,005 6	-0,003 4 (-0,00 26)	0,0008	0,48 4	No difference of AR
t-1 vs t+2	0,001 4 (0,009)	0,0076	-0,003 4 (0,000 7)	0,0041	0,11 2	No difference of AR
t-1 vs t+3	0,001 4 (-0,00 22)	-0,000 8	-0,003 4 (-0,00 48)	-0,0014	0,71 3	No difference of AR
t-1 vs t+4	0,001 4 (-0,00 59)	-0,007 3	-0,003 4 (-0,00 21)	0,0013	0,22 9	No difference of AR
t-1 vs t+5	0,001 4	0,0003	-0,003 4	0,0032	0,72 6	No difference of AR

	(0,001 1)		(-0,00 02)			
t-1 vs t+6	0,001 4	-0,000 5	-0,003 4	0,0002	0,33 6	No difference of AR
	(-0,00 19)		(-0,00 32)			
t-1 vs t+7	0,001 4	0,0018	-0,003 4	0,0034	0,77 5	No difference of AR
	(0,003 2)		(0,000 0)			

Note: Figures in bold show that hypothesis testing is based on data distribution patterns.

The above table is the result of the hypothesis test using the Wilcoxon Paired Sample test on the abnormal return of the stocks forming the LQ45 indices for 14 days of the observation period. The results show that during the 14 days of the observation period or 7 days before and 7 days after the Constitutional Court's decision on the 2019 Presidential Election lawsuit with a significance level (α) of 5% stated that there were no significant differences in average abnormal returns received by investors in before and after the decision of the Constitutional Court on the 2019 Presidential Election lawsuit. There is only one pair of days stating that there are differences in abnormal returns, namely at t+4. These results indicate that the day there was influence of information before t-3 of the decision of the Constitutional Court over the 2019 Presidential Election Lawsuit with a p-value of 0.009. The same results were also obtained from the breakdown by sector, data processed by the Paired Sample Test for each sector of the LQ45 indices forming shares showed the results that there were no significant differences in average abnormal returns both before and after the Constitutional Court's decision on the 2019 Presidential Election lawsuit. The difference in abnormal return that is found is in the mining sector, namely at t + 3 and t + 4 which is influenced by t-5, t-3, and t-2. However, overall the Paired Sample Test in the mining sector states that there is no significant difference in abnormal returns both before and after the Constitutional Court's decision on the 2019 Presidential Election lawsuit.

IV. CONCLUSIONS

This study aims to test the hypothesis, whether there are differences in abnormal returns both before and after the decision of the Constitutional Court over the 2019 Presidential Election lawsuit. Although at t + 4 there are differences in abnormal return

with an indication of the effect of t-3, the results of testing the hypothesis using non-parametric tests The Wilcoxon Paired Sample shows a p-value greater than alpha (α) so that the alternative hypothesis is rejected or H_0 is accepted, meaning that there is no significant difference in the average abnormal return both before and after the Constitutional Court's decision on the 2019 Presidential Election lawsuit on the LQ45 indices forming stock period February 2019 - August 2019. The results of the sectoral breakdown conducted by the Paired Sample Test parametric test also indicate that there are no significant differences in the average abnormal return both before and after the Constitutional Court's decision on the 2019 Presidential Election lawsuit. Hypothesis test results still indicate that there is no significant difference in average abnormal returns both before and after the Constitutional Court's decision on the 2019 Presidential Election lawsuit with a p-value greater than alpha (α) then the alternative hypothesis is rejected or H_0 is accepted. So in broad outline, political events as big as the Constitutional Court's decision on the 2019 Presidential Election lawsuit still had no significant impact on the Indonesian capital market. Even though there are various kinds of actions that disturb the stability of the country, investors still think that this event still does not provide important information content to consider. There are several limitations of this study. First, this study uses the market adjusted model to estimate the expected return, there are several models to estimate the expected return so that it does not rule out the possibility that the calculation also might produce different calculations such as the market model and the mean adjusted model. Second, there are several days of observation that are indicated to have an influence other than this event and therefore it is necessary to look for or study in more detail in relation to other events on these observational days. Third, this study only detected the effect of information on the mean level. Different results will be obtained if the detection is expanded at the variance level by using stock volatility or liquidity.

REFERENCES

- [1] E. F. Fama, "Efficient Capital Market: A Review of Theory and Empirical work," *Journal of Finance*, pp. 383-417, 1970.
- [2] R. Baiquni, "Pengaruh Pengumuman Hasil Pemilihan Umum Presiden 2014 Terhadap Abnormal Return Dan Aktivitas Volume Perdagangan Saham," STIE Muhammadiyah, Pekalongan, 2015.
- [3] L. N. Islami and E. Sarwoko, "Reaksi Pasar Modal Indonesia Terhadap Pergantian Menteri Keuangan," *MODERNISASI*, vol. 5, no. 21, pp. 5-17, 2012.
- [4] CNN Indonesia, "Efek Jokowi Menang di Sidang MK, Saham Konstruksi 'Menggoda'," Online, 2019.
- [5] O. Sabbaghi and N. Sabbaghi, "Market Efficiency and The Global Financial Crisis: Evidence from Develop Market," *Studies in Economics and Finance*, 2018.
- [6] J. Y. Campbell, A. W. Lo and A. C. Mackinlay, *The Econometrics of Financial Markets*, 1997.
- [7] W. Ahmed, "The Impact Of Political Regime Changes On Stock Prices: The Case Of Egypt," *International Journal of Emerging Markets*, 2017.
- [8] S. Obradovic and N. Tomic, "The Effect of Presidential Election in The USA On Stock Return Flow - A Study of a Political Event," *Economic Research-Ekonomika Istrazivanja*, vol. 30, no. 1, pp. 112-124, 2017.
- [9] T. A. Gumanti, E. Savitri, N. Wahidatun and E. S. Utami, "Event Study on the Crash of Airasia Plane: A Study on Travel and Leisure Companies Listed at Malaysian Stock Market," *Jurnal Akuntansi dan Keuangan*, vol. 20, no. 1, pp. 20-26, 2018.
- [10] Andreas, T. A. Gumanti, U. Nurjannah and I. N. Awaliyah, "The Effect of Announcement as the host of XVIII Asian Games on Indonesian Stock Market," *Investment Management and Financial Innovations*, vol. 17, no. 1, pp. 109-118, 2020.
- [11] Wikipedia, "EasyChair," [Online]. Available: <https://en.wikipedia.org/wiki/EasyChair>.

The Role of Joint Liability in Lowering the Risk of Farmer and Agriculture Crowdfunding (A case study of one agriculture crowdfunding in Indonesia)

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Abstract

Agriculture crowdfunding is a source of alternative financing for farmers. The crowdfunding platform does not ask collateral from the farmer, hence they apply group lending with joint liability to lower the default risk. The purpose of this paper is to understand how joint liability group lending can lower the risk of both farmers and agriculture crowdfunding. A deductive qualitative research design with case study approach is used in this paper. A series of in depth interviews were conducted with one agriculture crowdfunding and two farmers groups. Data analysis is done by using pattern matching techniques. The findings of this paper are joint liability can lower the default risk of crowdfunding platform because the farmers groups are self selected and all member have strong relationship (peer selection), the leader of the farmers group plays an important role of monitoring the member activities (peer monitoring) and he may apply social sanction to the defaulting member (peer pressure). From the farmer's side, joint liability can lower the price risk. This can be done because crowdfunding platforms apply group lending, so it can get a high volume of commodities from the farmer. This enables crowdfunding platforms to build B2B contracts with buyer companies and give fixed buying prices to farmers upon contract.

Keywords: Joint liability, agriculture, crowdfunding, risk management.

I. INTRODUCTION

One of United Nations Sustainable Development Goals (SDG) is Ending Poverty and Hunger by 2030. According to World Bank Group [1], globally, 80% people live in rural areas and 64% work in agriculture. Therefore, most of the income gain needed to end poverty by 2030 will need to come from activities in rural areas. The food and agriculture-related UN agencies estimate that ending poverty and hunger requires additional financing in agriculture and rural development of \$140 billion per year.

The source of financing in the agriculture sector generally comes from formal institutions such as banks, cooperatives and other government organizations or from informal institutions such as neighbor, friends, family or community based financial institution [2-3]. Some research showed that farmers still have difficulties to access financing from formal institutions since most of Indonesian farmers do not have land certificates as collateral [4]. As a consequence, farmers usually opt for financing from informal institutions as they are easier to access, do not request collateral and do not require a long approval process, although these institutions charge higher interest rates compared to banks [5]. This situation led to the development of alternative financing such as microfinance, crowdfunding and peer to peer network [6].

We choose crowdfunding as our unit of analysis since through crowdfunding, individual people may become investors and contribute for additional financing in the agriculture sector. To open more financing access to the farmers, crowdfunding platforms do not ask for collateral. Therefore, their loan default risk is higher since they are not able to charge financial sanction from the farmers. One way to mitigate this risk is by implementing a group lending mechanism with joint liability. Joint liability means that if one borrower cannot pay a loan, then other members of the joint liability group will do so [7]. One of the reasons why joint liability may lower the lender's default risk is because the group may apply social sanction to the defaulting member [8].

However from the borrower's point of view, joint liability causes higher risk since every group member bears his/her own risk and that of all other group members [9]. Another major risk, farmers as borrowers face price uncertainty due to inherent volatility of agriculture products [10]. Thus, the research problem is "How can the joint liability model lower the risk of both farmers and agriculture crowdfunding? "

Previous research has demonstrated that by applying joint liability, the default risk of agriculture lending institutions can be reduced [21]. However, that research did not study how joint liability can lower the risk of farmers. Thus, our research contributes to the practice of joint liability in lowering the risk for both lender and borrower. Other than that, our study shows that if a lending institution cooperates with other stakeholders in the agriculture ecosystem (for example agri-input companies and buyer companies), the major risk of farmers which is market uncertainty can also be reduced.

II. METHOD

A deductive qualitative research design with case study approach is used in this research. Deductive qualitative research uses theoretical propositions from literature review as a starting point and then apply these to the collection and analysis of data [11]. The appeal of deductive qualitative analysis is evident in its recommended use in case studies [12]. The intent of the case study is to understand a specific issue or problem and a case or cases are selected to best understand the problem [13]. According to Pearse [14], there are seven steps procedure in doing deductive qualitative research : (1) Create conceptual framework, (2) Create propositions, (3) Create Code Book, (4) Create Question Matrix, (5) Data Collection, (6) Analysis, (7) Reporting.

A. Step 1 – 2 : Conceptual Framework (Literature Review) & Proposition

According to Klein et al [9], there are four main risks faced by a financial institution, namely: loan default risk which is the borrower's inability or unwillingness to repay his loan, liquidity risk which is a condition where financial institutions do not have sufficient cash, interest rate risk which is risk that loans will decrease in value due to changes in interest rates, and foreign exchange risk defines exposure to changes in exchange rates which affect international borrowings denominated in foreign currency. Since institutions that provide alternative financing such as crowdfunding platforms do not ask for collateral from the farmers, their default risk is higher because they cannot charge financial sanctions to borrowers. This has become the main cause of market failure in credit programs especially in the agricultural sector [15].

One way to mitigate a lender's default risk is by implementing a group lending mechanism with joint liability. Joint liability is defined as a control mechanism in which a group is jointly responsible if one member of the group cannot repay the

loan [7]. The joint liability mechanism is proven to be able to increase the repayment rate of a credit program, for example, the success stories of Grameen Bank in Bangladesh and BancoSol in Bolivia. Both programs show a repayment rate of up to 95%. In addition, these two programs have also succeeded in reaching millions of borrowers who are categorized as unbankable [16].

Some factors that influence how joint liability can increase the repayment rate include peer selection, peer monitoring, and peer pressure. Several studies related to how peer selection can increase the repayment rate were conducted by Sharma & Zeller [17] and Zeller [18]. Research by Sharma & Zeller [17] states that groups that select their own members (self selected group) are proven to have a high repayment rate. Research by Zeller [18] states that if a group has a strong social relationship, the repayment rate will increase. Another study on the effect of peer monitoring on repayment rates was conducted by Varian [19]. He stated that peer monitoring plays a role as internal assurance within the group, where group members guarantee each other so that it can increase the repayment rate. The effect of peer pressure to increase repayment rate is discussed by Besley and Coate [20]. Peer pressure is the pressure from fellow group members, because they can apply social sanctions if a group member fails to pay his loan due to his negligence. Since the lender's default risk is lower due to joint liability mechanisms, banks or lending institutions can provide benefits to borrowers, for example in the form of reduced interest rate [15].

From the borrower's point of view, joint liability causes higher risk since every group member bears his/her own risk and that of all other group members [9]. The high risk perceived by borrowers is also seen in the research of Turvey et al [21] which shows that 86% of the respondents in the study stated that the reason they did not become members of the joint liability group lending was because they did not want to bear the risk in case of default from one of the group members. Another major risk, farmers face price uncertainty (price risk) due to inherent volatility of agriculture products [10].

According to Zeller [22], when taking credit is perceived as a decision making process, then it starts with the decision of the individual to apply for credit. In fact, the demand for loans depends on the self-financing potential, access to credit

facilities and risk taking ability of borrowers. Thus, benefits offered to borrowers will affect borrowers' decision to access credit from crowdfunding platforms. Those benefits are perceived to be able to reduce the risks of the borrowers.

From this conceptual framework, the propositions of the research can be built. In qualitative research, a proposition is a statement of the qualitative (and not quantitative or statistical) nature of the relationship between various concepts contained in the literature [14]. According to Trochim [23], the proposition can be derived from the literature, from theory, or from hunches developed from the researcher's experience in the field.

In summary, the conceptual framework and the proposition can be illustrated in Figure 1 and Table 1 below.

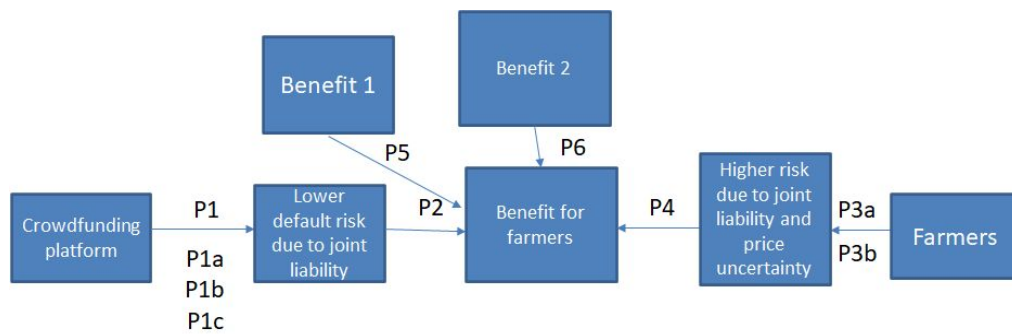


Figure 1. Conceptual Framework of how joint liability lower the risk of farmers and crowdfunding platforms.

Table 1. Research Propositions.

No	Proposition
P1	Crowdfunding platform applies joint liability group lending to lower the default risk
P1a	Crowdfunding platform's default risk is lower due to peer selection
P1b	Crowdfunding platform's default risk is lower due to peer monitoring
P1c	Crowdfunding platform's default risk is lower due to peer pressure
P2	Since crowdfunding platform's default risk is lower, it can offer more benefit to the borrower
P3a	Farmers risk is higher since every group member bears other member's risk
P3b	Price uncertainty is major risk for farmers
P4	The benefit for farmers will affect the farmers' decision to access credit from the crowdfunding platform
P5	The benefit for farmers will reduce the farmers' risk
P6	The benefit for farmers will reduce the farmers' risk

B. Step 3 – 4 : Code Book & Question Matrix

After stating the propositions, the researcher can now develop a code book that will be used to code the raw data [14]. The codes will represent key concepts used in this research. From the literature which are used to build the conceptual framework, seven codes are derived, namely : joint liability, peer selection, peer monitoring, peer pressure, crowdfunding platform's risk, benefit for farmers and farmers' risk.

These codes are then used as a reference to generate interview questions. Table 2 shows selected examples of interview questions.

Table 2. Examples of interview questions

Codes	Interview Questions
Joint Liability	How is the implementation of joint liability group lending in this crowdfunding platform ?
Peer Selection	How does platform select the farmers group who is eligible to get the funding ?
Peer Monitoring	How is the monitoring mechanism for the borrower (farmers group) ?
Peer Pressure	Who is responsible for the monitoring of the borrower ?
Crowdfunding platform risk	What will you do if there is a defaulting member in your group ?
Benefit for farmers	What is the most crucial risk that the crowdfunding platform face ?
Farmers' risk	What are the benefit for farmers that the platform offered ?
	What is your group's perception about joint liability ?
	What is the most crucial risk that farmers face ?
	Why do your group decide to access credit from this crowdfunding platform ?

C. Step 5 – 7 : Data Collection, Analysis, and Reporting

Data collection is done by conducting in depth interviews with one crowdfunding platform and two farmers groups who got financing from the crowdfunding platform. The crowdfunding platform in our case study was founded in 2018 and they only apply group lending mechanisms with joint liability. Their current operational area is in Java and North Sumatra. The informants from the crowdfunding platform are Vice President of Marketing, Head of Finance, and Chief Risk Management Officer. The informant from the farmer groups are the leaders of the group. The first farmers group is located in West Java whose members are 70 farmers. While the second farmers group is located in Central Java whose members are 50 farmers. The interviews were conducted between July until September 2020. Each informant was interviewed individually for about 1 hour.

Data analysis is done by using pattern matching techniques. Pattern matching was originally described by Campbell [24] and is one of the analysis tools that is recommended for case study research [12]. Pattern matching involves identifying the patterns in data, and then comparing this against one or more patterns that are proposed in the literature [25].

The reporting is organized as follows : section 1 presents the introduction of the study, section 2 explains each procedure of doing deductive qualitative research, then continues with discussion of data and findings in section 3 and finally section 4 concludes the study.

III. RESULT

A. How joint liability lower the risk of crowdfunding platform

Crowdfunding platforms in this case study provide financing only to farmers groups. The platform applies group lending with joint liability. Unlike traditional financial institutions, the loan repayment of this crowdfunding platform can be in the form of cash or in the form of crops. If the platform has a contract with the buyer, the repayment from the farmer will be in the form of crop. Otherwise, the repayment will be in the form of cash. For example for commodities like honeydew, the crowdfunding platform may cooperate with Sunpride, so that the farmers will repay the loan in the form of crops (honeydew). The implementation

of joint liability group lending in this crowdfunding platform is explained by Chief Risk Management Officer as follow :

One farmers group, for example, consists of 4 farmers, and they plant honeydew. Each farmer, let's say...need to repay the loan for 3.5 tons of honeydew. In total, on harvesting time, the group needs to provide 14 tons of honeydew. In case one farmer can not provide 3.5 tons of honeydew, the other farmers need to find a solution how to provide the contracted quantity (14 tons of honeydew). As they plant the same commodity in a group, they take turns to plant the seeds. If for example the plants of farmer A got some diseases, farmer B,C, and D have to think how to mitigate the risk of not being able to repay the loan. They may search for the commodity from other sources or they may increase their productivity.

This statement supports proposition P1. Since crowdfunding platforms apply group lending with joint liability, all members of the farmers group are jointly responsible to repay the loan. Thus, the default risk of crowdfunding platforms is lower.

However, there is a challenge for the crowdfunding platform to acquire the right farmers group. In doing so, the crowdfunding platform built a relationship with agro-input companies (companies which provide seeds for the farmer). The crowdfunding platform asked for recommendation which farmers group is trustworthy and can be granted financing. Therefore, the recommended farmers group is an existing group which has a strong relationship between members. This fact supports proposition P1a that joint liability can lower the default risk due to peer selection, which means that the self-selected group has known each other and that strong relationship will increase responsibility among members [18].

After selecting the farmers group, the crowdfunding platform will assess the members. Each member of the farmers group needs to have an identity card, family document, and statement letter as a farmer from the village leader. Historical credit checking to the central bank (Bank Indonesia) will also be performed. At this stage, the crowdfunding platform will choose a key farmer as the responsible person of the group. Usually the key farmer is the leader of the

farmers group. This fact supports proposition P1b that peer monitoring will lower the default risk of the crowdfunding platform since the key farmer will be responsible for the repayment of the other member. Other than that the crowdfunding platform also provides field managers to monitor the farmers group.

According to Aghion [8], one of the reasons why joint liability may lower the lender's default risk is because the group may apply social sanction to the defaulting member. From our interview with the leader of the first farmers group, he said :

In case there is a member who is not able to make the repayment more than 3 times, I will take that member's farm field. In fact, I have never done this. However, as a leader, it's a big responsibility to the bank. So, I need to emphasize that if more than 3 times the member can not repay the loan, I will take their farm field.

This statement supports proposition P1c that joint liability can lower the default risk due to peer pressure, which is the pressure of social sanction among the group members

B. Benefit for farmer

According to Ghatak & Guinane [15], since the lender's default risk is lower due to joint liability mechanism, banks or lending institutions can provide benefits to borrowers, for example in the form of reduced interest rate. By lending to a group of farmers instead of to individual farmers, where all members of the group will plant the same commodity, the crowdfunding platform will get a high volume of crops on harvest time. This enables crowdfunding platforms to build business to business contracts with buyer companies (offtaker). By having this contract, crowdfunding platforms will be able to give fixed buying prices for the farmer upon contract. This will be really beneficial for the farmers since it gives price certainty.

Moreover, the credit disbursement from this crowdfunding platform is in the form of seeds and fertilizer (agro input) instead of cash. This will make farmers to be more focused on their on-farm activity, because they don't need to buy fertilizer or other things. To do this, crowdfunding platforms cooperate with agro input

companies to distribute seeds and fertilizer to the farmers. These benefits to farmers support proposition P2 : since crowdfunding platform's default risk is lower, it can offer more benefit to the farmers and also proposition P5 & P6 : the benefit for farmers will reduce the farmer's risk.

C. How joint liability lower the risk of farmers

Proposition P3a is derived from the theory that from the borrower's point of view, joint liability causes higher risk since every group member bears his/her own risk and that of all other group members [9]. However the condition is different in our case. The farmers group has a mechanism to collect monthly funds from the member which can be used in case there is a defaulting member. Therefore, this fact refutes proposition P3a.

However, there is another major risk that farmers face which is price uncertainty. This risk is caused by inherent volatility of agriculture products [10]. According to the leader of the second farmers group :

If we access credit from a financial institution other than a crowdfunding platform, we need to negotiate the price with the local buyer on harvest time. It's easier when we cooperate with crowdfunding platforms since we agree on the fixed price upon contract.

This statement supports proposition P3b that price uncertainty is a major risk for farmers. This statement also supports proposition P4 that the benefit for farmers will affect the farmer's decision to access credit from the crowdfunding platform.

The result of the propositions analysis using pattern matching technique can be summarized in Figure 2 and Table 3 below :

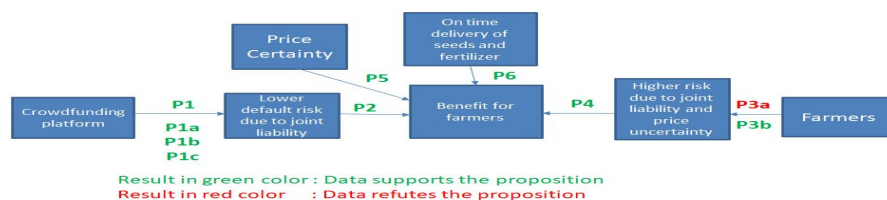


Figure 2. The result of the propositions analysis

Table 3. The result of the propositions analysis

Proposition	Result
P1	Joint liability is one form of risk mitigation in this case study.
P1a	The farmers group are existing group whose members are self-selected
P1b	The farmers group's leader will be responsible for the repayment of the other member
P1c	The farmers group's leader may apply social sanction to the defaulting group member
P2	Since crowdfunding platform applies group lending, it can get high volume of commodity from the farmer. This enable crowdfunding platform to build B2B contract with buyer company (offtaker). By having this contract, crowdfunding platform will be able to give fixed buying price for the farmer's commodity upon contract.
P3a	The farmers group has a mechanism to collect monthly fund from the member which can be used in case there is a defaulting member.
P3b	If farmers borrow money from institution other than crowdfunding platform, they need to negotiate the commodity price with local buyer after harvest time
P4	The farmers are willing to access credit from crowdfunding platform due to price certainty and on time delivery of seeds and fertilizer
P5	Price certainty will help farmers to reduce price risk (price volatility)
P6	The credit disbursement from this crowdfunding platform is in form of seeds and fertilizer (agro input) instead of cash, so that the farmer can be more focus on their on-farm activity

IV. CONCLUSIONS

Based on the case analysis, we can conclude that joint liability can help to lower the default risk of the crowdfunding platform because of several reasons. First, the farmers group is self selected so that all the members know each other and have strong relationships (peer selection). Second, the key farmer or the group leader plays an important role of monitoring the member activities (peer monitoring). Other than that the crowdfunding platform also provides field managers to monitor the farmers group. Third, the leader may apply social sanction to the defaulting member (peer pressure). From the farmer's side, joint liability is not considered as high risk since the farmers group collects monthly funds from members which can be used in case there is a defaulting member. The price risk is lower since the crowdfunding platform is able to give fixed buying price for the farmer's commodity upon contract (forward contract). This can be done because crowdfunding platforms apply group lending, so it can get high volume of commodities from the farmer. This enables crowdfunding platforms to build B2B contracts with buyer companies (offtaker). Beside price certainty, another benefit for the farmers is on time delivery of seeds and fertilizer, so that farmers can be more focused on their on-farm activity. In this case, crowdfunding platforms cooperate with agro input companies to distribute seeds and fertilizer to the farmers.

This research contributes practical implication for lending institutions in the agriculture sector. To lower default risk, lending institutions are suggested to apply group lending instead of individual lending to the farmers. The farmers group then need to plant

the same commodity, so that the production risk can be managed collectively and at the end high volume of commodity can be harvested. Lending institutions are also suggested to cooperate with offtaker companies to help lower the price uncertainty of the farmers. The significance of this study is to explain that risks in the agricultural sector can be managed, so that more individual investors will be willing to contribute for additional financing in the agriculture sector.

REFERENCES

- [1] World Bank Group : FUTURE of FOOD Maximizing Finance for Development in Agricultural Value Chains. World Bank Publications (2018)
- [2] Thaker, H. M. T., Khaliq, A., Sakaran, K.C., Asmy, M., & Thaker, M.T.: A discourse on the potential of crowdfunding and Islamic finance in the agricultural sector of East Java, Indonesia. *Jurnal Ekonomi dan Keuangan Islam*, 6(1), 10-23 (2020)
- [3] Avisha, A., Charina, A., Noor, T. I., Mukti, G. W.: Crowdfunding Sebagai Akses Alternatif Permodalan Berbasis Teknologi Digital Pada Kegiatan Pertanian. *Jurnal Pemikiran Masyarakat Ilmiah Berwawasan Agribisnis* 5(1): 1-22 (2019)
- [4] Kasumaningrum, Y.: Fintech: Di antara peluang dan tantangan. *Pikiran Rakyat*. Retrieved from <https://www.pikiran-rakyat.com/ekonomi/pr-01320871/fintech-diantara-peluang-dan-tantangan> (2019).
- [5] Asnawi, A., A.A. Amrawaty, & Nirwana : Mukhabarah as sharia financing model in beef cattle farm enterprise. *IOP Conf. Series: Earth and Environmental Science* (2018)
- [6] Bruton, G., Khavul, S., Siegel, D. and Wright, M. : New financial alternatives in seeding entrepreneurship: microfinance, crowdfunding , and peer-to-peer innovations. *Entrepreneurship Theory and Practice*, Vol.39 No.1 (2015)
- [7] Pasupuleti, V. : A study of joint liability versus individual liability in micro finance institute with respect to default rate (loan repayment). Working Paper, SSRN1745442 (2010)
- [8] Armendáriz De Aghion, B. : On the design of a credit agreement with peer monitoring. *Journal of Development Economics*, 60(1), 79–104 (1999)
- [9] Klein, B., Meyer, R., Hannig, A., Burnett, J. & Fiebig, M.: Better Practices in Agricultural Lending. Food and Agriculture Organization of the United Nations (FAO) (1999)

-
- [10] Amin, Hao.: Uncertainty, Risk Aversion and Risk Management in Agriculture. International Conference on Agricultural Risk and Food Security (2010)
- [11] Boyatzis, RE : Transforming Qualitative Information: Thematic Analysis and code development, Thousand Oaks, SAGE Publications (1998)
- [12] Yin, RK. : Case Study Research, Design and Methods, 5th edn, Thousand Oaks. SAGE Publications (2014)
- [13] Creswell, J.W.: Qualitative Inquiry & Research Design. SAGE Publications (2013)
- [14] Pearse, N.: An illustration of a deductive pattern matching procedure in qualitative leadership research. *Electronic Journal of Business Research Methods*, 17(3), 143–154 (2019)
- [15] Ghatak, M., & Guinnane, T. W. : The economics of lending with joint liability : theory and practice 1. 60(May), 195–228. (1999).
- [16] Hermes, N., Lensink, R., & Mehrteab, H. T.: Does the group leader matter? The impact of monitoring activities and social ties of group leaders on the repayment performance of group based lending Eritrea (2005)
- [17] Sharma, M., and Zeller, M. : Repayment Performance in Group-Based Credit Programs in Bangladesh: An Empirical Analysis. *World Development*, 25 (10), pp.1731-1742. (1997)
- [18] Zeller, M. : Determinants of Repayment Performance in Credit Groups: The Role of Program Design, Intra-group Risk Pooling and Social Cohesion. *Economic Development and Cultural Change* 6 (3), pp.599-620. (1998)
- [19] Varian, H.R. : Monitoring Agents With Other Agents. *Journal of Institutional and Theoretical Economics (JITE)*. *The New Institutional Economics Different Approaches to the Economics of Institutions* (1990)
- [20] Besley, T. and Coate, S. : Group lending, repayment incentives and social collateral. *Journal of Development Economics*, Vol. 46 No. 1, pp. 1-18. (1995)
- [21] Turvey, C. G., He, G., Kong, R., Ma, J., & Meagher, P. : The 7 Cs of rural credit in China. *Journal of Agribusiness in Developing and Emerging Economies*, 1(2), 100–133. (2011)
- [22] Zeller, M. : Determinants of credit rationing: A study of informal lenders and formal groups in Madagascar. *World Development* 22 (12): 1895–1907 (1994)
- [23] Trochim W. : Outcome pattern matching and program theory. *Eval. Program Plann.* 12: 355–366. (1989)
- [24] Campbell, DT : III. 'Degrees of freedom' and the case study", *Comparative Political Studies*, vol. 8, no. 2, pp. 178–193 (1975)

-
- [25] Almutairi, AF, Gardner, GE, & McCarthy, A. : Practical guidance for the use of a pattern-matching technique in case study research: A case presentation: Pattern-matching technique”, Nursing & Health Sciences, vol. 16, no. 2, pp. 239– 244 (2014)

Analysis of Factors Affecting the Green Purchase Intention of Electric Motorcycle: Case Study of Selis

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Abstract

Although Selis brand under PT.JUARA BIKE has been the pioneer of electric bicycle in Indonesia since 2011, the brand still has lack of demand on the electric motorcycle. The objective of this research is to analyze the factors affecting the green purchase intention of electric motorcycle. Some logical frameworks of this research are Subjective Norms, Aesthetic Value, Green Value, Perceived Price, and Perceived Quality. By using an online survey, a total of 300 respondents from people live in Jabodetabek region were collected. The findings showed that subjective norms, aesthetic value, green value, Perceived Price, and perceived quality influenced green purchase intention positively. The findings also revealed that green value, perceived quality and aesthetic value made the largest contribution in influencing green purchase intention among consumers. On the other hand, Perceived Price and subjective norms had a lesser significant impact on consumer intention to purchase green products.

Keywords: Subjective Norms, Aesthetic Value, Green Value, Perceived Price, Perceived Quality, Green Purchase Intention.

I. INTRODUCTION

Air pollution represents the biggest environmental risk to health. According to a report by World Health Organizations [1] in 2016, the cause of death of one out of nine people in the world is related to air pollution. Around 3 million people deaths were caused by ambient (outdoor) air pollution in 2012. Citizens in Africa, Asia or the Middle East are having higher risk due to the higher levels of air pollutants compared to other countries in the world. Some cities there have air pollution levels that are multiple times higher than those considered safe by the WHO. Based on WHO website, the main cause of air pollution is the usage of transportation such as motorcycles, cars, bus, etc [2]. In Southeast Asia, there are a lot of residents that have used the conventional motorcycle as the main means of urban transportation. Relatively high but flatly distributed job densities and population, narrow streets, and a uniformly distributed road network make the motorcycle a convenient choice from one place to another to travel in many cities. Cheap motorcycles, inexpensive fuel and easy credit payment methods make it an interesting choice as well. Motorcycles are very convenient transportation, not only because of the space efficiency due to their size but also the maneuverability, but their efficiency likely increases with the proportion of traffic comprising motorcycles [3]. In 2019, Indonesia was categorized as the sixth most air polluted country in the world [4]. Indonesian Motorcycle Industry Association (AISI) has data that the average motorcycle sales in Indonesia are between 6-8 million units per year from 2008 until 2019 and it has led to severe air condition in Indonesia [5]. Jakarta itself, as the capital city of Indonesia, has ranked as the fifth most air polluted city in the worlds [6]. If this situation is continuing to happen, it can shorten the life expectancy of Jakarta people up to 4 years [7].

As written on Kompas.com, the total number of motorcycles in Jakarta has reached 14,74 million units in 2018, which is three times greater than cars [8]. Motorcycle itself shares the largest segment of air pollution causes in Jakarta with 44.53%, followed by bus at 21.43% and cars at 16.11%. Seeing this high amount of pollution produced by motorcycles, it can be seen that many Jakarta's people are relying on using motorcycles all the time. On the other hand, there are also some companies in Indonesia that produce Electric Motorcycles, one of them is PT. JUARA BIKE. At the beginning, they focused only on electric bicycles / E-bike, but now they are selling Electric motorcycles as well. According to CNNIndonesia.com, Indonesian government is targeting to produce up to 2.1 millions Electric Motorcycles in 2025 [9].

PT. JUARA BIKE has started to sell electric bikes since 2011, but until now the average production of the electric bike and motorcycle is only 72 thousands units/year, which is far below the average production of the conventional motorcycle. In fact, PT.JUARA BIKE only uses 30% of their production capacity due to lack of demand for electric bikes and motorcycles, and they can produce up to 240 thousands units/year if they maximize the production capacity. However, a lot of people in Indonesia do not have interest to purchase or switch from conventional motorcycle to electric motorcycle. It is known that changing from conventional motorcycles to electric motorcycles will reduce one of the primary harmful air pollution caused by conventional motorcycles and improve the local air quality [3].

II. THEORETICAL FRAMEWORK

2.1 Literature Review

Subjective Norms. The term “subjective norm” can be defined as “the perceived social pressure to perform or not to perform the behavior” [10]. As stated by [11] that subjective norms are “the influence of others who are important/close to the person such as “close friends, relatives, colleagues, or business partners.” Subjective norm captures an individual's feeling about the social pressure they feel about a given behavior. Subjective norms refers to “observing the attitudes and behaviors of a person to change his or her self-faith and behaviors” [12], therefore purchase decisions are affected by the Internet , friends and family [13]. The opinions and suggestions from others typically affect the green purchase intention. Subjective norms are perceived social influences / pressures because of which an individual might indulge himself / herself in a particular behavior.

Aesthetic Value. Aesthetic value can be defined as “the degree of customer perception of the attractiveness and beauty of products” [14]. The concept of visual product aesthetics usually plays a basic role for ideas about the sensorial character of the products [15]. Following (Bloch, Brunel, Arnold and Charters, the aesthetic design or appeal of a product has many varieties from very low (own-label detergent) to very high (a painting or sculpture) [16], [17]. Visual aesthetics can be seen in many customer experiences most noticeably in fashion and electronic products such as smartphones, tablets and personal computers [18]. Products can be manufactured to be aesthetically interesting and pleasing for both touch and to the visually [19]. Moreover, aesthetic value is one of the most important factors affecting consumer preferences in many ways. A

good or unique product design helps to differentiate products from its competitors and enables them to make a difference in the market [16].

Green Value. Haws, Winterich and Naylor, stated the concept of green values by defining them as “the tendency to explore the value of environmental protection through one’s purchases and consumption behaviors” [20]. Green value is the other name for environmentally friendly, eco-friendly and environmentally responsible [21]. Also has been stated by McEachern and McClean (2015), that green value is “a multifaceted concept which includes: minimization of pollution, responsible use of non-renewable resources, preservation of the environment, and animal welfare & species preservation.” [22] The green values construct thus encapsulates the tendency to express the value of environmental protection through one’s purchases and consumption behaviors. Thus, consumers with higher knowledge about green values are correspondingly generally more oriented towards protecting resources and more interested in buying green products.

Perceived Price. From the customer's perspective, Perceived price can be defined as “what is given up or sacrificed to obtain a product.” It is considered to be one of the most important elements in the green marketing mix. Roy (2013) has described Perceived price as the main reason customers choose not to buy green products because they are more likely to be more expensive [23]. In the simplest form, prices can be defined as “the nominal value charged to the customer to acquire products and to be benefited from the ownership or use of products” [24]. According to Roe et al., (2001), 67% of Americans were prepared to pay an additional five to ten percent more for ecologically compatible goods in 2000, and people with more environmentally aware people were prepared to pay an additional 15-20 percent more for green products [25]. Different with Indonesian customers, Indonesian customers are well known to be cost sensitive and unwilling to pay more for product characteristics [26].

Perceived Quality. Perceived quality is also important for customer decision making to take an action as a result, customers will compare the quality of alternatives with regard to price within a category [27]. According to Hacker (1991) perceived quality is “directly related to the reputation of the firm that manufactures the product.” [28] According to Zeithaml (1988) & Tsiotsou (2006) the perceived quality is defined as “the consumer’s judgement about a product’s overall excellence or superiority” [29], [30] and following Snoj, Pisnik Korda and Mumel (2004) perceived quality results from the comparison of consumer expectations with the actual performance of a brand or product [31].

Green Purchase Intention. Green purchase intention is the desire of a consumer to prefer, and their intention to purchase environmentally friendly products Chen and Chang (2012), Debora Indriani, Rahayu and Hadiwidjojo (2019) [32], [33]. On the other hand, Roe et al. argued this meant consumers bought green products in order to protect or not destroy the environment [25]. Also, Chan stated that green purchase intentions could be measured by three items, which are switching to a green version of a product, switching other brands for ecological reasons and considering to buy green or greener products [34]. The intention to buy green products can be explained as a particular type of environmentally friendly behavior which is reflected by the customers to express their concern towards the ecological system [35]. Ramayah, Lee and Mohamad (2010) indicated that green purchase intention is a crucial factor for determining the behavior of consumers [36].

2.2 Hypothesis Development

SN and GPI. According to the previous research, that subjective norms are one of the predictors of purchase intention [37]–[39]. There is a study from a previous researcher that found an associated between electric car usage and subjective norms [40]. In contrary results with the research in India, while some research show that there is no association between the intention to purchase green products with subjective norms , because the people tend to be more individualistic in their countries [41], some recent studies predict there is a significant direct relationship between subjective norms and the intention to purchase green products [42]. In the last research by Screen, Purbey and Sadarangani (2018) has proven that subjective norms have a significant impact on purchasing green products [43]. To conclude, the authors have the hypothesis:

H1#1: Subjective norms are positively associated with the Green purchase intention.

AV and GPI. Ares and Deliza (2010) has noted that there is a relationship between aesthetic value and the intention to purchase green products [44]. The shape and the color of a product has a positive influence on the intention to buy a product. The researcher Gallarza and Saura (2006) has applied aesthetic value to understand how it influences purchase intention and satisfaction in the travel industry [45]. Aesthetic value was frequently used to measure how it gives impact on customer decisions while shopping online [46]. Alternatively, aesthetic value has been found to have a significant impact with purchase intention [47], [48]. Moreover, Mohd et al., (2013) has proven that

aesthetic value has a positive relationship in purchase intention of conventional motorcycles [49]. As a result, according to the above discussions, the hypothesis is proposed as the following:

H1#2: Aesthetic value is positively associated with the Green purchase intention.

GV and GPI. Consumers with stronger or higher knowledge about green values (i.e., “green” consumers) are generally oriented toward protecting resources at both the environmental and personal level. Based on the previous research, that green value has a positive impact for an upcycled product [14]. The findings by Haws, Winterich and Naylor (2014) showed that stronger green values increase consumer preference for environmentally friendly products [20]. If consumers perceive that the value of a product is higher, they are more likely to purchase the product [32]. In the rise of the environmentalism nowadays, green value is very important in order to have the intention to purchase green products, so according to the above discussions the following hypothesis is proposed:

H1#3: Green value is positively associated with the Green purchase intention.

PP and GPI. Studies by Manner et al (2007) have shown that cost is an important factor in the acquisition of customers, thus having a major effect on the satisfaction of customers. This means that Perceived Price may be a great factor leading a consumer’s intention of purchasing a product. Consumers consider price when evaluating products or services [50], [51]. As a result, customers who are willing to purchase green products consider the Perceived Price of these products, and green products are typically more expensive than ordinary products. Also, several studies have indicated that Perceived Price is a crucial factor affecting consumer use intention [52], [53]. Huang and Lin said that customers are willing to pay more money to purchase green products if they believe that the product will be beneficial for the environment [54]. As a result, according to the above discussions, the hypothesis is proposed as the following:

H1#4: Perceived Price is positively associated with the Green purchase intention.

PQ and GPI. Perceived quality has a significant relationship on consumer intention to purchase a product [55]. The positive impact towards product quality originates from the perceived quality dominance [56]. Subsequently perceived quality significantly sustains a long-standing consumer relationship such that purchase intentions remain as the most vital element that determines the intention to purchase green products [31]. On the other hand, some available empirical evidence shows that the results are inconsistent

depending on the situation. The research conducted by Boulding et al., (1993) shows that there is a significant direct effect relationship between purchase intention and perceived quality [57]. Thus, this research has the following hypothesis:

H1#5: Perceived quality is positively associated with the Green purchase intention.

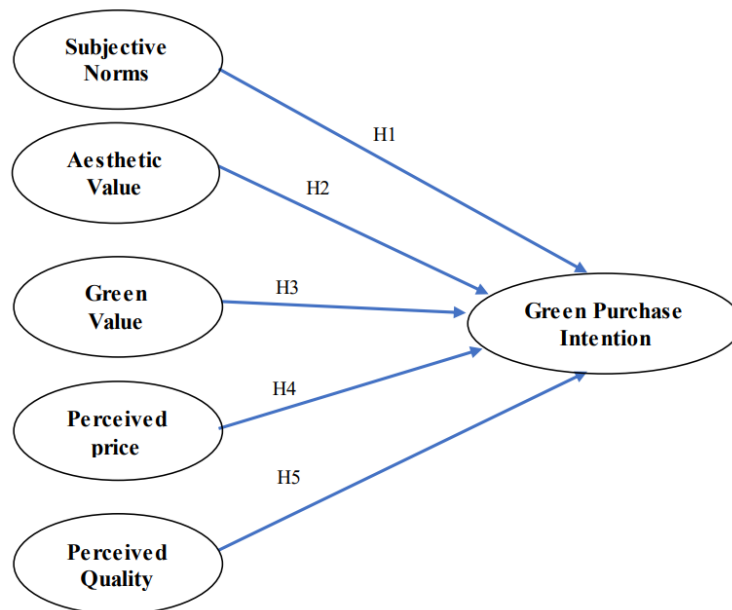


Figure 1. Research Model

Source: Author, 2020

III. METHOD

3.1 Data Collection & Method

In this research, the author uses descriptive study and will use non-probability judgement sampling for the sample collection. Descriptive study uses methods like quantitative analysis of secondary data, questionnaires, surveys and interviews. In this research, the descriptive study method was used to analyze the factors affecting the green purchase intention of electric motorcycles. The researcher chooses to use a descriptive method because the objective is to get first hand data from the respondents. Moreover, a descriptive study method has an advantage for the researcher because of its flexibility. This method can be used either quantitative or qualitative data or both, giving

the researcher greater options in selecting the instrument for data-gathering. In this research, there were included primary data and secondary data types. The primary data were derived from the answers gathered by distributing the online questionnaires. While the secondary data were obtained from the previous studies & literatures that are in line with the current topic. Thus, there are three main stages in this research as the following:

Pre-test. Pre-test is an important step that should be done on a research. Failure to pre-test may enhance both sampling mistakes (because of failure to answer either a few questions or the entire questionnaire) and non-sampling mistakes (because of misunderstanding some questions, inaccurate or unclear skip patterns, or number of other reasons.) In a pre-test sample, there are a few steps the researcher needs to undergo, starting with data preparation, followed by data screening and validity & reliability test [58]. The first step of data analysis is data screening. It was done to make sure that the raw data is reliable, and it meets the requirements of basic assumptions by Hair et al., (2010). The first step, data preparation will be gathered from the information gathered from previous studies. The second step is data screening using SPSS software, and there are a few stages of data screening. The first data screening was done to check the missing data, to check whether the respondent has answered all the questionnaires completely or not. The second data screening was to evaluate the accuracy of the data and was determined using minimum and maximum theoretical range of scores between 1 and 5. The last data screening is to identify outliers [58]. After finish with data screening, then the pre-test sample should go to the validity & Reliability test. Validity test also use SPSS software to evaluate the validity of the questionnaire's construct. By using SPSS, six things can be evaluated; "KaiserMeyer-Olkin measure of sampling adequacy (KMO), Anti-image Matrices (the MSA scores), Bartlett's Test of Sphericity sig., Component matrix score (factor loading), component matrix (in 1 column or more than 1 column) and Communalities-Extractions scores."

Post-test. Post-test will be done after the pretest is done. Similar to the pre-test, but the posttest will be using a bigger sample. In the post-test, there will be data preparation and data screening. After making sure that all the data has passed the data screening, the next step is examining the multivariate assumption Hair et al., (2010). There are six stages to be done, called classical assumption tests. 1. Normality Test with Kolmogorov-Smirnov; 2. Normality Test with Normal Probability Plot (P-Plot Test) and Histogram graphic; 3. Linearity Test; 4. Homoscedasticity or Heteroscedasticity test with Scatter Plot graphic; 5. Non-Correlated Errors/Autocorrelation Test with Spearman Rho Test, and 6. Multicollinearity Test [58].

In-depth Interview. The data that was collected from this in-depth interview will be used for cross-checking from quantitative data. There will be 3 people as samples in this interview who are selected randomly from those who already fill in the questionnaires. The interviewees must be those who are already answered the questionnaires fully until the end

3.2 Sampling Size

Sampling is the selection process that targets a sufficient number of the right members from the population to generalize such characteristics of the population. Targeting a sufficient sample size is important to represent the whole population of the Jabodetabek area. According to Hair et al., (2010), "the number of respondents is at least five times as many observations as the number of variables to be analyzed, and the more acceptable sample size would have 10:1 ratio". So based on Hair et al definition, the sample size of this study can be calculated as below:

$$\text{Number of Variables} \times 5 = \text{Minimum Sample Size}$$

$$30 \times 5 = 150 \text{ respondents}$$

Hence, the needed number of minimum respondents for this specific study is 150 respondents. This minimum amount of sample size will determine the data and result of this study and determine the relationships between the independent variables and dependent variables. Values under the calculated amount such as the above will result in insufficient or reliable data results.

IV. RESULTS AND DISCUSSION

Table 1 below shows the results from each latent variable, including the overall KMO, MSA, Bartlett's test, factor loading, component matrix column, communalities extraction score and cronbach's alpha score. All of the data taken are already valid and reliable and higher from the minimum validity and reliability parameters.

Table 1. Table of validity and reliability (Measurement Model analysis)

Item		Validity Parameters						Reliability Parameters
Construct	Questions	Overall KMO	MSA	Bartlett's Test	Factor Loading	Component Matrix Column	Communalities Extract	Cronbach's Alpha

							ion Score	
SN	1	0.848	0.893	0.000	0.733	1	0.537	0.874
	2		0.850		0.730		0.533	
	3		0.820		0.706		0.498	
	4		0.851		0.755		0.570	
	5		0.827		0.817		0.668	
	6		0.819		0.821		0.674	
	7		0.899		0.730		0.532	
AV	1	0.860	0.860	0.000	0.910	1	0.829	0.946
	2		0.881		0.924		0.854	
	3		0.832		0.939		0.851	
	4		0.837		0.936		0.876	
GV	1	0.824	0.839	0.000	0.849	1	0.721	0.882
	2		0.793		0.890		0.791	
	3		0.810		0.883		0.780	
	4		0.867		0.818		0.669	
PP	1	0.823	0.828	0.000	0.877	1	0.769	0.875
	2		0.820		0.883		0.779	
	3		0.773		0.909		0.825	
	4		0.916		0.755		0.570	
PQ	1	0.888	0.874	0.000	0.789	1	0.623	0.912
	2		0.869		0.792		0.627	
	3		0.930		0.819		0.672	
	4		0.888		0.786		0.618	
	5		0.894		0.785		0.616	
	6		0.893		0.835		0.696	
	7		0.875		0.887		0.787	
GP I	1	0.785	0.834	0.000	0.825	1	0.681	0.856
	2		0.855		0.730		0.532	
	3		0.744		0.886		0.785	
	4		0.755		0.893		0.797	

Table 2 below shows the R score, R Square, and adjusted R square for the used variable. The data taken from the SPSS software.

Table 2. Regression Analysis Test

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.712 ^a	.506	.498	2.47083

a. Predictors: (Constant), PQ, AV, GV, PP, SN

b. Dependent Variable: GPI

Table 3 below shows the T-Test (Partial) Score and F-Test (Simultaneously) Score for the used variable. It has a T-Score higher than the T-table and F-Score also higher than the F-Table. Thus, it is considered that all the hypotheses carried in this research are all accepted.

Table 3. Table of T-test, F-test & Hypothesis conclusion

Hypothesis	T-Test (Partial)		F-Test (Simultaneously)		Hypothesis Conclusion
	T-Score > T-Table (1.968)	Sig. < 0.05	F-Score > F-Table (2.26)	Sig. < 0.05	
H1: Subjective Norms	3.477	0.001	60.339	0.000	H1#1 Accepted
H2: Aesthetic Value	3.683	0.000			H1#2 Accepted
H3: Green Value	4.857	0.000			H1#3 Accepted
H4: Perceived Price	3.386	0.001			H1#4 Accepted
H5: Perceived Quality	3.777	0.000			H1#5 Accepted

V. DISCUSSION

Based on the hypothesis results above, it can be determined that subjective norms have a positive and significant influence on green purchase intention because the t-score is higher than the t-table. It also has significance below the level of error of 0.05, or in other words, H1#1 – Subjective Norms positively associated with green purchase intentions are accepted. As previously stated by [43], subjective norms has the ability of making the consumers want to buy green products, which concludes that subjective norms also have

a significant impact on consumer's green purchase intention. The presence of subjective norms on a consumer's perspective also will lead to beneficial for the business. It will lead consumers who already bought or not yet bought become influenced by the subjective norms.

Based on the table 3 above, it can be determined that aesthetic value has a positive and significant influence on green purchase intention because the t-score is higher than the t-table and has a significance value below the level of error of 0.05, or in other words, H1#2 – Aesthetic Value is positively associated with green purchase intention. As previously stated by [44] that there is a relationship between aesthetic and purchase intention. The shape and the color of a product has a positive influence on the intention to buy a product. In this research, aesthetic value shows the third highest affecting green purchase intention with 3.683 score. It can be concluded that aesthetic value plays a good role for green purchase intention of electric motorcycles. By creating an interesting design for the electric motorcycle, it is believed that it will increase the sales of the electric motorcycle.

Based on the table 3 above, it can be determined that green value has a positive and significant influence on green purchase intention because the t-score is higher than the t-table and has a significance value below the level of error of 0.05, or in other words, H1#3 – Green Value is positively associated with green purchase intention. As stated by [20] that stronger green values increase consumer preference for environmentally friendly products. The same case with electric motorcycles, people with higher green values will consider buying electric motorcycles compared with conventional motorcycles because of its more environmentally friendly. Also, in this research, green value has the highest score in the t-score compared to the others. It means that green value is the most influencing factor for green purchase intention.

Based on the table 3 above, it can be determined that Perceived Price has a positive and significant influence on green purchase intention because the t-score is higher than the t-table and has a significance value below the level of error of 0.05, or in other words, H1#4 – Perceived Price is positively associated with green purchase intention is accepted. As stated by [50], [51] that price is an important factor in the acquisition of customers, thus having a major effect on the satisfaction of customers. This means that price may be a great factor leading a consumer's intention of purchasing a product. Based on this research, consumers perceived Price of electric motorcycles already in line with the value of the product, and the price is acceptable. On the other hand, the sales of electric motorcycles in Indonesia are still considered low, so it is not in

line with the normal economic theory that the higher the price, the higher the intention of purchasing an electric motorcycle.

Based on the table 3 above, it can be determined that perceived quality has a positive and significant influence on green purchase intention because the t-score is higher than the t-table and has a significance value below the level of error of 0.05, or in other words, H1#5 – Perceived Quality is positively associated with green purchase intention is accepted. As stated by [31] that perceived quality is the most vital influencer for customer purchase intention, because of long-term customer relationships. Consumers that already know the perceived quality of the product is good, will keep buying from the same company. As can be seen on the table 4.39 above, perceived quality is the second highest factor affecting green purchase intention. Thus, customers will choose the electric motorcycle with good quality and long-lasting without frequent servicing than better aesthetic value.

VI. CONCLUSIONS

This research has five objectives that were set in the first chapter of this research. The first objective is to analyze whether subjective norms positively affect consumers' green purchase intention. The second objective is to learn whether aesthetic value has a positive impact towards consumers' intention to purchase. The third objective is to analyze whether green value has a positive impact towards consumers' green purchase intention. The fourth objective is to see whether Perceived Price has a positive impact towards consumers' intention to purchase. The last objective is to analyze whether perceived quality has a positive impact on consumers' green purchase intention.

After undergoing some data gathering processes, statistical tests and analyzing the results, there are five outcomes that can be concluded from this research. The results of this research signified several conclusions in line with consumers' intention to purchase green products. According to the t-score results, the score of subjective norms is the second lowest after Perceived Price. It means that subjective norms have contributed to the green purchase intention, but electric motorcycles are not considered cheap, so people cannot easily be influenced by only subjective norms. Aesthetic value has the third highest t-score after green value and perceived quality, it means that consumers are really influenced by the design of the electric motorcycle. Green value has the highest t-score among others, which is 4.857 and followed by Perceived Price with the lowest

t-score, which is 3.386. It can be concluded that green value of the consumers is the highest aspect that influenced consumers green purchase intention. People with higher green value will still consider buying an electric motorcycle, although the price is high, the design is not aesthetic, and the quality still not as good as the conventional motorcycle. On the other hand, Perceived Price has the lowest t-score, which means that Perceived Price has contribution but not as high as green value. Consumers still buy electric motorcycles if the price is high, but they will be attracted more if the price is cheaper. Perceived quality has the second highest score from the t-table, which is 3.777. It means that consumers are really influenced by the perceived quality of the electric motorcycle. So based on this research, it can be concluded that people will choose electric motorcycles with high quality but bad aesthetic design and expensive price, rather than low quality but good aesthetic and cheap price.

REFERENCES

- [1] WHO, "Ambient Air Pollution database," 2016.
- [2] WHO.int, "Air Pollution • Air pollution," Traveller Malaysia, 2019. .
- [3] E. Guerra, "Electric vehicles, air pollution, and the motorcycle city: A stated preference survey of consumers' willingness to adopt electric motorcycles in Solo, Indonesia," *Transp. Res. Part D Transp. Environ.*, vol. 68, no. June, pp. 52–64, 2017, doi: 10.1016/j.trd.2017.07.027.
- [4] Iqair.com, "World most and outdoor air quality monitor," 2019. .
- [5] AISI, "AISI - Asosiasi Industri Sepedamotor Indonesia_ Statistic," no. 88, p. 14250, 2019.
- [6] R. Hicks, "Gasp! Air pollution in Jakarta and Hanoi is now worse than in Beijing , global study reveals," pp. 1–8, 2020.
- [7] M. Greenstone and Q. Fan, "Indonesia's Worsening Air Quality and its Impact on Life Expectancy," *Air Qual. Life Index*, no. March, pp. 1–10, 2019.
- [8] A. Maulana, "Motor Disebut Penyebab Utama Polusi di Jakarta , Ini Jumlah Populasinya," pp. 2–7, 2019.
- [9] Ray, "Ambisi Indonesia Populasi Motor Listrik 2 Juta Unit pada 2025," pp. 2–6, 2019.
- [10] I. Ajzen, "The theory of planned behavior as a predictor of growth in risky college drinking," *J. Stud. Alcohol Drugs*, vol. 72, no. 2, pp. 322–332, 1991, doi: 10.15288/jsad.2011.72.322.

-
- [11] H. S. Park, "Relationships among attitudes and subjective norms: Testing the theory of reasoned action across cultures," *Commun. Stud.*, vol. 51, no. 2, pp. 162–175, 2000, doi: 10.1080/10510970009388516.
- [12] D. H. Shin, "Determinants of customer acceptance of multi-service network: An implication for IP-based technologies," *Inf. Manag.*, vol. 46, no. 1, pp. 16–22, 2009, doi: 10.1016/j.im.2008.05.004.
- [13] D. Costa Pinto, W. M. Nique, M. Maurer Herter, and A. Borges, "Green consumers and their identities: how identities change the motivation for green consumption," *Int. J. Consum. Stud.*, vol. 40, no. 6, pp. 742–753, 2016, doi: 10.1111/ijcs.12282.
- [14] S. Yu and J. Lee, "The effects of consumers' perceived values on intention to purchase upcycled products," *Sustain.*, vol. 11, no. 4, 2019, doi: 10.3390/su11041034.
- [15] J. E. Workman and L. F. Caldwell, "Centrality of visual product aesthetics, tactile and uniqueness needs of fashion consumers," *Int. J. Consum. Stud.*, vol. 31, no. 6, pp. 589–596, 2007, doi: 10.1111/j.1470-6431.2007.00613.x.
- [16] P. H. Bloch, F. F. Brunel, and T. J. Arnold, "Individual Differences in the Centrality of Visual Product Aesthetics: Concept and Measurement," *J. Consum. Res.*, vol. 29, no. 4, pp. 551–565, 2003, doi: 10.1086/346250.
- [17] S. Charters, "Aesthetic Products and Aesthetic Consumption: A Review," *Consum. Mark. Cult.*, vol. 9, no. 3, pp. 235–255, 2006, doi: 10.1080/10253860600772255.
- [18] M. Yamamoto and D. R. Lambert, "The Impact of Product Aesthetics on the Evaluation of Industrial Products," *J. Prod. Innov. Manag.*, vol. 11, no. 4, pp. 309–324, 1994, doi: 10.1111/1540-5885.1140309.
- [19] E. Swilley, "Aesthetic technology: scale development and measurement," *Int. J. Technol. Mark.*, vol. 7, no. 3, p. 324, 2012, doi: 10.1504/ijtmkt.2012.048119.
- [20] K. L. Haws, K. P. Winterich, and R. W. Naylor, "Seeing the world through GREEN-tinted glasses: Green consumption values and responses to environmentally friendly products," *J. Consum. Psychol.*, vol. 24, no. 3, pp. 336–354, 2014, doi: 10.1016/j.jcps.2013.11.002.
- [21] G. K. Dagher, O. Itani, and A. N. Kassar, "The Impact of Environment Concern and Attitude on Green Purchasing Behavior: Gender as The Moderator," *Contemp. Manag. Res.*, vol. 11, no. 2, pp. 179–206, 2015, doi: 10.7903/cmr.13625.
- [22] M. G. McEachern and P. McClean, "Organic purchasing motivations and attitudes: Are they ethical?," *Int. J. Consum. Stud.*, vol. 26, no. 2, pp. 85–92, 2002, doi: 10.1046/j.1470-6431.2002.00199.x.

- [23] S. Roy, "Green Marketing and its Impact on Indian Environment," *Indian J. Public Adm.*, vol. 59, no. 4, pp. 875–885, 2013, doi: 10.1177/0019556120130409.
- [24] G. Armstrong, S. Adam, S. Denize, M. Volkov, and P. Kotler, "Principles of Marketing (Australian 7th Edition 2017)." 2017.
- [25] B. Roe, M. F. Teisl, A. Levy, and M. Russell, "US consumers' willingness to pay for green electricity," *Energy Policy*, vol. 29, no. 11, pp. 917–925, 2001, doi: 10.1016/S0301-4215(01)00006-4.
- [26] A. Nugroho, "The Role of Price in Deciding to Purchase Ready-to-Drink Tea," *J. Manaj.*, vol. 22, no. 3, p. 381, 2018, doi: 10.24912/jm.v22i3.428.
- [27] B. Jin and Y. G. Suh, "Integrating effect of consumer perception factors in predicting private brand purchase in a Korean discount store context," *J. Consum. Mark.*, vol. 22, no. 2, pp. 62–71, 2005, doi: 10.1108/07363760510589226.
- [28] D. Hacker, *Operations Management*, vol. 7, no. 4. 1991.
- [29] V. a. Zeithaml, "Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence," vol. 52, no. 3, pp. 2–22, 1988.
- [30] R. Tsiotsou, "The role of perceived product quality and overall satisfaction on purchase intentions," *Int. J. Consum. Stud.*, vol. 30, no. 2, pp. 207–217, 2006, doi: 10.1111/j.1470-6431.2005.00477.x.
- [31] B. Snoj, A. Pisnik Korda, and D. Mumel, "The relationships among perceived quality, perceived risk and perceived product value," *J. Prod. Brand Manag.*, vol. 13, no. 3, pp. 156–167, 2004, doi: 10.1108/10610420410538050.
- [32] Y. S. Chen and C. H. Chang, "Enhance green purchase intentions: The roles of green perceived value, green perceived risk, and green trust," *Manag. Decis.*, vol. 50, no. 3, pp. 502–520, 2012, doi: 10.1108/00251741211216250.
- [33] I. A. Debora Indriani, M. Rahayu, and D. Hadiwidjojo, "The Influence of Environmental Knowledge on Green Purchase Intention the Role of Attitude as Mediating Variable," *Int. J. Multicult. Multireligious Underst.*, vol. 6, no. 2, p. 627, 2019, doi: 10.18415/ijmmu.v6i2.706.
- [34] R. Chan and R. Y. K. Chan, "Determinants of Chinese Consumers' Green Purchase Determinants of Chinese Consumers' Green Purchase Behavior," vol. 18, no. August, pp. 389–413, 2001, doi: 10.1002/mar.1013.
- [35] Z. U. Rehman and M. K. Dost, "Conceptualizing green purchase intention in Emerging markets: An empirical analysis on Pakistan," 2013 WEI Int. Acad. Conf. Proc., pp. 99–120, 2013.

- [36] T. Ramayah, J. W. C. Lee, and O. Mohamad, "Green product purchase intention: Some insights from a developing country," *Resour. Conserv. Recycle.*, vol. 54, no. 12, pp. 1419–1427, 2010, doi: 10.1016/j.resconrec.2010.06.007.
- [37] P. Sparks and R. Shepherd, "Self-Identity and the Theory of Planned Behavior: Assessing the Role of Identification with 'Green Consumerism,'" *Soc. Psychol. Q.*, vol. 55, no. 4, p. 388, 1992, doi: 10.2307/2786955.
- [38] B. Verplanken, O. Psychology, and L. Univer-, "Explaining Proenvironmental Intention and Behavior by Personal Norms and the Theory of Planned Behavior'," *J. Appl. Soc. Psychol.*, pp. 2505–2528, 1999.
- [39] F. G. Kaiser and H. Gutscher, "The proposition of a general version of the theory of planned behavior: Predicting ecological behavior," *J. Appl. Soc. Psychol.*, vol. 33, no. 3, pp. 586–603, 2003, doi: 10.1111/j.1559-1816.2003.tb01914.x.
- [40] I. Moons and P. de Pelsmacker, "Emotions as determinants of electric car usage intention," *J. Mark. Manag.*, vol. 28, no. 3–4, pp. 195–237, 2012, doi: 10.1080/0267257X.2012.659007.
- [41] J. Paul, A. Modi, and J. Patel, "Predicting green product consumption using theory of planned behavior and reasoned action," *J. Retail. Consum. Serv.*, vol. 29, pp. 123–134, 2016, doi: 10.1016/j.jretconser.2015.11.006.
- [42] R. Yadav and G. S. Pathak, "Determinants of Consumers' Green Purchase Behavior in a Developing Nation: Applying and Extending the Theory of Planned Behavior," *Ecol. Econ.*, vol. 134, pp. 114–122, 2017, doi: 10.1016/j.ecolecon.2016.12.019.
- [43] N. Screen, S. Purbey, and P. Sadarangani, "Impact of culture, behavior and gender on green purchase intention," *J. Retail. Consum. Serv.*, vol. 41, no. July 2017, pp. 177–189, 2018, doi: 10.1016/j.jretconser.2017.12.002.
- [44] G. Ares and R. Deliza, "Studying the influence of package shape and colour on consumer expectations of milk desserts using word association and conjoint analysis," *Food Qual. Prefer.*, vol. 21, no. 8, pp. 930–937, 2010, doi: 10.1016/j.foodqual.2010.03.006.
- [45] M. G. Gallarza and I. G. Saura, "Value dimensions, perceived value, satisfaction and loyalty: An investigation of university students' travel behaviour," *Tour. Manag.*, vol. 27, no. 3, pp. 437–452, 2006, doi: 10.1016/j.tourman.2004.12.002.
- [46] C. Mathwick, N. Malhotra, and E. Rigdon, "Experiential value: Conceptualization, measurement and application in the catalog and Internet shopping environment," *J. Retail.*, vol. 77, no. 1, pp. 39–56, 2001, doi: 10.1016/S0022-4359(00)00045-2.

- [47] R. C. Tzou and H. P. Lu, "Exploring the emotional, aesthetic, and ergonomic facets of innovative products on fashion technology acceptance model," *Behav. Inf. Technol.*, vol. 28, no. 4, pp. 311–322, 2009, doi: 10.1080/01449290701763454.
- [48] S. Lee and R. J. Koubek, "Understanding user preferences based on usability and aesthetics before and after actual use," *Interact. Comput.*, vol. 22, no. 6, pp. 530–543, 2010, doi: 10.1016/j.intcom.2010.05.002.
- [49] R. S. Mohd, W. M. Suhardi, A. H. Anita, W. O. Maznah, and H. H. Ety, "The relationship between product quality and purchase intention: The case of Malaysia's national motorcycle/scooter manufacturer," *African J. Bus. Manag.*, vol. 5, no. 20, pp. 8163–8176, 2013, doi: 10.5897/ajbm11.267.
- [50] N. Mohd Suki, "Consumer environmental concern and green product purchase in Malaysia: structural effects of consumption values," *J. Clean. Prod.*, vol. 132, pp. 204–214, 2016, doi: 10.1016/j.jclepro.2015.09.087.
- [51] P. W. Schultz, C. Shriver, J. J. Tabanico, and A. M. Khazian, "Implicit connections with nature," *J. Environ. Psychol.*, vol. 24, no. 1, pp. 31–42, 2004, doi: 10.1016/S0272-4944(03)00022-7.
- [52] J. J. Cronin, M. K. Brady, and G. T. M. Hult, "Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments," *J. Retail.*, vol. 76, no. 2, pp. 193–218, 2000, doi: 10.1016/S0022-4359(00)00028-2.
- [53] Z. Basiri and J. Heydari, "A mathematical model for green supply chain coordination with substitutable products," *J. Clean. Prod.*, vol. 145, pp. 232–249, 2017, doi: 10.1016/j.jclepro.2017.01.060.
- [54] P. C. Lin and Y. H. Huang, "The influence factors on choice behavior regarding green products based on the theory of consumption values," *J. Clean. Prod.*, vol. 22, no. 1, pp. 11–18, 2012, doi: 10.1016/j.jclepro.2011.10.002.
- [55] A. Parasuraman, V. A. Zeithaml, and L. L. Berry, "A Conceptual Model of Service Quality and Its Implications for Future Research," *J. Mark.*, vol. 49, no. 4, p. 41, 1985, doi: 10.2307/1251430.
- [56] V. A. Zeithaml, L. L. Berry, and A. Parasuraman, "The behavioral consequences of service quality," *J. Mark.*, vol. 60, no. 2, pp. 31–46, 1996, doi: 10.2307/1251929.
- [57] W. Boulding, A. Kalra, R. Staelin, and V. A. Zeithaml, "A Dynamic Process Model of Service Quality: From Expectations to Behavioral Intentions," *J. Mark. Res.*, vol. 30, no. 1, p. 7, 1993, doi: 10.2307/3172510.

-
- [58] M. R. Adam, "Practical Guide of the integrated Structural Equation Modeling (SEM) with LISREL & AMOS for Marketing and Social Sciences Thesis," 2018.

Comparison Study of Indonesian Third-Culture Individuals and Non-Third Culture Individuals in Regards to Communication Accommodation in Intercultural Business

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Abstract

Third Culture Individuals (TCI) are people who spent a significant amount of time outside their passport country during their developmental years. Due to their exposure to different cultures, they are inclined and have the ability to adjust their communication and behaviour accordingly. Communication Accommodation focuses on Convergence and Divergence, the communication strategies when individuals adapt to each other's communication language and behaviour. Convergence occurs when individuals adjust their communication to be more similar to their communication partner. Conversely, Divergence is when individuals accentuate differences. The aim of this study is to compare communication Convergence and Divergence levels of Indonesian TCI and non-TCI by adopting a pre-existing scale measuring four dimensions (Approximation, Interpretability, Discourse Management and Interpersonal Control). Data was gathered through an online survey with 140 respondents who are Indonesian TCI and non-TCI.

Results show that even though both groups are convergent, TCI are more convergent and accommodating..

Keywords: Communication Accommodation Theory, Convergence and Divergence, Intercultural Communication, Cultural Identity, Intercultural Business Communication, TCK, Third Culture Kids, Third Culture Individuals.

I. INTRODUCTION

With rapid changes in global technology, transportation, and immigration policies, humans are able to commute and settle anywhere in the world. In a global society, people bring different work habits and cultural practices differently. According to a research by a global market agency, Finaccord (2018), the number of expats around the world has risen to approximately 66 million worldwide with the largest share consisting of individual workers. The number is expected to rise to over 87 million in the next few years.

Third Culture Individuals (TCI) are defined as individuals who have spent their developmental years outside their passport countries. The term was coined in 1960 by John and Ruth Hill describing TCI as individuals who have a high mobility lifestyle and cross-cultural upbringing. Considering TCI having diverse interactions with people from different cultures on a daily basis, their identity and self-concepts are developed based on these interactions. Everyone needs, to a certain extent, adjust their ways of communicating to the individual(s) they are speaking to. Hence, throughout their whole lives, TCI have to adjust their communication to be understood by people that do not come from the same cultural background as theirs.

Within intercultural business communication, Communication Accommodation can be found when two speakers shift their communication styles in two different ways: 1) Convergence, the strategy to which individuals adapt their communication to be more similar to others and 2) Divergence, the strategy to accentuate the differences between self and the other. These strategies are achieved through adjusting their linguistic, paralinguistic and behavior depending on the person(s) they are communicating with.

This study will address Communication Accommodation strategies by comparing Indonesian TCI and Indonesian non-TCI to see whether there is a difference or not and how they differ. The results of this study are expected to provide more findings both in regards to TCI and Communication Accommodation. Moreover, the findings can be

applied into real-life situations such as in academics, jobs, intercultural business communications and other situations that involve cultural understanding.

II. LITERATURE REVIEW

A. Third Culture Individuals

Third Culture Individuals (TCI) or often referred as Third Culture Kids (TCK), are individuals that have spent most of their developmental years outside their parents' culture. They often build relationships to many cultures, yet do not have full ownership of any of the said cultures. Even though they may assimilate all of the cultures experienced, TCI cannot fully identify fully to any.

The differences that separate TCI from non-TCI are: mobility, developmental years spent in host country, developmental years spent in passport country, culture of host country, cultural identity and relationship to host country (PoIvan Model), educational experience and languages spoken.

Mobility is the amount of times TCI have moved from one country to another, mainly in their developmental years. Due to high mobility, TCI are exposed to different cultures throughout their lives. Commonly, TCI is able to speak two languages fluently; one of his/her passport country and one of the host countries. Furthermore, as for educational experience, TCI are forced to adjust their communication to specific curriculums and ways of teachings, depending on the place they are currently studying.

B. Communication Accommodation Theory (Convergence & Divergence)

Communication Accommodation Theory (CAT) was developed by Howard Giles who believed that it is likely for individuals to change the way they speak when interacting with others. They modify their speech, vocal patterns, and gestures to accommodate others. CAT focuses on patterns of Convergence and Divergence in communication and behaviors.

Convergence, defined by Giles, Nikolas and Justine Coupland in 1991, is "a strategy whereby individuals adapt to each other's communicative behaviors". Convergence can be achieved through verbal and non-verbal communication. When individuals feel attracted to someone, they are more likely to prompt Convergence. The attractiveness can be caused by a number of reasons such as having similar beliefs,

personality, behavior, status, credibility, etc. Another motive for Convergence is to adjust their way of communicating based on the person(s) they are talking to gain likeness and approval. Successful convergence results in effective communication since both parties are exposed to the same symbols and meaning thus creating a mutual understanding.

Divergence, or non-accommodation, in contrast to Convergence, is the emphasis of differences in speech and non-verbal behavior between themselves and others. It has to be noted that Divergence does not equal to ignorance or inattentiveness but rather to maintenance meaning that individuals choose to maintain their original linguistic, paralinguistic and non-verbal behavior. Giles (1987) asserted that people, especially in racial groups or ethnic groups, deliberately maintain their original speech and language to emphasize their identity and culture. Another important reason is to maintain social power and differences between people from different socio-economic classes and status.

There are four dimensions in Communication Convergence and Divergence:

1. Approximation refers to when individuals adjust their speech patterns, tone, etc. to be similar (converge) or different (diverge) from another;
2. Interpretability focuses on adjusting the use of language so that the receiver of the message can understand;
3. Discourse management is the adjustment of communication based on the conversational needs. For instance, knowing the needs when to not talk about a certain subject or when to change the topic of the conversation; and
4. Interpersonal control is to adapt communication based on role relations and status. In interpersonal control, when individuals converge, they try to place their status equal to the other but when they diverge, they emphasize on the difference of the status between one another.

In CAT, people have options whether to use the same languages and non-verbal systems or differentiate themselves from others. These choices are referred to as Convergence and Divergence. These choices are either done consciously or unconsciously, depending on the needs of the individuals.

III. METHOD

In order to investigate the level of Communication Convergence and Divergence between Indonesian TCI and non-TCI, a quantitative approach through a 7-point likert scale questionnaire with 3 parts was chosen. Respondents from both groups are aged 20 to 29 years old. All respondents must have an Indonesian passport and are currently residing/ repatriated in Indonesia. Since there is no precise definition of TCI, in this study respondents who have spent at least 4 of their developmental years (aged 6 to 18) outside Indonesia are considered TCI while non-TCI are the respondents who have spent less than four years outside Indonesia.

The questionnaire consists of three parts. The first part contains basic demographics and will determine whether the respondents fit the criteria to fill in the questionnaire. The second part is to profile the respondent as a TCI or a non-TCI based on the characteristics of Schumacher (2016)'s TCI Characteristics. Lastly, the third part consists of determinants on the level of Communication Convergence and Divergence strategies. The items of the questionnaire are adopted from a previous study done by Dumanig, (2015). The study provides a quantitative measure for Communication Convergence and Divergence levels.

IV. RESULT AND DISCUSSIONS

The questionnaire collected 140 responses in total; 70 Indonesian TCI and 70 non-TCI. The overall study of this paper examined based on these responses. Results concluded factors as to why TCI are more capable of applying Convergence strategies in communication is because of their exposure to multicultural settings throughout their developmental years. 81.4% of TCI respondents spent more than 7 years abroad in the ages of 6 to 18. Conversely, 75% of non-TCI spent less than a year abroad. Furthermore, 62.9% of TCI respondents attended international school abroad whereas the majority of non-TCI respondents attended local private schools and national schools in Indonesia. Lastly, the number of languages spoken by both TCI and non-TCI are roughly the same. However, 47.1% of non-TCI respondents speak 2 languages whereas 41.4% of TCI respondents speak 3 languages.

Table 1. Indonesian TCI and non-TCI Characteristics

TCI Characteristics		TCI	Non-TCI
Languages Spoken		2 languages: 31.4%	2 languages: 47.1%
		3 languages: 41.4%	3 languages: 32.9%
High School Type	International school abroad:	62.9%	Private school: 35.7%
			National school: 28.6%
Years Abroad (Ages 6-18)	7-9 years:	35.7%	0 years: 75.0%
	10+ years:	45.7%	
Years in Indonesia (Ages 6-18)	1-3 years:	38.6%	10+ years: 90.0%
	4-6 years:	37.1%	

Following the data collection, a reliability test of the scale was conducted with 140 respondents; 70 were TCI and the other 70 were non-TCI. For the Communication Convergence and Divergence, the Cronbach's Alpha is excellent ($\alpha = 0.953 > 0.9$). The calculation per-dimension, the Cronbach Alpha are $0.8 \leq \alpha < 0.9$. The test items are consistent and reliable. The overall means of Communication Convergence and Divergence among TCI and non-TCI combined is $M = 5.83$ ($SD = 0.74$), showing both groups are mainly more convergent rather than divergent. Looking at groups separately however, shows that TCI ($M = 5.83$, $SD = 0.74$) are significantly more convergent compared to non-TCI ($M = 4.73$, $SD = 1.12$).

Table 2. T-test results of Communication Convergence and Divergence Per-Dimension on TCI's and Non-TCI's

Communication Accommodation Dimensions	TCI	Non-TCI
Approximation	6.01	4.75
Interpretability	5.96	4.97
Discourse. Management	5.80	4.80
Interpersonal. Control	5.59	4.41

Note

* $p < 0.05$ is statistically significant

*(1 = Strongly Divergent, 4 = Neither/Nor, 7 = Strongly Convergent)

A. Approximation

TCI (M= 6.01, SD= 0.75) scored higher in Approximation compared to non-TCI (M= 4.75, SD= 1.40), in addition to being the highest-scored dimension for TCI (M = 6.36, SD = 0.75). The main factors of the results are TCI's mobility and time spent outside their passport countries. Since TCIs are exposed to multicultural settings, they are able to distinguish between different types of cultural situations and individuals. Every culture in the world has different behaviours, languages and other aspects that are acceptable in some places but different in others. Hence, TCI are obliged to accustom themselves to different cultures. As TCIs move from one country to another they learn from various cultures and combine the knowledge gained to develop fully their communicative behaviours. All TCI have experienced living abroad for at least four years while the majority of non-TCI have not experienced living abroad. With that, TCIs have more varied communication and situation encounters than non-TCI. Through their journey, TCI have to adapt and adjust their communication styles. In addition, they have become more familiar and more experienced in adjusting their communication styles as they please.

Approximation is the dominant strategy during interactions. Individuals can either adjust their verbal, non- verbal and behaviour to be more similar or more different than others. A good intercultural business communication requires expertise in Approximation strategies, which include the other person(s)'s language and other aspects of their communication (e.g. culture, background, etc). Every language and culture are different – verbally, non-verbally and behaviorally. Without the fluent knowledge of the different cultures and languages, Approximation would be hard to master.

A. Interpretability

Interpretability is crucial for both TCIs and non-TCIs to master so that their messages are delivered efficiently. Even though TCIs still scored higher than non-TCIs, non-TCIs scored the highest in this dimension compared to the other dimensions. It is quite a challenge to achieve the Interpretability methods in communication, as it takes into account the other person's knowledge and disposition.

In communication accommodation, Interpretability can be defined as the comprehension of what is being said by the person(s) they are speaking to. This comprehension leads to the adoption of Interpretability strategy, where individuals decrease (convergence) or increase (divergence) their diversity of vocabulary, simplifying (convergence) or making more complex (divergence) their sentence structure, and becoming louder to increase clarity. Interpretability focuses on the information expressed and the partner's ability to understand the said information.

An example of convergence in Interpretability is avoiding the use of jargon or terms that only apply to certain fields and/or individuals. Instead, individuals accommodate and use vocabularies and syntax that will be most likely to be understood by the person(s) they are speaking to. On the other hand, divergence in Interpretability is using terms that can only be understood by certain groups or individuals, regardless of the understanding of the person(s) they are speaking to. In this research, Interpretability is related to Indonesia being a high-context culture and collectivism; speakers are expected to "read between the lines" and uphold in-group values. Which is why, Interpretability skills are highly upheld since it is important for Indonesians to understand the abilities of the person(s) they are speaking to and communicate accordingly to them.

A. Discourse Management

Discourse Management among TCI are more convergent as well ($M= 5.80$, $SD= 0.84$) compared to non-TCI ($M= 4.80$, $SD= 1.22$). Discourse Management refers to the adjustment of communication based on the needs of the conversation. It also includes emotional expression, which is the adjustment of emotional needs of the person(s) the individual(s) is speaking to.

Discourse Management strategies include selecting topics that are of mutual interest and do not cause conflicts or misunderstandings between the individuals and the person(s) they are speaking to. To converge in Discourse Management, individuals adjust their conversation topics, flows and tones to suit the person(s) they are speaking to avoid discomfort and conflicts or misunderstandings.

In intercultural businesses, Discourse Management is crucial as well as it controls the flow of interactions. Different cultures do businesses differently, where some things are acceptable in some cultures might not be in others. By applying Discourse Management, individuals are able to quickly grasp the cultural context

and might have the advantage of gaining sympathy from the other group, ensuring smooth transactions and discussions. Doing businesses with other cultures, we are bound to have certain topics that are not very pleasant to discuss or offensive. Even though TCIs have the upper-hand being exposed to different cultures, results suggest that Discourse Management is the one strategy dimension in which even non-TCI can master fast. When doing intercultural business communications, individuals can do a pre-research in regards to the other groups' cultural background to determine what sorts of topics are allowed or best not to be discussed.

B. Interpersonal Control

Interpersonal Control, both TCI and non-TCI lean more to Convergence in their communication and behavior strategies and yet TCI (M= 5.59, SD= 1.12) are more convergent compared to non-TCI (M= 4.41, SD= 1.11). Even so, both groups score the lowest in this dimension compared to the other dimensions.

Both TCI and non-TCI are leaning towards Convergence rather than Divergence is highly influenced by the shifts in how youths in general are communicating nowadays. Professional settings such as education institutions and working environments are currently pushing through hierarchies by using a different approach in communication where everyone is allowed to deliver their ideas and contribute deeply. In fact, these occurrences are not just happening in Indonesia but globally as well. Even so, in Indonesia people still uphold high cultural values where older people or people from higher status have to be respected. This can be seen as how Indonesians have to refer to other people with 'Pak' (Sir) or 'Ibu' (Mam) or even 'Kak' (for someone older). First name basis is not very common in Indonesia. Meanwhile, in international settings people often address each other on a first name basis. TCI are able to do this strategy better as they are used to different cultures and they tend to see more towards the context and in what ways the people they are communicating with will feel more comfortable.

V. CONCLUSIONS

The aim of this paper is to compare Communication Accommodation between Indonesian TCI and non-TCI through the 4 dimensions of Communication Accommodation Theory: Approximation, Interpretability, Discourse Management and Interpersonal Control. The findings show that both TCI and non-TCI are more leaning towards Convergence in their communication and behavior. Even so, TCI are more convergent than non-TCI overall. In all the 4 dimensions, results show that TCI are in fact more convergent compared to non-TCI.

Our findings suggest that TCI are more convergent than non-TCI highly correlates with the multi-cultural exposure TCI have to face throughout their whole lives, specifically during their developmental years. Everywhere they go, TCI are forced to learn about other cultures and adjust their communication and behavior. This continuous process has pushed TCI to develop their Communication Accommodation skills. On the other hand, non-TCI's Communication Accommodation skills are more correlated to the Indonesian culture of having to accommodate the people they are talking to.

In the end, we can conclude that both groups are leaning towards Convergence rather than Divergence because both TCI and non-TCI have the same goal of communicating: to be understood by other people and get their message across.

REFERENCES

- [1] Finaccord, "Global Expatriates: Size, Segmentation and Forecast for the Worldwide Market," Finaccord, no. April, pp. 1–18 (2018)
- [2] R. West and L. H. Turner, *Introducing Communication Theory: Analysis and Application*, 5th ed. New York, NY: McGraw-Hill (2014)
- [3] D. C. Pollock, R. E. Van Reken, and M. V. Pollock, *Third Culture Kids: Growing Up Among Worlds*, 3rd ed. London: Quercus (2010)
- [4] S. Schumacher, "Sense of Belonging Amongst Third Culture Kids and Their Motives in Consuming News and News Consumption about Host and Passport Country," Technische Universität Ilmenau (2016)
- [5] T. Giles, H. & Ogay, "Communication Accommodation Theory," *Explain. Commun. Contemp. Theor. Ex.*, pp. 293–310 (2007)
- [6] B. Chevalier, "Investigating the effectiveness of communication taking place between hospital pharmacists and patients during medication counselling," The University of Queensland, 2017.

-
- [7] F. Dumanig, *Language Choice in Interracial Marriages: The Case of Filipino-Malaysian Couples*. Boca Raton, Florida: Universal-Publishers (2010)
- [8] A. A. Lijadi and G. J. Van Schalkwyk, "Bloom Where You Are Planted: Place Identity Construction of Third Culture Kids," University of Macau (2015)
- [9] A. A. Lijadi and G. J. Van Schalkwyk, "Narratives of third culture kids: Commitment and reticence in social relationships," *Qual. Rep.*, vol. 19, no. 25, pp. 1–18 (2014)
- [10] M. Dragojevic, J. Gasiorek, and H. Giles, "Communication Accommodation Theory Historical backdrop and basic concepts," *Int. Encycl. Interpers. Commun.*, pp. 1–18 (2016)
- [11] O. Hargie, "Communication accommodation in a divided society: Interaction patterns between Protestants and Catholics in Northern Ireland," *Stud. Commun. Sci.*, vol. 14, no. 1, pp. 78–85(2014)
- [12] D. G. Hewett, B. M. Watson, C. Gallois, M. Ward, and B. A. Leggett, "Intergroup communication between hospital doctors: Implications for quality of patient care," *Soc. Sci. Med.*, vol. 69, no. 12, pp. 1732–1740 (2009)

Correlations between Campaign Message and Exposure, and Behavioral Change: the Case of Cinema 21's #PadaTempatnya Public Relations Campaign

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Abstract

Cinema 21 created #PadaTempatnya campaign to change people's lifestyles to be more concerned with cleanliness, especially in the cinema after watching a movie. The purpose of this study was to find out if there is a correlation between the #Padatempatnya campaign message and exposure and audience behavioral change to dispose of trash in its place. A survey of 115 young adults ages 20 to 24 years old was conducted. A Spearman Correlation Test found that there was a significant moderate positive correlation between campaign exposure, and significant strong positive correlation between campaign messages and behavioral change to dispose of trash in its place. Data was also analyzed using the perspective of the AIDA model. Findings showed that this campaign was most effective in the Attention stage.

Keywords: Campaign exposure, campaign message, behavior change to dispose of trash in its place.

I. INTRODUCTION

Indonesia has a coastal population of 187.2 million, which annually produces 3.22 million tons of unmanaged plastic waste. Around 0.48-1.29 million tons of plastic waste are thought to pollute the ocean. Of all the rubbish on the beach, the majority of stranded rubbish is plastic waste. As a result, the condition of marine pollution in Indonesia is very alarming. For this reason, Indonesia is the second highest plastic waste-producing country after China. In spite of laws and sanctions regulating littering, it is still done and has caused massive environmental problems, such as water pollution and floods. The Indonesian government is trying to reduce waste and has invited people to dispose of garbage in its place through several events, one of them is the "Clean Indonesia Movement".

The Clean Indonesia Movement, which at the same time became the national identity of all the clean action activities or care for waste, was initiated by the Coordinating Ministry for Maritime Affairs, together with the Ministry of Environment and Forestry (KLHK) as a daily technical implementer. This movement was launched for the first time to the public as a form of invitation for all Indonesian citizens to care more about reducing waste, and managing their daily waste well.

Cinema 21 is one of the public facilities in the entertainment industry that produces large amounts of waste generated every day. Therefore, it requires a more optimal waste management system. Cinema 21's #PadaTempatnya campaign aims to persuade its visitors to dispose of trash in its place. The campaign is in the form of advertisements shown before the film began airing, trash bins inside the cinema with an attractive design at the exit of the cinema, as well as some interactive contents spread on Cinema21's social media, which contain cash-prized quizzes, and free movie tickets.

This study aims to answer the following questions:

- a. In which stage of behavior change to dispose trash in its place is the #PadaTempatnya Campaign most effective?
- b. Is there a correlation between campaign exposure and behavior change to dispose of trash in its place?
- c. Is there a corre

II. LITERATURE REVIEW

A. Public Relations Campaign

Campaigns are one of the persuasive methods commonly used in public relations in order to accomplish the goals of the company or organization. Public relations strategies are utilized to raise public awareness and understanding, and to promote favorable views or expectations about the actions of an individual or organization, to build a relationship and a strong representation of the group by intense contact through the long-term communication process. According to Ross, in Venus (2018), the public relations campaign aims to build the image or reputation of the organization, overcome organizational crises, and form a mutual understanding between the organization and its public. In other words, public relations campaigns offer ongoing insight, comprehension, and empowerment of the group towards a specific activity or program through well-planned communication processes and methods to gain recognition and a favorable reputation, even to the degree that certain significant improvements arise in the society (Ruslan, 2008, p. 66).

B. Exposure

Exposure refers to the audience's level of intensity of receiving a message through a medium or various media.. According to Ardianto and Erdinaya (2005, p. 2), exposure can be defined as the practice of listening, watching, and reading media messages, or having knowledge and sensitivity to certain messages that may occur to individuals or groups. Media exposure aims to identify media audience data using both media forms, consumption frequency, and consumption duration. On the other hand, exposure according to Shimp (2003, p. 182) is when consumers interact with messages conveyed by marketers. Exposure then occurs when a message is placed so that the audience can see, hear, or read the message.

Moriarty (2000, p. 156) states that there are three instruments in seeing exposure, including:

1. Frequency
2. Duration
3. Intensity

Therefore, exposure in this study includes the frequency of viewing the campaign, the duration of viewing the campaign, and the intensity of viewing the campaign.

D. Behavior

Notoatmodjo (2010) defines behavior as the result of all kinds of human experiences and interactions with the environment that are manifested in the form of knowledge, attitudes, and actions. Behavior is the response or reaction of an individual to stimuli originating from outside as well as from within himself. According to Mubarak (2011), behavior is a set of someone's actions in responding to something and then made into a habit because of believed value. Ellis (2008) stated that people's behavior is largely a result of their experience with environmental stimuli, humans are born like blank paper without an innate tendency to behave in a particular or special way. Over the years the environment will write this paper, forming in a manner that individuals have unique behavioral characteristics. Based on several definitions of behavior, the authors conclude that behavior is an act that has a specific purpose based on stimuli that come from within oneself or from outside influences causing a certain effect that can make an expected or desired change by the actor.

E. The AIDA Model

In communication science, the concept of AIDA is known as a reference to create communication programs as the initial foundation in making a campaign. Campaign tools must attract Attention, gain and encourage Interest, generate Desire, and produce Action (West & Turner, 2004).

In Attention, the message must be able to attract the attention of the target audience. The message should contain statements that invite people's attention, sentences, or images that are strong enough to attract attention to make people think and pay attention to the contents of the message. Interest is the stage in which the message causes the target audience to be willing to spend time to read, watch, or listen to the message that has been made in detail. The Desire stage is when the audience believes that the message can provide the right solution. In this stage, the target audience already has the motivation to change behavior. The message has succeeded in creating an important value for the

audience and emotions have been touched. Action is the most important stage in which the message leads to actions to change behavior.

Using the AIDA model, this study seeks to find out in which stage is the #PadaTempatnya campaign most effective.

III. METHODS

This study uses a quantitative survey method, with an online questionnaire as the research instrument, which contains questions about the effects of the #PadaTempatnya Campaign of Cinema 21. Sampling was done using the Snowball Sampling Method.

The first independent variable is campaign exposure of which dimensions are adapted from Moriarty (2000, p. 156). The second independent variable is campaign message of which dimensions are adapted from Kotler (2003, p. 176). Lastly, the dependent variable is change in behavior, of which dimensions are adapted from the AIDA model (West & Turner, 2004). Based on the literature review conducted in this research, the proposed hypotheses are as follow:

H1: "Cinema21's campaign of "#PadaTempatnya" is the most effective at the stage of Action"

H1.0: "Cinema21's campaign of "#PadaTempatnya" is not the most effective at the stage of Action"

H2: "There is a correlation between #PadaTempatnya campaign exposure and behavioral change to dispose of trash in its place."

H2.0: "There is no correlation between #PadaTempatnya campaign exposure and behavioral change to dispose of trash in its place."

H3: "There is a correlation between #PadaTempatnya campaign messages and behavioral change to dispose of trash in its place."

H3.0: "There is no correlation between #PadaTempatnya campaign messages and behavioral change to dispose of trash in its place."

IV. RESULT

A. Profile of Respondents

Out of 115 respondents, 59 (51.3%) were male and 56 (48.7%) were female. When it comes to age, 12 (10.4%) respondents were aged 20 years old; 47 (40.9%) respondents were 21 years old; 49 (42.6%) were 22 years old; 5 (4.3%) were 23 years old; and, 2 respondents (1.7%) were 24 years old.

To identify the level of respondents' exposure to the campaign, respondents had to answer the number of their visits to Cinema 21 in the last 6 months, and 38 respondents (33%) had visited Cinema 21, 1 to 2 times in the last 6 months; 32 respondents (27.8%) answered "3-4 times"; 24 respondents (20.9%) answered "5-6 times"; 7 respondents (6.1%) answered "7-8 times"; and, 14 respondents (12.2%) answered "more than or equal to 9 times" going to Cinema 21 in the last 6 months. Therefore, it was assumed that the 115 respondents, had been exposed to the #PadaTempatnya campaign.

B. Validity and Reliability Tests

After collecting the questionnaires and input the eligible ones into SPSS, the results showed that all variables reached a KMO value of above 0.50, which meant that all variables were valid. The Cronbach's Alpha test resulted in all variables having a value above the minimum of 0.60, which meant that the instrument was reliable.

Table 1. Reliability Test

No	DIMENSIONS	Cronbach's alpha values
1	Campaign Exposure	$\alpha = .899$
2	Campaign Message	$\alpha = .946$
3	Behavioral Change	$\alpha = .929$

Table 2. Validity Test

No	DIMENSIONS	KMO values
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1	Campaign Exposure	.838
2	Campaign Message	.927
3	Behavioral Change	.867

C. Normality Test

Before starting hypothesis testing, data obtained was tested for normality. The normality test is used to determine the condition of data, whether normally distributed or not, by using the Shapiro-Wilk test in the SPSS 25.0 application. A result of Sig. ≥ 0.05 means that data are normally distributed. A result of Sig. ≤ 0.05 means that data are not normally distributed. The normality test results can be seen in Table 3:

Table 3. Normality Test

Shapiro-Wilk Tests of Normality			
Statistic		N	Sig.
Campaign Exposure	,984	115	,182
Campaign Message	,925	115	,000
Behavior Change	,941	115	,000
Attention	,944	115	,000
Interest	,910	115	,000
Desire	,912	115	,000
Action	,910	115	,000

The normality test of data gathered from a sample of 115 respondents resulted in a value of Sig. less than 0.05. Therefore, it was concluded that the data are not normally distributed. Therefore non-parametric tests were applied in testing the hypothesis by using the Spearman correlation test.

D. Hypothesis Test Results

For the research question (RQ), "In which stage of behavior change to dispose of trash in its place is the #PadaTempatnya Campaign most effective?" Spearman's correlation test was done to test the hypothesis "Cinema21's campaign of "#PadaTempatnya" is the most effective at the stage of Action". From the Spearman's correlation test, it was concluded that Cinema21's campaign of #PadaTempatnya is not the most effective at the stage of Action. The correlation test between Campaign Exposure and behavior change stages resulted in the correlation coefficient value in Action with Campaign Exposure value of $r_s = .438$, $N = 115$, $p = < .001$. and Campaign Message value of $r_s = .602$, $N = 115$, $p = < .001$.

Table 4. Spearman Correlation Test Campaign Exposure and Behavior

Correlations			Campaign Exposure	Attention	Interest	Desire	Action
Spearman's rho	Campaign Exposure	Correlation Coefficient	1,000	,601**	,402**	,394**	,438**
		Sig. (2-tailed)	.	,000	,000	,000	,000
		N	115	115	115	115	115

Table 5. Spearman Correlation Test Campaign Message and Behavior

Correlations					
	Campaign Message	Attention	Interest	Desire	Action

Spearman's rho	Campaign Message	Correlation Coefficient	1,000	,696**	,629**	,603**	,602**
		Sig. (2-tailed)	.	,000	,000	,000	,000
		N	115	115	115	115	115

The Spearman Correlation test between Campaign Message and Behavior Change stages resulted in the highest correlation coefficient in the Attention stage, with the value of $r_s = .696$, $N = 115$, $p = < .001$. Therefore, H_1 was rejected and $H_{1.0}$ accepted.

To answer the second research question, "Is there a correlation between campaign exposure and behavior change to dispose of trash in its place?" a Spearman's correlation test was done to test the hypothesis "There is a correlation between #PadaTempatnya Campaign Exposure and Behavior change to Dispose Trash in Its Place." It was concluded that there was a significant moderate positive correlation between campaign exposure and behavior change to dispose of trash in its place ($r_s = .438$, $N = 115$, $p = < .001$). Therefore, H_2 was accepted, while $H_{2.0}$ was rejected.

Table 6. Spearman Correlation Test for Campaign Exposure and Behavior Change

Correlation		Campaign Exposure	Action
Campaign Exposure	Correlation Coefficient	1,000	,438**
	Sig. (2-tailed)	.	,000
	N	115	115
Action	Correlation Coefficient	,438**	1,000
	Sig. (2-tailed)	,000	.
	N	115	115

To answer the third research question, "Is there a correlation between Campaign Message and Behavior Change to dispose of trash in its place?" a Spearman's correlation test was done to test the hypothesis "There is a correlation between #PadaTempatnya Campaign Message and Behavior change to Dispose Trash in Its Place."

It was concluded that there was a significant strong positive correlation between the campaign message and behavior change to dispose of trash in its place ($r_s = .602$, $N = 115$, $p = < .001$). Therefore, H3 was accepted, while H3.0 was rejected.

V. DISCUSSION

Results from this study showed that Cinema 21's #PadaTempatnya Campaign is most effective at the stage of Action within the AIDA model. This proves that the Cinema 21's #PadaTempatnya campaign's main strength is in attracting the attention of the visitors to watch the campaign, understand the campaign, and think that throwing trash in its place after watching a movie is interesting to do to maintain the cleanliness of the cinema. From the correlation test of Campaign Exposure and Behavioral Change, the Action stage had a correlation value of .438, which was second highest value after Attention, followed by Interest with a value of .402, and finally, Desire with the value of .394. It can be concluded that after visitors were exposed to the campaign, they immediately implemented actions to dispose of trash in its place. This happened because there was a desire to obey and follow what was conveyed in the campaign, which was to dispose of trash in its place. After all, visitors had been exposed to the campaign every time they visited Cinema 21.

However, results from the correlation test of Campaign Message and Behavior Change, showed that, out of the four stages of AIDA, Action had the lowest correlation value. Again, Attention had the highest value of .696, Interest was ranked second with a value of .629, followed by Desire with a value of .603, and lastly, Action, with a correlation value of .602. One may assume that Cinema 21 visitors who saw, heard, and understood the message conveyed in the #The PadaTempatnya campaign only paid attention to the messages conveyed, but this did not necessarily lead to interest, and desire to dispose of the trash in the proper place. This could be because the campaign was only limited to persuasions delivered through advertisements, banners, posters, and also the provision of trash bins in the cinema studios after the screening of the films. Cinema 21 does not apply strict, clear sanctions, laws, fines, or regulations regarding the prohibition of littering inside the cinema. At the same time, some visitors who dispose trash properly might not do so because of the #PadaTempatnya campaign, but because they are already accustomed to not littering, and thus the presence or absence of #PadaTempatnya campaign may not have influenced a change of behavior.

VI. RECOMMENDATION

This study has found that both in terms of campaign exposure and campaign messages for behavioral change as measured by AIDA, this campaign had a significant correlation at the Attention stage, not in the Action stage. In order to be more effective at the Action stage, it is suggested that Cinema 21 and other entertainment providers apply sanctions and strict regulations on visitors who litter. Presently, Cinema 21's efforts only include providing information about the adverse effects of littering, encouraging Cinema 21 visitors to dispose of trash in its place, as well as providing garbage bins with attractive designs and placing them near the exit door. Even though there was a significant correlation between the #PadaTempatnya campaign and change of behavior, this could have also been caused by pre-existing custom to dispose of trash in its place, and not because of the campaign exposure. This study also found that Cinema 21 only focused on communicating its message through the banners, posters, trash bins, and advertisement before the movies began. Therefore, as a form of advice to Cinema 21, the #PadaTempatnya campaign should make a large-scale social movement that involves and reaches a wider audience beyond the scope of Cinema 21.

This study found the level of respondents' exposure to the #PadaTempatnya campaign by measuring each of their visits to Cinema 21 to watch a movie. It is suggested that future research compare data from before and after exposure to the campaign in order to get more accurate data of the campaign's effectiveness.

REFERENCES

- [1] Venus, A. (2018). *Manajemen Kampanye: Panduan Teoritis dan Praktis dalam Mengefektifkan Kampanye Komunikasi*. Bandung: Simbiosis Rekatama.
- [2] Ruslan, R. (2008). *Kiat dan Strategi Kampanye Public Relations*. Jakarta: Raja Grafindo Persada.
- [3] Ardianto & Erdinaya, L. K. (2005). *Komunikasi massa: Suatu pengantar*. Bandung: Simbiosis Rekatama Media.
- [4] Shimp, T.A. (2003). *Periklanan Promosi & Aspek Tambahan Komunikasi Pemasaran Terpadu (5th Ed., vol. 1)*. Jakarta: Erlangga.
- [5] Moriarty, S., Wells, W., Burnet, J. (2000). *Advertising Principles and Practice*. New Jersey: Prentice-Hall International.
- [6] Notoatmodjo, S. (2010). *Metodologi Penelitian Kesehatan*. Jakarta : Rineka Cipta.

-
- [7] Mubarak, W. (2011). Promosi Kesehatan Masyarakat untuk Kebidanan. Jakarta: Salemba Medika.
- [8] Ellis, N. C. (2008). The dynamics of second language emergence: Cycles of language use, language change, and language acquisition. *The modern language journal*, 92(2), 232-249.
- [9] West, R. & Turner, L. (2004). *Introducing Communication Theory* (2nd Ed.). New York: McGraw-Hill.

Determinant of Continuance Usage Intention of Mobile Payment Application Using Extended Tam Model

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Abstract

The purpose of this study is to examine factors that influence on continuance usage intention (CUI) of OVO mobile payment applications in Indonesia. This study uses the concept of the Technology Acceptance Model (TAM) that has been further developed to examine the factors that influence on CUI, namely perceived usefulness (PU), perceived ease of use (PEOU), perceived credibility (PC), social influence (SI), and customer awareness (CA). Some 241 mobile payment application user was recruited as respondents. Data were collected using a cross-sectional survey design with a structured questionnaire via a Google form. SmartPLS is used to verify hypotheses. The study results showed that all observed variables influence positively on CUI of mobile payment application. The study found that the service provider needs to maintain and monitor the functions of PU, PEOU, PC, SI, and CA so that mobile payment application will always be attractive to users to continue using mobile payment application.

Keywords: TAM, perceived credibility, social influence, customer awareness, continuance usage intention

I. INTRODUCTION

This Word document A survey conducted by the Indonesian Internet Service Providers Association [1] on internet user penetration stated that 64.8% of the 264.16 million Indonesia society were internet users. Of the total users, most of them (93.9%) use smartphones to connect to the internet. The number of smartphone users in Indonesia is certainly the main target of business people to offer their products via smartphones, and one of them is mobile payment. This can be seen from the large number of companies both from banks and non-bank institutions that have obtained electronic money management licenses on May 27, 2020, where 51 institutions provide server-based electronic money products [2]. Based on a survey conducted by PricewaterhouseCoopers [3] shows that mobile payment users in Indonesia in 2019 have reached 47%. This number increased by 9% from the number of users in 2018. This shows that there is a market opportunity for the mobile payment industry business that is still wide open in Indonesia. Mobile payment is a payment system using a mobile device where users can make payments, check balances, and send money without being limited by space and time [4]

A past study about the adoption of mobile payment services found that factors of comfort, security, and the ability to adapt mobile applications have a significant relationship to the intention to adopt mobile payment applications. The study also concluded that mobile payment plays an important role in everyday life because of the increase in smartphone users and the lifestyle of people who need everything quickly and comfortably [5]. Another study uses the TAM concept, which results in the finding that PU, PEOU, information sharing, and trust have a significant relationship with the intention to adopt mobile payment [6].

There are many studies on mobile payments that focus only on early adoption, whereas post-adoption mobile payment studies relating to continued use are rarely examined [7]. Research on the post-adoption mobile payment that has been conducted was continuance usage of mobile payment services conducted by [8]. The study found that satisfaction has a positive effect on the intention to adopt mobile payment services. In the previous study, the concept of the TAM model was developed by adding other variables, namely PC, CA, and SI [9]. Similar studies were conducted by [10] by adding trust variables that have similar meanings to PC variables [9]. This study adopts the research model from [9] to examine the effect of perceived usefulness, perceived ease of use, perceived credibility, customer awareness, and social influence on continuance

usage intention of OVO mobile payment service, one of the mobile payment services in Indonesia.

II. THEORETICAL REVIEW AND HYPOTHESIS DEVELOPMENT

Previous studies on the CUI of online social networks have shown that PU has a positive effect on the CUI of online social networks [11]. Other research on mobile application usage has found that PU has a positive effect on mobile application usage [8],[12]. Previous research that examined the use of Gopay mobile payment in Indonesia, found that PU affected the use of the mobile payment Gopay application. Consumers feel that they have benefited from the use of mobile payments, such as a faster and more productive transaction process that is more efficient [13]. Other research stated that PU affects the use of mobile payments through mediating attitude variables [14][15]. Based on these arguments, the following hypotheses are proposed:

H1. PU has a positive effect on CUI.

Difficulties in operating mobile payments are often obstacles for consumers to use them. Previous research on the effect of PEOU on the CUI mobile banking services found that PEOU had a significant and positive effect on CUI [9]. This shows that the decision of consumers to reuse mobile banking services is influenced by the experience of ease of use. Previous research on the use of Gopay mobile payment found that the reason consumers use the service is because of clear instructions, easy to understand the system, and easy to use [13]. Based on these arguments, the following hypotheses are proposed:

H2. PEOU has a positive effect on CUI.

The credibility of the company is one of the key factors that consumers consider in choosing a company that issues mobile payment services. Previous research on the influence of PC on the CUI mobile money shows that the concept of security which is reflected by the trust variable or often referred to as PC has a positive influence on CUI mobile money services [16]. The study examined the reuse of mobile money in Tanzania with a total sample of 309 people. The conclusion of the study shows that trust (PC) plays a role in every transaction or business related to money. Another study conducted by [13] stated that if the mobile payment used creates a sense of uncertainty and high consequences, consumers will avoid it. Or in other words, the higher the credibility of the

company, the more consumers will feel secure in transactions so that they will be willing to reuse the service. Based on these arguments, the following hypotheses are proposed:

H3. PC has a significant positive effect on CUI.

In a collectivist society, social influences are still relevant to the study. Previous research on the effect of SI on the CUI of online social networks shows that SI has a positive effect on the CUI of online social networks [11]. Based on these arguments, the following hypotheses are proposed:

H4. SI has a significant positive effect on CUI.

Previous studies on CA found that CA influenced CUI of mobile banking services [9]. A study about mobile banking conducted in the city of Bandung, Indonesia, found that the more a person became aware of the mobile banking services provided, the further encourage the intention to reuse these services. Based on the results of the research above, the following hypotheses are proposed:

H5. CA has a positive effect on CUI

The relationship between the observed variables in this study is illustrated in Figure 1. This theoretical model conceptualizes the determinants of continuance usage intention of customers in the context of m-banking. The hypothesis to be verified can be seen in the relationship between latent constructs.

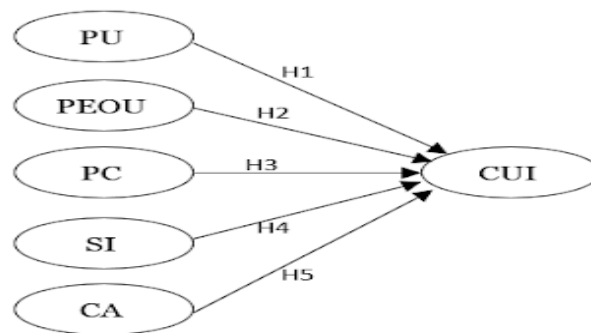


Fig. 1. Research Model

III. METHOD

This research uses a purposive sampling technique where the respondent is chosen according to the required criteria, ie, have used OVO application for at least the last 6 months. For data sufficiency, the minimum number of samples is determined to be 10 times the number of items in research instruments [17]. Thus, the minimum sample that must be recruited is 160. However, data collected in this study was 241 respondents. Data was carried out through a structured questionnaire distributed to respondents online via Google form in November 2019. Scale for data measured using a Likert scale with the weight of the item score 1 for strongly disagree to score 5 for strongly agree. Data analysis is performed using the SmartPLS statistical tool. The research instrument was taken from several previous studies and adapted to the needs of the study. The instrument of PU and CUI variables were taken from the research conducted by [11];[18], PEOU and PC [18], and CA [19]. The questionnaire consists of two parts, the first part contains statements about the demographic characteristics of the respondents that consist: gender, age, occupation, length of adoption of the OVO application, the average usage of the OVO application per month for the last six months. The second part contains statements for hypothesis testing that consists of the determinants of continuance usage intention, namely: PU, PEOU, PC, SI, and CA.

IV. RESULT AND DISCUSSIONS

A. Demographic characteristics

Table 1 shows the statistical description of the respondents. A total of 241 respondents were collected, the majority of the respondents are women (56.8%), aged between 21 and 25 years of old (56.9%). Most of them working as private employees (42.3%), they had used OVO applications for more than 12 months (53.4%) and used OVO applications are less than 10 times a month of use (33.7%).

B. Measurement model

The measurement model uses to test reliability, discriminant validity, and convergent validity. The instrument reliability test in SmartPLS uses composite reliability with the rule of thumb the value of composite reliability must be greater than 0.70 [20]. Based on the test results, the composite reliability value of all research variables is greater than 0.70. This proves that the accuracy, consistency, and accuracy of instruments in measuring constructs are said to be good or high.

The result of the convergent validity test with SmartPLS can be seen from the AVE value and loading factor. Based on the rule of thumb, the value of AVE must be greater than 0.5 and the value of the loading factor must be greater than 0.70 [20]. Table 1 shows the AVE value of each variable is greater than 0.5. Whereas in Table 2 shows the loading factor value of each indicator is greater than 0.70 and the indicator of each variable is highly correlated.

Discriminant validity test results with SmartPLS can be explained from the cross-loading value. The loading factor value of the related variable indicator must be higher than the value of the loading of other variables and the loading factor value of the indicator of each variable must be greater than 0.70. Table 2 shows the results of cross loading where the loading factor value of each variable is greater than 0.70 and is greater than the value of loading other variables. This proves the concept of discriminant validity where indicators of unrelated variables should not be highly correlated or should be low correlated [20].

Table1. Composite Reliability

Variable	Composite reliability	AVE
PU	0.907	0.709
PEOU	0.923	0.802
PC	0.942	0.845
SI	0.910	0.772
CA	0.933	0.823
CUI	0.945	0.813

Table 2. Cross Loading

Indicator	CA	PC	PEOU	PU	SI
CA1	0.842	0.534	0.352	0.614	0.590
CA2	0.937	0.485	0.646	0.702	0.629
CA3	0.939	0.698	0.452	0.584	0.585
PC1	0.559	0.920	0.227	0.244	0.321
PC2	0.491	0.944	0.176	0.238	0.134
PC3	0.648	0.893	0.232	0.469	0.378
PEOU1	0.333	0.205	0.819	0.459	0.138
PEOU2	0.517	0.149	0.942	0.485	0.267

PEOU3	0.568	0.286	0.920	0.547	0.228
PU1	0.543	0.324	0.570	0.848	0.306
PU2	0.603	0.319	0.267	0.844	0.376
PU3	0.540	0.298	0.519	0.840	0.428
PU4	0.650	0.289	0.500	0.837	0.546
SI1	0.536	0.103	0.162	0.499	0.832
SI2	0.741	0.444	0.291	0.473	0.916
SI3	0.384	0.189	0.150	0.337	0.887

C. Structural model

Based on the structural model verification, the R^2 value of the CUI variable is 0.743. This shows that the independent variables PU, PEOU, PC, SI, and CA affect the CUI as a dependent variable by 74.3%. Thus it can be concluded that the model is included in the moderate category or approaching the strong model. Judging from the evaluation of the Q^2 value, the results show that the Q^2 value of the CUI variable is 0.312 ($R^2 > 0$). This shows that the CUI variable has a predictive relevance which is useful for measuring how well the value of observations produced by the model.

This study uses a level of confidence 95% ($\alpha=0.05$) with $N=241$, t-table shows infinite (∞)=1.96. The hypothesis is stated significant if the path has a p-value of less than 0.05 and has a positive β (Hair et al., 2014). Based on the result shows that H1($\beta=+0,012$, p-value<0.05), H2($\beta=+0,207$, p-value<0.05), H3($\beta=+0,068$, p-value<0.05), H4($\beta=+0,265$, p-value<0.05) and H5($\beta=+0,491$, p-value<0.05) are supported. These mean that PU, PEOU, PC, SI, and CA affect positively and significantly on CUI.

The following is Table 3 which shows a summary of the study results using the SmartPLS statistical model.

Table 3. Summary of Path Coefficients and Hypothesis Testing Results

Hypothesis	Path coefficient	β -coefficient	t-statistic	p-value	Result
H1	PE \rightarrow CUI	0.012	3.066	0.002	Significant
H2	PEOU \rightarrow CUI	0.207	2.342	0.020	Significant
H3	PC \rightarrow CUI	0.068	2.915	0.004	Significant
H4	SI \rightarrow CUI	0.265	3.530	0.000	Significant
H5	CA \rightarrow CUI	0.491	2.938	0.003	Significant

D. Discussion

PU has a positive and significant effect on CUI (H1 is supported). This shows that the benefits perceived by users of OVO applications such as helping to complete payment transactions more quickly, the ability to make transactions with applications within 24 hours/day as well as the increased effectiveness of payment transactions can prove to increase the CUI of OVO applications. The result of this study is not in line with the study conducted by [9]. Their study found that PU did not have a significant effect on CUI.

PEOU has a positive effect significantly on CUI (H2 is supported). This shows that the display of the OVO application that is easy to understand and easy to use by its users can increase CUI the OVO mobile payment application. This study is in line with research conducted by [9] where PEOU has a significant effect on CUI. The findings of this study opposite with studies conducted by [21]. Their study of mobile learning management systems found that PEOU did not influence CUI. Other factors that are not included in the model, such as the type of participant and the learning environment can be a cause of no relationship between PEOU and CUI.

PC has a positive effect on CUI significantly (H3 supported). This shows that OVO mobile payment application users believe that their data and transaction data will be well protected. This affects OVO users to improve CUI. This study is in line with the study conducted by [16] where PC has a positive and significant effect on CUI. SI has a positive and significant effect on CUI (H4 supported). This shows that the influence of closed people around the user influences CUI OVO mobile payment application. This study is in line with research conducted by [11]. This study found the opposite of a study conducted by [22] about the continuance usage intention of GoJek application service. Their study found that SI does not affect CUI [11]. CA has a significant positive effect on CUI (H5 supported). This shows that CA affects CUI of OVO mobile payment application. This study is in line with studies conducted by [9] which stated that consumer awareness of the importance of the product contributed significantly to the intention to reuse the product.

V. Conclusions and managerial implications

PU, PEOU, PC, SI, CA have an important role in determining CUI for OVO mobile payment application users. This shows that an application must be user friendly and useful. The usefulness of the OVO mobile payment application in assisting the activities of its users in the field of financial transactions has a role in determining the application CUI. Besides, the clear display and instructions of the OVO mobile payment application are also one of the determinants of CUI. Thus, the company needs to develop a simple and good appearance of the application while providing the right benefits to consumers.

Besides, OVO mobile payment application users will also continue to use the application if, during use, sensitive user data is maintained properly. Thus the PC becomes one of the important factors that need to be considered by the application development company so that users increasingly trust the company's credibility.

The presence of people who have influence or who are considered close to users also contributes to the improvement of CUI. Marketing managers can influence customers through social organizations, sports, music, special events in certain groups. The last factor influencing CUI is CA. Base on these study findings, application development companies need to pay attention to things that can increase user awareness of products owned by OVO applications to maintain and increase the intention to continue using OVO mobile payment application.

REFERENCES

- [1] APJII, "PENETRATION & BEHAVIOR PROFILE INDONESIAN INTERNET USERS." (in Bahasa), 2018, [Online]. Available: <https://apjii.or.id/>
- [2] Bank Indonesia, "Licensing Information for Provider and Support of Payment System Services." The Bank Central Republic of Indonesia (in Bahasa), 2020, [Online]. Available:
<https://www.bi.go.id/id/sistem-pembayaran/informasi-perizinan/uang-elektronik/penyelenggara-berizin/Contents/Default.aspx>.
- [3] Global Consumer Insights Survey, "It's time for a consumer-centered metric: introducing 'return on experience.'" PricewaterhouseCoopers, 2019, [Online]. Available:
<https://www.pwc.es/es/retail-consumo/assets/global-consumer-insights-survey-2019.pdf>
- [4] Zhao Tao, "Understanding the determinants of mobile payment continuance usage," *Ind. Manag. Data Syst.*, vol. 114, no. 6, pp. 936–948, 2014.
- [5] M. Singh, J., & Gupta, "An Empirical Study of Customer Adoption of Mobile Wallet Payment Services: A Case Study of the City Kurali of Punjab," *Splint Int. J. Prof.*, vol. III, no. 12, pp. 88–95, 2016.
- [6] N. J. Eappen, "Mobile Wallet Adoption in India : Impact of Trust and Information Sharing," vol. 26, no. 1, 2019.

-
- [7] L. Cao, Xiongfei; Yu, Lingling ; Liu, Zhiying; Gong, Mingchuan; Adeel, "Understanding mobile payment users' continuance intention: a trust transfer perspective," Internet Res., vol. 28, no. 2, pp. 1066–2243, 2018, DOI: 10.1108/IntR-11-2016-0359.
- [8] X. Chen and S. Li, "Understanding Continuance Intention of Mobile Payment Services : An Empirical Study," J. Comput. Inf. Syst., vol. 57, no. 4, pp. 287–298, 2017, DOI: 10.1080/08874417.2016.1180649.
- [9] C. L. Arahita and J. Hatammimi, "Factors Affecting the Intention to Reuse Mobile Banking Service," Int. J. Res. Bus. Soc. Sci., vol. 4, no. 4, 2015.
- [10] M. Amin, S. Rezaei, and M. Abolghasemi, "User satisfaction with mobile websites : the impact of perceived usefulness (PU), perceived ease of use (PEOU) and trust Nankai Business Review International Article information: " no. June 2018, 2014, DOI: 10.1108/NBRI-01-2014-0005.
- [11] Y. Sun, L. Liu, and X. Peng, "Understanding Chinese users ' continuance intention toward online social networks : an integrative theoretical model," pp. 57–66, 2014, DOI: 10.1007/s12525-013-0131-9.
- [12] L. Normalini, M.K.; Lurudusamy, Saravanan Nathan; Arokiasamy, mutivariate, vol. 5, no. 1. 2018.
- [13] G. L. N. Danuarta and G. S. Darma, "Determinants of Using Go-Pay and its Impact on Net Benefits," Int. J. Innov. Sci. Res. Technol., vol. 4, no. 11, pp. 173–182, 2019, [Online]. Available: <https://www.ijisrt.com/determinants-of-using-gopay-and-its-impact-on-net-benefits>.
- [14] A. Z. Susilo, M. Iksan Prabowo, A. Taman, A. Pustikaningsih, and A. Samlawi, "A comparative study of factors affecting user acceptance of go-pay and OVO as a feature of Fintech application," Procedia Comput. Sci., vol. 161, pp. 876–884, 2019, DOI: 10.1016/j.procs.2019.11.195.
- [15] Y. U. Chandra, D. M. Kristin, J. Suhartono, F. S. Sutarto, and M. Sung, "Analysis of Determinant Factors of User Acceptance of Mobile Payment System in Indonesia (A Case Study of Go-Pay Mobile Payment)," Proc. 2018 Int. Conf. Inf. Manag. Technol. ICIMTech 2018, no. May, pp. 454–459, 2018, DOI: 10.1109/ICIMTech.2018.8528182.
- [16] D. Koloseni and H. Mandari, "WHY MOBILE MONEY USERS KEEP INCREASING ? INVESTIGATING THE CONTINUANCE USAGE OF MOBILE MONEY SERVICES IN TANZANIA," vol. 26, no. 2, pp. 117–144, 2017.
- [17] I. Ghozali and H. Latan, Partial Least Squares: Concept, Technique, and Application SmartPLS 3.0 for Empirical Studies, (in Bahasa), 2nd ed. Semarang: Universitas Diponegoro Semarang, 2015.

-
- [18] H. Chahal and N. Kumari, "Consumer perceived value: The development of a multiple item scale in hospitals in the Indian context," *Int. J. Pharm. Healthc. Mark.*, vol. 6, no. 2, pp. 167–190, 2012, DOI: 10.1108/17506121211243086.
- [19] M. H. Warsame and E. M. Ireri, "Moderation effect on mobile microfinance services in Kenya: An extended UTAUT model," *J. Behav. Exp. Financ.*, vol. 18, pp. 67–75, 2018, DOI: 10.1016/j.jbef.2018.01.008.
- [20] J. F. J. Hair, W. C. Black, B. J. Babin, and R. E. Anderson, *Multivariate Data Analysis*, 7th ed. Edinburgh Gate: Pearson Education Limited, 2014.
- [21] Y. J. Joo, N. Kim, and N. H. Kim, "of a mobile learning management system (m-LMS)," *Educ. Technol. Res. Dev.*, vol. 64, no. 4, pp. 611–630, 2016, DOI: 10.1007/s11423-016-9436-7.
- [22] O. D. Erwanti, N.; Widodo, A. P; Nurhayati, "Determinants of Continuance Intention to Use On-demand Mobile Service : GO-JEK case," *Int. J. Comput. Sci.*, vol. 15, no. 6, pp. 9–16, 2018, DOI: 10.5281/zenodo.2544618.

Conspicuous Compassion, Social Media and Identity: a Case Study of @dr.tirta Instagram Account during the Covid-19 Pandemic

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Abstract

Social media allow individuals to construct ideal online identities and one of the new ways to do this is by showing conspicuous compassion, or the flaunting of good behaviors to others. Drawing on the antecedents of conspicuous compassion, which are Need for Uniqueness (NFU) and Attention to Social Comparison Information (ATSCI), this research investigates how conspicuous compassion is portrayed by an Indonesian influencer, dr. Tirta Mandira Hudhi, in his Instagram posts. This study employs a textual analysis through the prism of semiotics to interpret the images and captions of the Instagram account @dr.tirta from 23 to 30 March 2020. The results show that @dr.tirta portrays conspicuous compassion through his social interactions, involvement in fighting the coronavirus, unique style, and his knowledge in the medical field. Results also indicate that @dr.tirta is highly susceptible to his followers, thus intentionally adjusts his image to meet their expectations.

Keywords: conspicuous compassion, social media, identity, influencer, instagram.

I. INTRODUCTION

Identity is our concept of who we are and what place we have in this world (Gilovich et al., 2013, p. 69). Identity is attained by both reflecting internally and interacting externally with others (Mead, 1934). However, as social beings, this latter interaction arguably has more significant effect on our identity than the former (Mead, 1934). This is because in our interactions with others we receive feedbacks on the way we present ourselves (Gilovich et al., 2013, p. 97). When we receive a favourable feedback, we usually see this as a cue to maintain the behaviour. On the other hand, less favourable feedbacks teach us that we need to change our behaviour. In a long term, these interactions shape the kind of identity we construct of ourselves; which usually means the identity that generate most positive feedbacks from others (West and Turner, 2009).

This process of adjusting our identity to meet others' expectations is also known as impression management or identity management (Gilovich et al., 2013). Formally, identity management can be defined as a "dramaturgic perspective on the social self", in which social interactions function as a stage where self-presentation is performed through "creating and maintaining an impression of ourselves in the minds of others" (Gilovich et al., 2013, p. 102). While in the past this self-presentation was commonly done in a face-to-face setting, the advancement of technologies allows individuals to interact and present themselves in the virtual world. This new way of self-presentation gives opportunities for individuals to create an ideal identity, even one that is far different from their offline self (Marwick, 2016). Whether that is on social media, online games or virtual chatrooms, in each of these platforms, individuals have the freedom to choose what they want to portray with the given tools such as nicknames, usernames, avatars, profile pictures, and so on (Subrahmanyam & Smahel, 2011).

Nowadays, social media presence of individuals plays a significant role in their life as it has become a common reference to judge one's character. Employers, friends, fans, or acquaintances refer to social media to see the kind of persons that we are. Moreover, due to the lack of possible physical confrontation in the virtual world, they are not afraid to express their opinions on us either positively or negatively. Therefore, individuals become so conscious about what they share, post, or comment online as to not harm their image and hurt their identity (Chen, 2013).

One way to create an ideal identity on social media is through the act of showing off, which can be in form of wealth, success, unique abilities, or even socially good actions. This act of enhancing oneself is what sociologist Thorstein Veblen (1912)

referred as 'conspicuous consumption'. In their book, 'Showing Off in Humans: Male Generosity as a Mating Signal', Iredale et al. (2008) argued that this act of showing off is part of human nature. In ancient China for instance, Chinese aristocrats would grow out their nails to be very long in order to show that they did not have to do any hard labour and instead they had peasants who would do the work for them. While these past studies suggested that conspicuous consumption usually involved the display of wealth, recent studies (West, 2004; West in Grace & Griffin, 2006) argue that nowadays individuals tend to show their ostentatious caring (i.e. participating in social or political movements, supporting certain charities, volunteering in natural disaster reliefs, and so on) to create a positive identity. Thus, this display of altruism is often referred to as 'conspicuous compassion', 'humble bragging', or 'virtue signalling' (West, 2004; Wittles, 2010; Bartholomew, 2018).

In the past few years conspicuous compassion has been increasingly observed on social media. Social media are ideal to show conspicuous compassion as they allow individuals to post images, videos, and encouraging messages to their friends or followers on their altruistic endeavours. The framework of social media, which is referred to as the honeycomb framework, allows these contents to be shared within the networks; thus, creating conversations and relationships between the users and their followers (Kietzmann et al., 2011). Furthermore, these conversations and relationships will help the users to maintain positive reputation and favourable identity in front of the public. As such, one of the groups that are often known to flaunt their morally good activities online is public figures (Marwick, 2016). These public figures show conspicuous compassion online to promote themselves favourably, so that their supporters continue being loyal to them and allowing them to maintain their fame and wealth.

At the end of 2019, a new virus broke out in the city of Wuhan of Hubei Province, China. It is known as the Coronavirus Disease 2019, in short COVID-19. As the number of infected people quickly escalated all around the world, the pandemic became a global threat (Wang et al., 2020). So many efforts are made to conquer the virus. Health and medical workers with the shortage, politicians, police officers, celebrities, and common people jump into the action to protect the wellbeing of their people. In March 2020, the first confirmed COVID-19 cases were found in Indonesia. By the beginning of April 2020, all provinces of Indonesia got affected by the virus.

During this COVID-19 pandemic, several public figures have gained momentum. These people are covered regularly by the media due to their roles in sharing information about the virus and its effects on people and the society in general. One of Indonesian

public figures who have become more popular due to their COVID-related contents is Tirta Mandira Hudhi or better known as Dr. Tirta.

Dr. Tirta is an Indonesian influencer who first became well known among Indonesian youth for selling branded sneakers and managing sneaker cleaning business. His followers at that time were mostly street wear enthusiasts who enjoy following about the trends and purchase expensive and customisable shoes. When COVID-19 situation started to intensify in Indonesia, Dr. Tirta started to discuss more about the virus in his social media. As someone who also has a medical degree, Dr. Tirta is considered as a credible source of information about the virus. In addition, in his early postings about the virus, Dr. Tirta appeared aberrant, using harsh and sometimes cursing words to show his frustration about the way the pandemic is handled in Indonesia. One of his most viewed posts was an Instagram livestream on 17 March 2020. In this video, Dr. Tirta could be seen yelling and being angry at people who underestimated the gravity of the virus. This post became viral and was even picked up by the mainstream media. A week after this controversial post, Dr. Tirta's weekly followers increased by more than six-fold from around 10,000 the previous week to 623,949 the week after (Socialblade, 2020).

Based on the above-mentioned facts, this study investigates the way in which a public figure, Dr. Tirta, shows conspicuous compassion in his Instagram account. Further, this study also examines how this portrayal of conspicuous compassion contributes to Dr. Tirta's online image. To do that, this study poses two research questions, which are:

How do Dr. Tirta portray conspicuous compassion in his social media activity?

What are the roles of this conspicuous compassion towards the Dr. Tirta's image?

II. LITERATURE REVIEW

As mentioned above, one main characteristic of conspicuous compassion is that individuals who show this ostentatious caring to others, have the intention of showing off their compassion to the public (Wallace et al., 2018). Hence, visibility is the key to this conspicuousness (West, 2004). In order to understand this concept better, we need to know its relation to its antecedents, which are the Need for Uniqueness theory (Tian et al., 2001) and the theory of Attention to Social Comparison Information (Lennox & Wolfe, 1984).

2.1 Needs for Uniqueness

Need for uniqueness can be defined as “the trait of pursuing differentness relative to others through the acquisition, utilization and disposition of consumer goods for the purpose of enhancing one’s self-image and social image” (Tian et al., 2001, p.52). This need to be different often occurs when individuals feel a threat to their identity when they perceive themselves becoming very similar to other people around them (Snyder and Fromkin in Tian et al., 2001).

Vignoles et al. (in Abosag et al., 2019) argued that some individuals like to portray themselves in a different and distinctive ways from others to attain a meaningful identification about themselves. They usually do this through a process of comparison, where they evaluate what similarities that they share with others. This comparison can lead to different results depending on the individuals. Individuals with high level of NFU will most likely reject the similarities and decide to have a behavioral change (Snyder and Fromkin, 1977). This behavioral change can be achieved through various ways, such as abilities, beliefs, personality, hobbies, possession, and group membership (Tiggemann & Golder, 2006). On the other hand, individuals with low level of NFU tend to accept the similarities and behavioral change is less likely to happen.

While categories of NFU seem to show that someone with high level of NFU strives to differentiate himself/ herself from others, Ruvio (2008) explains that the NFU actually evokes individuals to have the desire for assimilation and differentiation simultaneously. This is because at once these individuals want to be unique to stand out from the crowd, while at the same time they do not want to appear so different that others do not see them as preferable. This is because people judge the quality of others based on the common standards that they are familiar with (Ruvio, 2008).

NFU plays an important role in relation to how conspicuous compassion is displayed online. Since social media sites, such as Instagram, have the same design and layout for each user, individuals have the desire to differentiate themselves and to stand out from others (Wallace et al., 2018). According to Wallace et al. (2018), conspicuous consumption is influenced by NFU and the display of uniqueness through virtual consumption qualifies as a tool to analyze conspicuous compassion online.

Based on the theory of uniqueness, nonconformity, and consumer behavior (Snyder and Fromkin, 1977), NFU can be seen as having three dimensions, which can be described as follows:

Creative Choice Counterconformity indicates that individuals’ desire to be perceived as different by others and seek social differentness. These individuals achieve social differentness by making selections that are likely to be considered good by their

social group or the public. On the consumer behavior, a goal-directed consumer that focuses on displaying their personal style accomplishes this through the purchase of goods that are new, original, or unique.

Unpopular Choice Counterconformity is similar to the creative choice. However, instead of attaining desirable goods that the social norm prefers, these individuals make unpopular choices that risk social disapproval, yet establish their distinction from other people. This is not limited to purchasing goods, but can also be reflected in negative actions, like breaking the rules or challenging existing norms. Unpopular Choice Counterconformity mostly occurs when individuals fail to achieve differentness through socially appropriate manners. Yet their actions can also lead to an enhanced self-image like the Creative Choice Counterconformity.

Avoidance of Similarity is another dimension of NFU. In this dimension individuals lose interest in the goods they have purchased or would stop using them because they have become common. By doing this, they avoid becoming less unique and reestablish their status of being different. Therefore, consumers with a high level of NFU would monitor other people's possessions in order to avoid similarity. This is actually an indication that attaining a distinctive self-image in the public is often short-lived. This concludes that in order to achieve social differentness individuals need to have the eagerness to change their behaviors and preferences all the time, either through avoidance, disposition, or devaluation.

2.2 Attention to Social Comparison Information

The other antecedent to conspicuous compassion, is Attention to Social Comparison Information (ATSCI). ATSCI is a study that is based on the Theory of Self-Monitoring by Snyder (1974, 1979) but was further developed by Lennox and Wolfe (1984). This latter study indicated that attention to social comparison information is related to social anxiety. They conclude that people scoring high in ATSCI are aware of the reactions of others to their behaviors and are concerned about the nature of those reactions (Lennox & Wolfe, 1984). By this understanding it can be said that ATSCI relates to an individual's level of sensitivity to social comparison cues (Kim et al., 2016). The need for individuals to compare themselves is innate, meaning that this behavior happens naturally. By comparing oneself, individuals can conduct better self-evaluation as well as self-enhancement (Gibbons and Buunk in Kim et al., 2016).

The research conducted by Lennox and Wolfe, was further analyzed by Bearden and Rose (1990) and resulted in the confirmation of the validity of ATSCI. Basing their

analysis on Snyder's theory of self-monitoring, Bearden and Rose (1990) argued that ATSCI was recognized as a distinct variable in the construct, due to its positive relationship to social anxiety. Aside from social anxiety Bearden and Rose (1990) also explained that individuals with high level of ATSCI tend to show neuroticism and fear of negative evaluation. This means that individuals with high ATSCI care about what other people think of them and make them continuously seek for clues of people's reactions.

Bearden and Rose (1990) further argued that high level of ATSCI is motivated by the following factors: (1) behavioral cues that refer to for instance what people look like based on their clothing or makeup; (2) the judgement by important people or group of people towards products and services and their appropriateness of the consumption; (3) the structure or social rewards and sanctions within a group, meaning the common reaction or responses from the group when consuming goods; (4) and lastly the attributions about likely reactions of group members to the individual's behavior.

Results of the study by Wallace et al. (2018) indicate that ATSCI is positively associated to conspicuous compassion. Meaning that individuals who are aware of views from others on social media platforms are likely to present an idealized self on social media through conspicuous compassion. High ATSCI makes individuals susceptible to others, making them more interdependent on their social network, and due to their desire to fit in, individuals with high ATSCI are prone to conduct conspicuous compassion with the hope that their action would leave a popular impression others (Wallace et al., 2018).

These two theories of NFU and ATSCI become the framework of analysis of Dr. Tirta's Instagram postings, which will be discussed in details in the discussion section.

III. METHODOLOGY AND RESEARCH DESIGN

This study employed a textual analysis of Dr. Tirta's Instagram postings, which were analyzed through the prism of semiotic. Textual analysis is when "we make an educated guess at some of the most likely interpretations that might be made of that text" (McKee, 2016). According to Griffin (2013) it is a method that requires the researcher to take a closer look at the text in order to explore and attain details about it without adding any presuppositions.

In textual analysis, texts are defined as visuals, written, or spoken messages. The goal of textual analysis is to make sense of the message and the meaning we make of the text, which can be a reflection of our society (Allen, 2017). The process of textual analysis can be seen in a systematic way. It consists of identification of textual elements, construction of provisional meaning, and deconstruction of meaning (Stern, 2013). Identification of elements talks about identifying the text, being able to recognize its literal characteristics. In the next step the construction of meaning, the researcher organizes his/her findings into different categories. Lastly, deconstruction of meaning focuses on the cultural assumption that the researcher explores and that can either sustain or subvert the meaning (Stern, 2013).

This study uses semiotics to decipher meaning from Instagram posts, posted by Dr. Tirta. Semiotics is the study of signs, and how meaning is drawn out of these signs (Chandler, 2017). These signs and symbols can consist of words, typography, performance, visuals, food, clothing, structure, non-verbal communication, emoticons or forms of media (Delp, 2019). The mentioned things alone have no meaning, only when we add interpretation to them that they will suggest meaning (Chandler, 2017). A model of semiotics that is used in this study is the model proposed by the Swiss linguist, Ferdinand de Saussure. As shown in Figure 1, in Saussure's system of signs, a sign has two aspects, one being signifier and another is signified (Chandler, 2017).

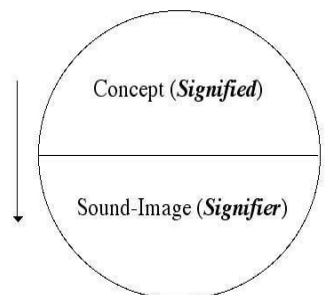


Fig.1. Saussure's Dyadic Model of Meaning

The arrows represent the interaction between signified and signifier, the result or the action of such interaction is referred to as the sign (Chandler, 2017). The signifier is understood as an expression or representation of an object, whereas the signified is the

meaning or content it creates (Gaines, 2010). The signified can further refer to a connotative meaning or denotative meaning (Gaines, 2010). Simplified, signifier is what gives that meaning, this can be through sound, word, or an image, anything that indicates the physical existence. And signified is what is evoked in the mind or mental concept of the one who perceives. For instance, an apple, we associate an apple as red or green, round, has a leaf, and associate it with the word 'apple'. Signified, or the mental concept of the apple can be a fruit, health, teacher's pet or even technology.

Semiotics is used to study all phenomena in the meaning making, which include how the meaning maker creates symbols in their communications and how the receiver interprets those symbols (Chandler, 2017). However, this particular study concentrates solely on the way Dr. Tirta creates his messages to create his identity online. Therefore, this study examines these messages from the sender's point-of-view, and not the audiences' point-of view.

Samples for the textual analysis were collected by employing a purposive sampling technique of Dr. Tirta's Instagram posts from 23 March to 30 March 2020. This period was chosen since this was the period when suddenly his number of followers spiked following his viral live Instagram video. While Dr. Tirta makes an average of five posts per day in his Instagram account, this study only focused on his most liked post of the day within the above selected period. Thus, the analysis was limited to eight posts by Dr. Tirta and coded them into the three categories of NFU, which are creative choice of counterconformity, unpopular choice of counterconformity, and avoidance of similarity and ATSCI.

IV. DISCUSSIONS

From the eight post that were analyzed with the construct of NFU and ATSCI, seven out of eight postings fulfill at least three components (out of four) of conspicuous compassion. There are even three postings that fulfill all components of conspicuous compassion. The following are the detailed explanation on how Dr. Tirta postings show the components of NFU and ATSCI:

To show creative choice of counterconformity, dr. Tirta often emphasizes his differentness through messages and symbols that signify his connections with people of high status, his

expertise in the medical field, and his personal wealth. In his posts he often shows pictures of him being with a prominent figure. This can be seen for instance in his post on 24 March 2020 (See Figure 2) where he posted a picture of him with Iwan Dwiprahasto, a well-known professor of Pharmacology who recently died of COVID-19. This post was followed by a caption where he described his close relationship with the professor whom he considered as a mentor during his studies at Gadjah Mada University's School of Medicine. This posting also serves as a re-instatement of his medical background, which is both seen as prestigious and a credible source of information about the COVID-19.

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To show **creative choice of counterconformity**, dr. Tirta often emphasizes his differentness through messages and symbols that signify his connections with people of high status, his expertise in the medical field, and his personal wealth. In his posts he often shows pictures of him being with a prominent figure. This can be seen for instance in his post on 24 March 2020 (See **Figure 2**) where he posted a picture of him with Iwan Dwiprahasto, a well-known professor of Pharmacology who recently died of COVID-19. This post was followed by a caption where he described his close relationship with the professor whom he considered as a mentor during his studies at Gadjah Mada University's School of Medicine. This posting also serves as a re-instatement of his medical background, which is both seen as prestigious and a credible source of information about the COVID-19.

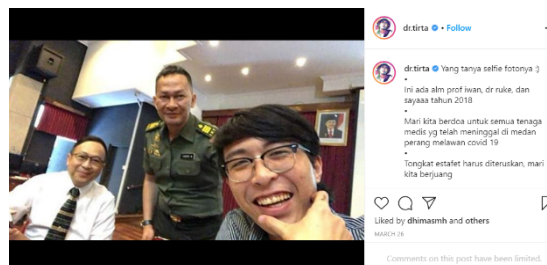


Fig. 2. Dr. Tirta's Instagram Posting on 24 March 2020.

To show **unpopular choice of counterconformity**, the most common message/ symbol that Dr. Tirta uses in his postings is his 'eccentricity'. This eccentricity can be seen mostly in his style of clothing, hair color and the language he uses in his postings. The choice of appearance and speech that he chooses to use are signifiers that give signified meaning of his unpopular choices in comparison to social norms, but that still contributes positively to his popularity.

For instance, in the postings that he made on 23 March 2020, Dr. Tirta, wears loose black pants with many pockets, a typical street wear look. Underneath his medical scrubs, he wears a long-sleeved denim dress shirt. This combination of tough, cool, and stylish streetwear with the medical scrub can be seen as an unpopular choice, because it gives the impression that the doctor's attire is unprofessional and that there is no effort put in maintaining cleanliness as part of the job requirement. At the same time, this look also speak to his audiences that doctors can be 'cool' and 'approachable'.

The most common symbol regarding **avoidance of similarity** is found in his captions when he addresses uncommon messages and, in his pictures, when he portrays himself not aligning with the social norm.

This can be observed for instance, in his post from 29 March 2020 (see **Figure 3**), where he posted a picture of himself in the hospital where he was the patient. The signifier black shorts and long-sleeved shirt indicated that though Dr. Tirta is in the hospital he refuses to wear the patient scrubs and chooses to wear his own clothes, pointing to the fact that he does not want to be like everyone else, but finds his own way by avoiding the norm and do his own thing, which is very common for him. This 'dissimilarity' is also strengthened by his purple hair, which is so different than the hair colour of common Indonesians.



Fig. 3. Dr. Tirta's Instagram Posting on 29 March 2020.

Signs and symbols of **attention to social comparison information** is mostly shown in his captions and choice of words. He would explain how he conforms to the norms commonly held as important by the Indonesian society, such as religiosity and humbleness.

For instance, in his post from 30 March 2020, he showed an x-ray photo of his diaphragm and stated that the damage was the consequences of smoking. In the caption he said "Makasih ya Allah karena diberi sakit, agar saya tersadar dari kebodohan saya sendiri" (Thank you God that You gave me this sickness, so that I am awoken from my own stupidity). This statement can have the signified meaning that Dr. Tirta is actually showing humility, by admitting his mistakes. At the same time the signifier "Allah" implies that Dr. Tirta is a religious person who understands that God wants to protect him from his stupid decision by inflicting the pain of smoking. Most people might not associate someone like Dr. Tirta to be religious, but on top of the other identities that he portrays, religion seems to be an important one.

Based on the above-mentioned examples, it can be derived that that in accordance to the theory of conspicuous compassion Dr. Tirta clearly practices conspicuous compassion in his Instagram posts. This is mostly done through the display of his material possessions (such as his expensive collection of shoes), his social interactions with prominent figures, and his prestigious education background. At the same time, Dr. Tirta also portrays a rebellious character, which can be seen as eccentric but can also potentially be perceived as unique by his audiences. All of these seem to reoccur frequently throughout his posts, either through images or captions.

At the same time, Dr. Tirta's posts also indicate that he is susceptible to his followers and that their reactions and expectations are what influence his image. Like the posting on his lung condition shows, his conversation with them acknowledges his bad behaviours and realization of what the audiences expect he learns from these shortcomings. This is actually in line what Ruvio (2008) explained that people who do conspicuous compassion aims to be different and similar simultaneously.

V. CONCLUSIONS

The goal of this study was to explore how conspicuous compassion is practiced by an Indonesian social media influencer and how it influences his image. Using a qualitative research method with a textual analysis approach, this study analyzed eight Instagram postings of @dr.tirta.

By considering two theories of conspicuous compassion, namely NFU and ATSCI, it can be concluded that Dr. Tirta's Instagram posts fulfill all components of these two theories (creative choice of counterconformity, unpopular choice of counterconformity, avoidance of similarity, and *attention to social comparison information*). At the same time, results also show that Dr. Tirta continuously adjusts his portrayal of conspicuous compassion, which potentially affect his online image positively.

As Indonesia is one of the top countries using social media, there is little research done regarding Indonesian social media influencers and the way they portray themselves online. Therefore, this study endeavors to provide some insights to the behaviors of Indonesian online users, particularly how social media influencers use conspicuous compassion to enhance their image online. While this study only scratched the surface of this topic, it can be a starting point for more research on this topic. In the future, it will be interesting to conduct an audience analysis of how followers make meaning of conspicuous compassion done by the influencers.

REFERENCES

- [1] Bearden, W. O., Rose, R. L., & Rose, R. L. (1990). 'Attention to Social Comparison Information: An Individual Difference Factor Affecting Consumer Conformity', *Journal of Consumer Research* (1990) 16(4) 461.
- [2] Gilovich, T. (Cornell U.), Keltner, D. (University of C.-B.), Chen, S. (University of C.-B., & Nisbett, R. E. (University of M. (2013). 'Social Psychology (S. Snavely (ed.); 3rd Editio)', W. W. Norton & Company, Inc. (2016).
- [3] Grace, D., & Griffin, D. (2006). 'Exploring conspicuousness in the context of donation behaviour', *Int. J. Nonprofit Volunt. Sect. Mark.*, 154(May), 147–154.
- [4] Gündüz, U. (2017). 'The Effect of Social Media on Identity Construction', *Mediterranean Journal of Social Sciences*, 8(5), 85–92.

-
- [5] Kim, E. (Anna), Ratneshwar, S., Roesler, E., & Chowdhury, T. G. (2016). 'Attention to social comparison information and brand avoidance behaviors', *Marketing Letters*, 27(2), 259–271.
- [6] Lennox, R. D., & Wolfe, R. N. (1984). 'Revision of the Self-Monitoring Scale', *Journal of Personality and Social Psychology*, 46(6), 1349–1364.
- [7] Marwick, A. E. (2016). 'Status Update: Celebrity, Publicity and Self Branding in Web 2.0 (PhD Dissertation)', *Journal of Chemical Information and Modeling*, 1–446.
- [8] Ruvio, A. (n.d.). 'Unique Like Everybody Else? The Dual Role of Consumers' Need for Uniqueness', 25(May 2008), 444–464.
- [9] Tian, K. T., Bearden, W. O., & Hunter, G. L. (2001). 'Consumers' need for uniqueness: Short-form scale development and cross-cultural validation', *International Marketing Review*, 28(1), 50–66.
- [10] Tiggemann M., & Golder F. (2006). 'Tattooing: An Expression of Uniqueness in the Appearance Domain', *Body Image* (2006) 3(4) 309-315.
- [11] Wallace, E., Buil, I., Chernatony, L. De, & Wallace, E. (2018). "Consuming Good' on Social Media: What Can Conspicuous Virtue Signalling on Facebook Tell Us About Prosocial and Unethical Intentions?", *Journal of Business Ethics*, 0(0), 0.
- [12] Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). 'Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China', *International Journal of Environmental Research and Public Health*, 17(5).
- [13] West, P. (2004). 'Conspicuous Compassion: Why Sometimes it Really is Cruel to be Kind', *Civitas, Institute for the Study of Civil Society*.
- [14] West, R. (Emerson C., & Turner, L. H. (Marquette U. (2009). 'Understanding Interpersonal Communication', (M. Eckman (ed.); 2nd Editio). Lyn Uhl.

The Effect of Celebrity Endorsement on Purchase Intention of Adidas Products Mediated by Customer's Attitude Toward Brand

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Abstract

This study aims to determine the effect of celebrity endorsment on purchase intention of Adidas which mediates customer attitude towards brand. Big companies currently use celebrity to be able to market their products, one of which is a sportwear company, namely Adidas, which uses Kanye West as a celebrity endorser to be able to market their products. Companies are expected to pay attention to or see celebrity from several variables, namely celebrity trustworthiness, celebrity expertise, celebrity attractiveness, celebrity similarity, celebrity liking, celebrity familiarity and celebrity match-up congruence with the brand / product. This study uses individual primary data collection methods using a questionnaire. Researchers took respondents who live in the Tangerang and Jakarta areas. Respondents in this study were 150 respondents. This study uses data processing using Partial Least Square - Structural Equation Modeling (PLS-SEM) and is processed using SmartPLS software. The results showed that the celebrity endorsement variable had a positive and significant effect on the response from prospective Adidas customers,

so that customers would do Purchase Intention mediated by customer attitude toward the brand.

Keywords: celebrity endorsement, purchase intention, customer attitude towards brand

I. INTRODUCTION

This study aims to determine the effect of celebrity endorsement on purchase intention of Adidas which is mediated by customer attitude towards brand. Big companies currently use celebrity to be able to market their products, one of which is a sportswear company, namely Adidas, which uses Kanye West as a celebrity endorser to be able to market their products. Based on the results of the research that has been made, it shows that companies cannot arbitrarily choose celebrities to be able to advertise products. Companies are expected to pay attention to or see the celebrity from several variables, namely celebrity trustworthiness, celebrity expertise, celebrity attractiveness, celebrity similarity, celebrity liking, celebrity familiarity and celebrity match-up congruence with the brand / product.

2. Hypothesis Development

2.1 Celebrity Trustworthiness and Customer Attitude Toward Brand

Celebrity Trustworthiness is the most useful and most effective tool to make customers trust and rely on the brand even more. Therefore, if celebrities who advertise a particular product or brand have trustworthiness in the eyes of customers, the customer's attitude towards the brand will also be more positive [1]. Thus, the following hypothesis can be developed:

H1: Celebrity trustworthiness has a positive effect on Customer Attitude Toward Brand.

2.2 Celebrity Expertise and Customer Attitude Toward Brand

Emphasizes that celebrity is considered as someone who is an expert in a certain field, so this will cause the endorsement of a brand to be higher than celebrities who do not have expertise [2] [3]. The more persuasive a celebrity who is an expert (expert), the more it will create customer purchasing decisions [1]. If a celebrity is considered as expertise, then the attitude of the customer to the brand will also increase towards the brand endorsed by the celebrity. Based on the explanation above, the hypothesis of this study is proposed as follows:

H2: Celebrity Expertise has a positive effect on Customer Attitude Toward Brand
Celebrity Attractiveness and

2.3 Customer's Attitude Toward Brand

A celebrity is said to be attractive because of the popular image she has in the public eye. The attractiveness of this celebrity will encourage customers to increasingly want to be like the celebrity [4]. Based on the explanation above, the hypothesis of this study is proposed as follows:

H3: Celebrity Attractiveness has a positive effect on Customer Attitude Toward Brand

2.4 Celebrity Similarity and Customer Attitude Toward Brand

Similarity is described as "the supposed similarity between the source and recipient of the message" [5]. In other words, a customer can resemble the endorser. People are more easily influenced when they find common ground between themselves and their supporters. If celebrities and customers share popular factors, such as the same life style or interests, a better association will be formed [6]. Based on the explanation above, the hypothesis of this study is proposed as follows:

H4: Celebrity Similarity has a positive effect on Customer Attitude Toward Brand

2.5 Celebrity Liking and Customer 's Attitude Toward Brand

According to [5], if customers like (likes) a certain celebrity, then they will also like a brand advertised by that celebrity because the brand is already attached to the image of the celebrity. Therefore, if celebrity liking is getting higher, customer attitudes to the brand will be even more positive. Based on the explanation above, the hypothesis of this study is proposed as follows:

H5: Celebrity Liking has a positive effect on Customer Attitude Toward Brand

2.6 Celebrity Familiarity and Customer Attitude Toward Brand

Familiarity (familiarity) means a feeling of similarity through emotions and contact with a celebrity [7]. Celebrity familiarity will have a more positive impact when the customer finds out that he or she resembles the celebrity. This is called the sheer exposure effect. When customers have short contact with celebrities and the contact interval becomes longer, the familiarity effect will increase the customer's attitude towards the brand. Conversely, the effect is negative when they have prolonged contact and the contact interval becomes shorter [8]. Based on the explanation above, the hypothesis of this study is proposed as follows:

H6: Celebrity Familiarity has a positive effect on Customer Attitude Toward Brand

2.7 Celebrity Match-up Congruence With The Brand / Product and Customer Attitude Toward Brand

Based on the journal [9], customers want a new insight into the celebrity as someone who is considered an ordinary human who shows their routine and daily life which not only accentuates their career and popularity. When receiving real information about the celebrity, the customer will feel that he has a close relationship with celebrity. Therefore, if the celebrity is considered more authentic by the customer, the relationship between the customer and the brand advertised by celebrity will also feel tighter. Based on the explanation above, the hypothesis of this study is proposed as follows:

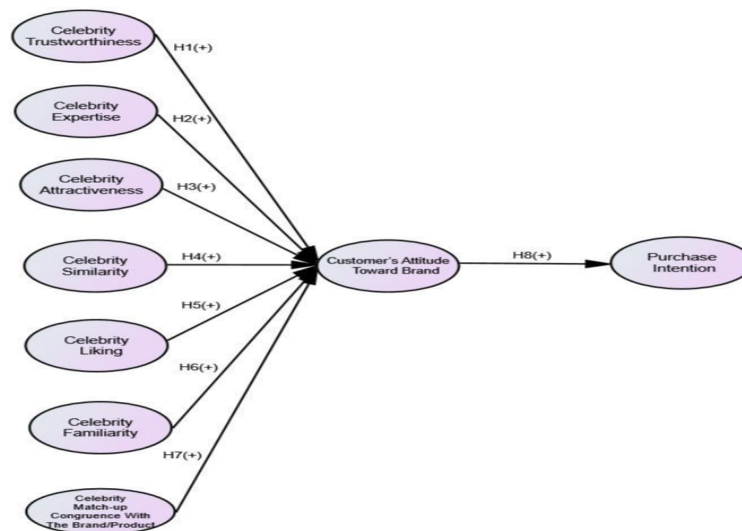
H7: Celebrity Match-up Congruence With The Brand/Product has a positive effect towards Customer's Attitude Toward Brand

2.8 Customer's Attitude Toward Brand and Purchase Intention

Customer purchase intentions discuss the tendency to buy certain brands or products [7]. According to [10][2] [11] argue that a positive customer attitude towards celebrity support will increase their purchase intention. Many studies also show that customer attitudes towards brands have a positive and significant impact on purchase intentions. Based on the explanation above, the hypothesis of this study is proposed as follows:

H8: Customer Attitude Toward Brand has a positive effect on Purchase Intention

2.9 Conceptual framework



II. METHOD

In this study using a sampling technique Non Probability Sampling with purposive sampling technique with a sample size of 150 people. This study uses an interval scale, on the grounds that the interval scale has accurate information about the ranking order where when there is a measurement and besides that the interval scale can also interpret the high difference in values directly [12]. In this study using a Likert scale, which aims to make respondents in this study convey the level of agreement to disagree for each question posed through a questionnaire. After the data is collected, the data will be processed using SEM or Statistical Equation Modeling with the PLS or Partial Least Square approach using SmartPLS software.

4. Research result

4.1 Outer model

In testing the validity of indicators, the loadings indicator must be above 0.70 that each indicator has met the stipulated requirements. The loading indicator on the reliability test results of this indicator ranges from 0.705 to 0.960. The next step is to test the convergence and discriminant validity in this study which will be explained in table.

Table 1 Discriminant Validity Test Results (Fornell-Lacker)

Source: Made from the results of actual research data processing 150 respondents (2020)

In carrying out the discriminant validity of the measurement model, if each construct is greater than the correlation between the construct and other constructs, it can be said to meet the Fornell-Lacker discriminant validity requirements.

Then in discriminant validity, the value of the Heterotrait-Monotrait Ratio (HTMT) or the correlation between variables is also seen with the condition that the correlation number is ≤ 0.85 , the following is the value of the Heterotrait-Monotrait Ratio (HTMT) in table 3 below:

Table 2: Discriminant Validity Test Results (Heterotrait-Monotrait Ratio (HTMT))

It can be seen that the discriminant validity has been achieved, the whole construct validity test in this study to test the PLS-SEM model measurement has been achieved because it meets the predetermined requirements.

The next step is to test the reliability of all the variables used in this study. The results of the reliability test can be seen in table 3 below:

Table 3 Results of the Actual Research Reliability Test

In table 3, it can be seen that the value of Cronbach's alpha and composite reliability of each variable shows a number above 0.70 which can be said that each of these indicators meets the criteria of Cronbach's alpha and composite reliability that has been set. Furthermore, the researcher will explain the value of each indicator which must be more than 0.70.

4.2 Inner Model

After testing the outer model, the data analysis stage was continued by evaluating the inner model by testing the coefficient of determination (R^2), multicollinearity, as well as testing the hypothesis, both direct and indirect effects through mediation.

Table 4 R-Square Value

From table 4 variable customer's attitude toward brand, the R-square value is 0.790 which means that 79.0% of the existing variations can be explained by the celebrity trustworthiness variable, celebrity expertise, celebrity attractiveness, celebrity similarity, celebrity liking, celebrity familiarity and celebrity match- up congruence with the brand / product while the remaining 21.0% is explained by other variables outside the variables used in the study, the R-square value of 0.790 is included in the strong category.

The purchase intention variable has an R-square value of 0.623, which means that 62.3% of the existing variations can be explained by the customer's attitude toward the brand variable, while the remaining 37.7% is explained by other variables outside the variables used in the study, the R value. -squarenya of 0.623 is in the moderate category.

Table 5 Inner VIF of the Actual Study

Furthermore, the researcher will test each indicator for evidence of multicollinearity using the Variance Inflation Factor (VIF) threshold used is that each indicator must have a VIF value of less than 5. If the indicator has a VIF value of more than 5, then there is multicollinearity and indicates that the indicator is correlated with other indicators. In other words, the indicator is no longer needed. Table 5 below shows the inner VIF value below 5 which means there is no multicollinearity.

4.3 Results and findings

The first hypothesis states that there is a positive effect of celebrity trustworthiness on customer's attitude toward brand with a path coefficient of 0.185. The first hypothesis has a t-count of 2.027 and a p-value of 0.043. Thus based on these limits it can be concluded that the first hypothesis is supported. The second hypothesis states that there is a positive influence of celebrity expertise on customer's attitude toward brand with a path coefficient of 0.178. The second hypothesis has a t count of 2.382 and a p-value of 0.018. Thus based on these limits it can be concluded that the second hypothesis is supported. The third hypothesis states that there is a positive effect of celebrity attractiveness on customer's attitude toward brand with a path coefficient of 0.225. The third hypothesis has a t-count of 2,280 and a p-value of 0.023. and it can be concluded that the third hypothesis is supported. The fourth hypothesis states that there is a positive effect of celebrity similarity on customer's attitude toward brand with a path coefficient of 0.065. The fourth hypothesis has a t-count of 1.320 and a p-value of 0.187. Thus based on these limits it can be concluded that the fourth hypothesis is not supported. The fifth hypothesis states that there is a positive effect of celebrity liking on customer's attitude toward the brand with a path coefficient of 0.187. The fifth hypothesis has a tcount of 2.411 and a p-value of 0.016, the fifth hypothesis can be concluded that it is supported. The sixth hypothesis states that there is a positive influence of celebrity familiarity on customer's attitude toward brand with a path coefficient of 0.022 which has a t count of 0.306 and a p-value of 0.759 and it can be concluded that the sixth hypothesis is not supported. The seventh hypothesis states that there is a positive effect of celebrity match-up congruence with the brand / product on customer's attitude toward brand with a path coefficient of 0.200 which has a t count of 2.697 and a p-value of 0.007 and it can be concluded that the seventh hypothesis is supported. The eighth hypothesis states that there is a positive influence on customer attitude toward brand on purchase intention with a path coefficient of 0.789 which has a tcount of 15.492 and a p-value of 0.000 and it can be concluded that the hypothesis eighth supported.

The results showed that the celebrity endorsement variable had a positive and significant effect on the response from potential Adidas customers, so that customers would do Purchase Intention mediated by customer attitude toward the brand.

III. CONCLUSIONS, IMPLICATIONS AND SIGNIFICANCE

Attitudes toward brands have factors that have an impact on product purchase intentions and product interest. After the researcher tested the reliability of the measurement scale and tested the explanatory factor analysis of the celebrity endorser, the result was that the researcher could draw conclusions on the factors that only made celebrity more famous so that it did not produce a significant effect on the omitted brand. While other factors that have a positive and significant effect on the brand can be maintained.

REFERENCES

- [1] Ohanian, R. (1990), "Construction and Validation Of A Scale To Measure Celebrity Endorsers' Perceived Expertise, Trustworthiness, and Attractiveness," *Journal Of Advertising*, Vol 19, No 3, pp. 39-52.
- [2] Yulia, Evelyn & Estella, Isabelle. (2019). Pengaruh Celebrity Endorsement terhadap Sikap Pelanggan Akan Merek dan Intensi Pembelian Pada Suatu Produk Kosmetik Rintisan. *Kajian Branding Indonesia Volume 1 Nomor 1*, Sekolah Bisnis dan Ekonomi, Universitas Prasetiya Mulya.
- [3] Hoekman, M. L. L., & Bosmans, A. M. M. (2010). Celebrity Endorsement. How Does Celebrity Endorsement Influence The Attitude towards The Brand and How Does Negative Publicity Affect This Relationship? Bachelor Thesis, ANR. 343396, Tilburg University, Netherlands.
- [4] Cohen, J. B. dan Golden, E., 1972. Informational social influence and product evaluation, *Journal of applied Psychology*, 56(1), pp. 54.
- [5] McGuire, W. J., 1985. Attitudes and attitude change. *The handbook of social psychology*, 8(1), pp. 233-34
- [6] [6] Erdogan, B. Z. (1999). Celebrity endorsement: A literature review. *Journal of Marketing Management*, 14, 291-314. <http://dx.doi.org/10.1362/026725799784870379>
- [7] [7] Belch, G., & Belch, M. (2004). *Advertising and Promotion: An Integrated Marketing Communications Perspective* (6 ed.). New York, USA: The McGraw Hill.
- [8] Broostin, D. (1982). *The Image: A Guide to Pseudo-Events in America*. New York: Athenneum, 49.
- [9] Kowalczyk, C. M. dan Pounders, K. R., 2016. Transforming celebrities through social media: the role of authenticity and emotional attachment, *Journal of Product & Brand Management*, 25(4), pp. 345-356.

-
- [10] Amos, C., Holmes, G. dan Strutton. D., 2008. Exploring the relationship between celebrity endorser effects and advertising effectiveness: A quantitative synthesis of effect size, *International journal of advertising*, 27(2), pp. 209-234.
- [11] Nguyen Minh Ha & Nguyen Hung Lam., The Effects of Celebrity Endorsement on Customer's Attitude toward Brand and Purchase Intention, *International Journal of Economics and Finance*; Vol. 9, No. 1; 2017 ISSN 1916-971X E-ISSN 1916-9728 Published by Canadian Center of Science and Education 64.
- [12] Hair, J. F. Jr., Hult, G. T. M., Ringle, C. M. & Sarstedt, M. (2016). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (2nd ed.). SAGE Publications.

Discernible Impact of Fashion's Online Shopping With Mobile - Augmented Reality (AR) Application on the Consumer's Perspective in Indonesia

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Abstract

To see the impact of Augmented Reality (AR) technology in fashion's online shopping on the consumer's perspective in Indonesia, a quantitative survey was distributed online to Indonesia young generation which born between 1981 and 2000. Non-probability sampling was conducted in order to collect primary data by making use of convenience sampling. A total amount of 147 valid responses were collected which were analyzed by correlation, linear regression and multivariate analyses. The variables related to acceptance and behavior through Augmented Reality technology (TAM: perceived ease of use, perceived usefulness, perceived enjoyment; DTPB: perceived self-efficacy) were found to be significantly related to the perspective of purchase intention, continuance intention and referral intention by the Indonesia young generation. Augmented reality can be used as a tool to enhance the consumers' perception of the offered product in the Indonesia young generation. Therefore, this study can recommend online retailers to introduce an augmented reality strategy in order to raise Indonesia young generation purchase-, continuance-, referral intention of shopping goods and therewith increase the sales numbers.

Keywords: Augmented reality, online fashion retail, e-commerce, Indonesia young generation.

I. INTRODUCTION

Augmented Reality (AR) is an immersive device that can transform shoppers' retail experience. AR is a type of human computer interaction, overlaying information, images and sounds produced by machine into the physical and real-time world [1]. Technology such as AR can enable fashion retailers to create unforgettable shopping experiences, which this kind of experiences could not be provide by online shopping. Due to the technology which provides an interface 'before you purchase,' AR exhibits tremendous potential for fashion retailers to increase conversion rates online and reduce rates of return. However, how exactly users are drawn into this new form of reality and what effects it has on them has not yet been exploited in consumer behaviour literature.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

A. Literature Review

Technology Acceptance Model (TAM). The original Davis (1989) model which explored the usage of computer related jobs notes that user acceptance is mainly affected by the perceived ease of use and usability of technology. This opportunity will affect the consumers ' ability to use the program. The fundamental (hedonistic) impulse of introducing emerging technologies was eventually extended to the TAM, which allows the concept, in both functional and hedonic technologies, to be implemented implemented [4],[9],[13],[14]. To its oversimplified understanding of technological acceptance, TAM was potentially criticized. Thus, human behavior and experience variables were integrated by TAM2 [30]. TAM2 [30] describe perceived enjoyment as "the practice of using an individual program that is pleasant, in addition to any effect on results induced by the use of the program.

Decomposed Theory of Planned Behaviour (DTPB). Taylor & Todd presented in June 1995 the Decomposed TPB (DTPB) which explores more deeply the dimensions of belief, normative norms and presumed behavioural. DTPB is a robust paradigm that has been used in various works on the information structure [20],[25]. The decomposed TPB (DTPB), which has a higher predictive performance than the original TPB, is superior to the original TPB. Through making new conclusions, DTPB improves explanation strength and accuracy in interpreting action context [7]. The DTPB suggests that the main direct force of acts is behavioural intention, which is "Perceived Self-Efficacy". PSE regulates the confidence level that they will carry out to perform a task [29].

Online Purchase Intention. Purchase intention measures a combination of market interest and the ability to purchase a product and is closely linked to the customer's potential purchasing activity [8], [15]. The purchasing intent was found to affect different variables, including behaviours [5] and predictors of happiness [18], [26].

Referral Intention.. There are many concepts (word of the mouth) based on a variety of experts' exposures. Tjiptono [28] describes an intention of submitting a message (personally or not) which a non-organization person would deliver to the client. The purpose of the reference is to offer incentives for people using electronic media and the goal of the reference is also the consumers voluntary access either because they are happy with the product or service output, or because they are not comfortable with it.

Continuance Intention. The willingness to continue is an example of the general customer appraisal of the use of a specific product [11]. Though technical advancement has proved to be an important success for companies, ongoing ambitions are a crucial determinant of the high market share and significant sales for companies that contribute to the long-term continued existence and growth of this advancement [2], [3].

B. Hypothesis Development

Technology Acceptance Model (Perceived Ease of Use, Perceived Usefulness, Perceived Enjoyment) and Purchase Intention.

Hypothesis	Author	Result
Hypothesis 1a: There is a correlation between TAM (Perceived Ease of Use) and purchase intention. Hypothesis 1b: There is an influenced between TAM (Perceived Ease of Use) and purchase intention.	Shah, Aziz, Jaffari, Waris and Ejaz, 2012	Perceived ease of use has an effect on the buying decisions, and the explanation why a customer buys a brand
Hypothesis 2a: There is a correlation between TAM (Perceived Usefulness) and purchase intention. Hypothesis 2b: There is an influenced between TAM (Perceived Usefulness) and purchase intention.	Pavlou, 2003; Koufaris, 2002	confirmed the relationship between PU and purchase intention by testing the model using two different empirical studies
Hypothesis 3a: There is a correlation between TAM (Perceived Enjoyment) and purchase intention. Hypothesis 3b: There is an influenced between TAM (Perceived Enjoyment) and purchase intention.	Fiore, Jin & Kim, 2005	Hedonic enjoyment of augmented reality increases mentally and emotionally the user's participation, allowing users to participate in the drug and thereby influencing the buying cycle

Technology Acceptance Model (Perceived Ease of Use, Perceived Usefulness, Perceived Enjoyment) and Continuance Intention.

Hypothesis	Author	Result
Hypothesis 4a: There is a correlation between TAM (Perceived Ease of Use) and continuance intention. Hypothesis 4b: There is an influenced between TAM (Perceived Ease of Use) and continuance intention.	Roca, Chiu, and Martinez 2006; Thong, Hong, and Tam 2006	The rationale is that when a system is perceived to be easy to use, users are more likely to have a higher intention to use/continue to use it.
Hypothesis 5a: There is a correlation between TAM (Perceived Usefulness) and continuance intention. Hypothesis 5b: There is an influenced between TAM (Perceived Usefulness) and continuance intention.	Davis, Bagozzi, & Warshaw, 1989; Venkatesh & Davis, 2000	Previous research regarding user intention has confirmed that perceived usefulness is one of the most crucial determinants of intention to adapt or continue behavior
Hypothesis 6a: There is a correlation between TAM (Perceived Enjoyment) and continuance intention. Hypothesis 6b: There is an influenced between TAM (Perceived Enjoyment) and continuance intention.	Koufaris, 2002; Shin, 2007; Liao, 2007	Claimed that people who find the system fun to use should continue to use it

Technology Acceptance Model (Perceived Ease of Use, Perceived Usefulness, Perceived Enjoyment) and Referral Intention.

Hypothesis	Author	Result
Hypothesis 7a: There is a correlation between TAM (Perceived Ease of Use) and referral intention. Hypothesis 7b: There is an influenced between TAM (Perceived Ease of Use) and referral intention.	Roca, Chiu, and Martinez 2006; Thong, Hong, and Tam 2006	The rationale is that when a system is perceived to be easy to use, users are more likely to have a higher intention to use/continue to use it.
Hypothesis 8a: There is a correlation between TAM (Perceived Usefulness) and referral intention. Hypothesis 8b: There is an influenced between TAM (Perceived Usefulness) and referral intention.	Davis, Bagozzi, & Warshaw, 1989; Venkatesh & Davis, 2000	Previous research regarding user intention has confirmed that perceived usefulness is one of the most crucial determinants of intention to adapt or continue behavior
Hypothesis 9a: There is a correlation between TAM (Perceived Enjoyment) and referral intention. Hypothesis 9b: There is an influenced between TAM (Perceived Enjoyment) and referral intention.	Koufaris, 2002; Shin, 2007; Liao, 2007	Claimed that people who find the system fun to use should continue to use it

Decomposed Theory of Planned Behaviour (Perceived Self-Efficacy) and Purchase Intention.

Hypothesis	Author	Result
Hypothesis 11a: There is a correlation between DTPB (Perceived Self-Efficacy) and purchase intention. Hypothesis 11b: There is an influenced between DTPB (Perceived Self-Efficacy) and purchase	Yi & Gong, 2008	Consumers with high self-efficacy have confidence in their ability and will try hard to complete the purchase
Hypothesis 12a: There is a correlation between DTPB (Perceived Self-Efficacy) and continuance intention. Hypothesis 12b: There is an influenced between DTPB (Perceived Self-Efficacy) and continuance	Delian, Lingling, & Hock Chuan, 2014; Igabria & Livari, 1995	Suggested that greater flexibility improves the user's ability to use system / technology
Hypothesis 13a: There is a correlation between DTPB (Perceived Self-Efficacy) and referral intention. Hypothesis 13b: There is an influenced between DTPB (Perceived Self-Efficacy) and referral	Palka, 2009; Cheng, 2006	Suggested that self-efficacy perceived had an effect on the purpose of WOM

III. RESEARCH METHODOLOGY

Sample and Procedure. The target population for this study consist of the Indonesian millennial generation, which was born between 1981-2000 and have never experienced augmented reality in their online shopping experiences. A total number of 152 responses were collected with the online survey tool Google Forms during a time period of 14 days. In the online survey, an AR-demo video was presented in order to see the perspective on how millennials Indonesia perceived AR-technology in enhancing their online shopping experience. All answer of respondents which did not have the age of interest (20-39) and have not been shopped fashion online, were removed from data set. Consequently 147 valid responses were included in the statistical calculations SPSS.

Measurement. Technology Acceptance Model (Perceived ease of use) was measured using 3 measurement items adopted from [4]. Technology Acceptance Model (Perceived Usefulness) was measured using 4 measurement items adopted from [4]. Techonology Acceptance Model (Perceived Enjoyment) was measured using 3 measurement items from [4],[30]. Decomposed Theory of Planned Behaviour was measured using 3 measurement items adopted from [27]. All of the variables were measured using 5-point Likert-type scales ranging from "1" being "strongly disagree" to "5" being "strongly agree".

IV. RESULT

Data analysis for this study was done using SPSS: for descriptive analysis, for hypothesis testing using correlation and regression analysis. The descriptive & inferential statistics are displayed in Table 1 below. Table 2 shows the hypotheses testing results indicated that all hypotheses are supported. Table 3 shows the multivariate analysis between socio-demographic with the dependent variable.

Table 1. Result of Descriptive & Inferential Statistic

Items	Result					
	Construct	N	Mean	SD	Validity	Reliability
Total PEU	147	3,89	0,737	.000	.928	.200
Total PU	147	3,71	0,837	.000	.930	
Total PE	147	3,89	0,810	.000	.929	
Total PSE	147	4,26	0,678	.000	.927	
Total PI	147	4,03	0,825	.000	.927	
Total CI	147	3,91	0,793	.000	.929	
Total RI	147	4,25	0,649	.000	.930	

Table 2. Correlation & Regression Test result

Construct	Correlation (Pearson Correlation)	Regression (Unstandardized B Coefficients)	Result
PEU -> PI	.531**	.729	Supported
PU -> PI	.454**	.437	Supported
PE -> PI	.655**	.551	Supported
PEU -> CI	.320**	.399	Supported
PU -> CI	.416**	.352	Supported
PE -> CI	.526**	.389	Supported
PEU -> RI	.326**	.324	Supported
PU -> RI	.331**	.223	Supported
PE -> RI	.379**	.223	Supported
PSE -> PI	.635**	.863	Supported
PSE -> CI	.404**	.483	Supported
PSE -> RI	.511**	.484	Supported

Table 3. Socio-demographic and Dependent Variable result

Effect	Sig.	Partial Eta Squared
Gender	.386	.022
Domicile	.932	.003
Age	.302	.026
Gender*Domicile	.351	.024
Gender*Age	.135	.040
Domicile*Age	.402	.021
Gender*Domicile*Age	.892	.004

V. DISCUSSIONS

In this study, an augmented reality demo video was used to test participants' response to a fashion item. The results showed that overall TAM model has a positive correlation and relationship with the perspective of millennials Indonesia towards AR- technology, which is online purchase-, continuance- and referral intention. Furthermore, this study confirms that behaviour such as self-efficacy has a significance influence with the perspective of millennials Indonesia towards AR-technology. Surprisingly, neither of the sociodemographic variables investigated demonstrated a significant impact on the perspective of online purchase intention, intention to continue and referral intention by the millennials Indonesia. These could be explained by the fact, that the millennial generation has been exposed to technological innovation from the early stages of life. The practical implications for E-Fashion retailers are seen in the key outcome of this study which is that companies need to focus primarily on

meeting customer needs and technology orientations strategies as this can make the company agile and improve the company's performance.

VI. CONCLUSIONS

Based on the findings and analysis of research that has been stated in the chapter before, then some conclusions can be drawn as follows:

The millennials Indonesia perceived acceptance and behaviour under the influence of AR-technology as very positive. Therefore, the implementation of an augmented reality strategy for an Indonesian millennials target market and shopping goods can be suggested.

The millennials Indonesia needs AR-technology easier to use & fun in order to enhance the attitude of purchase intention, continuance intention and referral intention. It can be assumed that Millennials generation is already prepared to adopt AR technology on their smart devices. Therefore, retailers should view AR as a form of persuasive technology that elicits and delivers experiential values rather than as only a functional technology

The millennials Indonesia has a higher self-efficacy and therefore lead to technological openness and lowered help-seeking propensity to completed their task, therefore this kind of generation is really potential users for such new technology like augmented reality.

REFERENCES

- [1] Alan B. Craig – 2013 “ Understanding Augmented Reality: Concepts and Applications“.
- [2] Bhattacharjee, A. “Understanding Information Systems Continuance: An Expectation-Confirmation Model,” MIS Quarterly (25:3), September 2001, 351-370.
- [3] Bhattacharjee, Anol and Perols, Johan and Sanford, Clive, Information Technology Continuance: A Theoretical Extension and Empirical Test (January 8, 2007). Journal of Computer Information Systems, 49(1), 17-26, 2008.
- [4] Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1992). Extrinsic and intrinsic motivation to use computers in the workplace. Journal of Applied Social Psychology, 22(14), 1111–1132. Research, 15(2), pp. 269-295.
- [5] Fishbein, M., & Ajzen, I. (1975). Belief, Attitude, Intention, and Behaviour: An Introduction to Theory and Research. Reading, Mass.: Addison-Wesley. [6] Teece, David J, G. Pisano, and A. Shuen, “Dynamic capabilities and strategic management,” Strateg. Manag. J., vol. 18:7, no. March, pp. 509–533, 1997.

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- [6] Fiore, A. M., Jin, H. -J., & Kim, J. (2005). For fun and profit: Hedonic value from image interactivity and responses toward an online store. *Psychology & Marketing*, 22, 669-694.
- [7] Garay, Lluís & Font, Xavier & Corrons, August. (2018). Sustainability-oriented innovation in tourism: an analysis based on the decomposed theory of planned behavior. *Journal of Travel Research*. Accepted. *Journal of Travel Research*.
- [8] Hung, K.P., Chen, A.H., Peng, N., Hackley, C., Tiwaskul, R.A. and Chou, C.L. 2011. Antecedents of luxury brand purchase intention. *Journal of Product & Brand Management*. 20 (6), pp. 457-467.
- [9] Huang, T., & Liao, S. (2015). A model of acceptance of augmented-reality interactive technology: the moderating role of cognitive innovativeness. *Electronic Commerce*.
- [10] Hong, Yili and Pavlou, Paul A. and Wang, Kanliang and Shi, Nan, On the Role of Fairness and Social Distance in Designing Effective Social Referral Systems (October 30, 2016). *MIS Quarterly*, Forthcoming, Fox School of Business Research Paper No. 16-038.
- [11] Hong, SeJoon & Thong, James & Tam, Kar. (2006). Understanding continued information technology usage behavior: A comparison of three models in the context of mobile Internet. *Decision Support Systems*.
- [12] Igbaria, M. and Iivari, J. (1995). "The Effects of Self-Efficacy on Computer Usage, *Omega*, Vol. 23, No. 6, pp. 587-605.
- [13] Kim, J., & Forsythe, S. (2008). Sensory enabling technology acceptance model (SE-TAM): Multiple-group structural model comparison. *Psychology and Marketing*, 25(9), 901-922.
- [14] Kim, J., & Forsythe, S. (2007). Adoption of virtual try-on technology for online apparel shopping. *Journal of Interactive Marketing*, 22(2), 45-59.
- [15] Kim, A.J. and Ko, E. (2012) Do Social Media Marketing Activities Enhance Customer Equity? An Empirical Study of Luxury Fashion Brand. *Journal of Business Research*, 65, 1480-1486.
- [16] Koufaris, Marios. (2002). Applying the Technology Acceptance Model and Flow Theory to Online Consumer Behavior. *Information Systems Research*. 13. 205-223.
- [17] Liao, Chechen & Lin, Tzu-Hua. (2007). Shopping motivations on Internet: A study based on utilitarian and hedonic value. *Tec novation*. 27. 774-787.
- [18] Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, 17(4), 460-469.
- [19] Palka, Wolfgang & Pousttchi, Key & Wiedemann, Dietmar. (2009). Mobile word-of-mouth – A grounded theory of mobile viral marketing. *Journal of Information Technology*. 24. 10.1057/jit.2008.37.

-
- [20] Pedersen, P. (2005). Adoption of mobile Internet services: An exploratory study of mobile commerce early adopters. *Journal of Organizational Computing and Electronic Commerce*, 15(3), 203-222.
- [21] Pavlou, P. (2003). Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. *International Journal of Electronic Commerce*, 7(3), pp. 101–134
- [22] Roca, Juan & Chiu, Chao-Min & Martínez López, Francisco. (2006). Understanding e-Learning continuance intention: An extension of the technology acceptance model. *International Journal of Human-Computer Studies*, 64(8), 683-696. *International Journal of Human-Computer Studies*. 64. 683-696.
- [23] Shah, Aziz, Jaffari, Waris, Ejaz, Fatima, and Sherazi. 2012. The Impact of Brands on Consumer Purchase Intentions. *Asian Journal of Business Management*, Vol. 4 (2), 105-110.
- [24] Shin, Don. (2007). User acceptance of mobile Internet: Implication for convergence technologies. *Interacting with Computers*. 19. 472-483.
- [25] Shih, Y., & Fang, K. (2004). The use of a decomposed theory of planned behaviour to study Internet banking in Taiwan. *Internet Research*, 14(3), 213-223.
- [26] Taylor, S. A., & Baker, T. L. (1994). An assessment of the relationship between service quality and customer satisfaction in the formation of consumers' purchase intentions. *Journal of Retailing*, 70(2), 163–178.
- [27] T., Cheng, C., Wong, D., Rochelle, T. & Kwok, S. (2006). Self-Esteem, Self-Efficacy and Deviant Behaviour of Young People in Hong Kong. *Advances in Applied Sociology*, 1, 48-55.
- [28] Tjiptono, Fandy. 2010. *Strategi Pemasaran. Edisi Ketiga*. Yogyakarta: Andi..
- [29] Trafimow, David & Sheeran, Paschal & Conner, Mark & Finlay, Krystina. (2002). Is perceived behavioural control a multidimensional construct? Perceived difficulty and perceived control. *The British journal of social psychology / the British Psychological Society*.
- [30] Venkatesh, N., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: four longitudinal field studies.
- [31] Wang, Deliang & Xu, Lingling & Chan, Hock. (2014). Understanding the continuance use of social network sites: A computer self-efficacy perspective. *Behaviour & Information Technology*. 34. 1-13.
- [32] Yi, Youjae & Gong, Taeshik. (2008). The Electronic Service Quality Model: The Moderating Effect of Customer Self-Efficacy. *Psychology and Marketing*. 25. 587 - 601.

The Effect of Non-cash Transactions on the Money Supply Indonesia (2009:Q1 – 2019:Q2)

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Abstract

This study explores and investigates the impacts of the volume of non-cash transactions through automated teller machine cards (atm), credit cards, and electronic money to money supply in Indonesia from 2009 quarter one to 2019 quarter two. This study uses secondary data obtained from Bank Indonesia. The analysis tool uses multiple linear regression. Secondary data used is quarterly data on money supply and the volume of transactions of atm debit cards, credit cards, and electronic transactions. The results showed that the volume of credit card and electronic money transactions positively and significantly determine the money supply. The money supply is more elastic in response to the change in the volume of the credit card transaction.

Keywords: non-cash transaction, money supply, money multiplier, autocorrelation

JEL : E4, E5, E6, C4

I. INTRODUCTION

Payment systems, economic transaction patterns, and money forms continue to change over time. The evolution of payment instruments began with gold coins and silver coins, then took the form of paper assets containing checks and currency, and now is an electronic or non-cash payment system [1]. According to Untoro and Widodo [2], technological developments in the field of information and communication provide support for innovations in electronic payments. There are two types of non-cash payments known to the public, namely prepaid cards and prepaid cash. Prepaid cards consist of debit cards via ATM, and credit cards. Prepaid cash is a transaction through the Internet communication network using information and communication technologies such as Integrated Circuits, Cryptography, and also communication networks.

Previous researches on the effect of non-cash transactions to money supply are conducted by Pramono et al. [3], Syarifuddin [4], Nirmala and Widodo [5], Venna and Anggoro [6], Lansody and Syarief [7], Nastiti et al. [8], and Ravi and Ritupana (2014)[9]. In previous studies, the variables most frequently used as variables that influenced the money supply were volume and values of non-cash transactions, Gross Domestic Product, interest rate, nominal exchange rates, and Consumer Price Index. While the tool's analysis that is often used in previous studies are panel data [6], regression analysis, cointegration, linear multiple regression [8], Error Correction Model [7], Vector Error Correction Model [3] [5] ; Vector Auto Regression [9][4].

The results of previous studies show there are two variations of conclusions. The first group succeeded in showing that there is a positive and significant influence of non-cash transactions on the money supply [3] [4] [5][6] [7] [8]. On the other hand, there is one study that has shown that there is no effect of non-cash transactions on the money supply [9]

This study will explore the effect of non-cash transactions on the money supply in Indonesia. This study will use the money supply as the dependent variable and the volume of debit, credit, and electronic money transactions as independent variables. The analysis tool will use multiple linear regression. There are two significant contributions of this paper. First, it will be revealed what kind of non-cash transaction variables which is dominantly influencing the money supply in Indonesia. Secondly, it will be uncovered what is the sensitivity of the change in money supply to the change in the kind of non-cash method variables.

Theoretical Background

The model to uncover the relationship between money supply (M) and the non-cash transaction in this study follow the work of Hunter and Kerr [10]. They introduced the non-fiat transaction using this equation.

$$Q=Q_f+Q_n \quad (1)$$

The equation revealed that total production is sold to society and paid using fiat money (Q_f) and using non-fiat transactions (Q_n). The link between production and money could be expressed in the equation, called the quantity equation [11] .

$$MV=PQ \quad (2)$$

Combining equation (1) and (2) and taking the rate of change of all the variables, it could be found the relationship between the rate of change in money supply and the variables which determine the change as bellow.

$$mf=-vf+f+Q-Q_nQ_f \quad (3)$$

The equation (3) shows the relationship between the growth rate of fiat money supply (mf), the velocity of fiat transaction (vf), fiat currency inflation rate (f), and the growth of fiat transaction which is determined by the real economic growth (Q) and non-fiat transaction growth. (ΔQ_n) .

II.LITERATURE REVIEW

In Hunter & Kerr's [10] model, the reduction in the change in the amount of money is determined by the change in the amount of fiat money and non-fiat money. Part of non-fiat money payments is payment by the non-cash method. From equation (3), it can be explained that non-cash transactions can affect the money supply from an increase in the transaction and precautionary demand for money, which in turn will affect GDP.

Research by Citradika et.al [12] shows that non-cash transactions among small and medium scale batik traders increase income through long-term customer service. Cichorska & Klimontowicz [13] observed that advances in technology caused transaction costs to be cheaper so that non-cash transactions increased, which in turn increased people's income. Munoz et.al [14] investigated the influence of technological and institutional advances in determining the choice of retail transactions method, especially in the Central and Eastern European Union. The increase in non-cash transactions encourages retail transactions and income.

Syarifuddin [4] observed the impact of increasing non-cash payments on the economy and the implications for monetary control in Indonesia. The results showed that non-cash payments would cause cash holding to decline, even though the demand for M1 and M2

increased. The increase in non-cash payments also resulted in a decrease in Bank Indonesia's interest rates, an increase in real GDP, and a decrease in the price level.

Nirmala and Widodo [5] discussed an increase in non-cash payments which results in a decrease in Bank Indonesia interest rates, an increase in real GDP, and a decrease in the price level, followed by a substitution effect and efficiency. Increased non-cash payments reduce transaction costs and the economy runs more efficiently. This research shows that cash holdings decrease, while M1 and M2 money stocks increase. An increase in non-cash payments also increases GDP growth and decreases prices.

Lansody and Syarief's [7], discussed the analysis of the impact of non-cash payments on the money supply in Indonesia. The dependent variable used in this study is the money supply in the narrow sense and the money supply in the broad sense. While the independent variable is a non-cash payment transaction. The results showed that non-cash transactions had a positive and significant effect on the money supply.

Nastiti et al. [8] claimed that from 2009 to 2016 the use of non-cash payment instruments every year always increased which indicated that non-cash payments had been received by the public. In this study, researchers not only discussed the effects of financial stability but also discussed the effect of non-cash payments on money supply, the velocity of money, interest rates and inflation. The results of the study revealed that debit cards and e-money transactions had a positive and significant effect on the money supply. If e-money influences the money supply, e-money should affect inflation and financial system stability. Credit card transactions have no significant effect on the money supply. Debit cards, credit cards, and e-money transactions did not significantly influence the velocity of money. E-money transactions and debit card transactions did not significantly influence interest rates. While credit card transactions had a positive and significant effect on interest rates.

Ravi and Rituparna [9] examine the dynamics of money circulation, the external sector and electronic transactions in India. In this study, it was concluded that electronic transactions in India did not affect the velocity of money. The volume of electronic transactions taking place in India did not adequately influence changes in the velocity of money. The external sector and interventions in India affect the velocity of money.

III. RESEARCH METHODOLOGY

The data used in this study is the quarterly time-series data, from the first quarter of 2009 to the second quarter of 2019 downloaded from the Bank Indonesia website, www.bi.go.id. The dependent variable in this study is the money supply M1 [15] [16], while the independent variable in this study is the volume of transactions of a debit card (VD) [17] credit card (VK) [18] and electronic money (VEM) [19]

Multiple regression analysis is employed in this study. The model is formulated as it is written in the equation (4).

$$M_t = \alpha_t + \beta_1 VD_t + \beta_2 VK_t + \beta_3 VEM_t + e_t \quad (4)$$

Variable M represents the money supply which is measured by M_t . VD stands for the volume of the Debit Card transaction. VK denotes the volume of Credit Card transactions. VEM embodies for Volume for Electronic Money transactions. Notation of α , β_1 , β_2 , β_3 symbolizes constant and coefficient of the regression and e_t is an error term, The tool of analysis used in this research is the Multiple Linear Regression. Eviews 8 was employed in data processing in this study. The econometrical and statistical tests done in this study are Stationary, Classical Assumptions, t, and F test.

IV. EMPIRICAL RESULT AND DISCUSSION

A stationarity Test is carried out to avoid the results of spurious regression. A data is said to be stationary if it meets the criteria that are if the average value and its variants are systematically not varied throughout the observation. In this study, the Philips-Pheron or PP test will be used [20].

Based on Table 1, it is found out that the variable money supply (M), debit card transaction (VD), credit card transaction (VK), and electronic money transaction (VEM) are stationary at zero degrees of integration level (0). Since all variables involved in the regression analysis are stationary at zero degrees of integration, so cointegration analysis could proceed [21]

Table 1: Phillips Perron Stationarity Test

Variable	T-stat Phillips Perron	Critical Value			Conclusion
		1 %	5 %	10 %	
M	4,788466	4,198503	3,523623	3,192902	Stationary
VD	4,217726	4,198503	3,523623	3,192902	Stationary
VK	3,779025	4,198503	3,523623	3,192902	Stationary
VEM	5,475059	4,198503	3,523623	3,192902	Stationary

Note: The sample period is spanned from 2001:01 to 2019:07

The multiple regression analysis of money supply (M) on debit card transaction (VD), credit card transaction (VK) and e-money transaction (VEM) could be reported in table 2.

Table 2: Multiple Regression Analysis on Money Supply (M)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-32935.98	95736.66	-0.344027	0.7327
VD	0.000484	9.92E-05	4.883909	0.0000
VK	0.007592	0.002889	2.628227	0.0123
VEM	2.93E-05	3.16E-05	0.925737	0.3604
R-squared	0.988481	Durbin-Watson stat		0.916207
F-statistic	1086.979			
Prob(F-statistic)	0.000000			

Note: The sample period is spanned from 2001:01 to 2019:07

After multiple regression on the cointegration model was proceeded, and classical assumption tests were done, it is found out that the cointegration model was heteroscedasticity free. The heteroscedasticity test was executed by the White test method. The autocorrelation test accomplished by the Breusch Godfrey method exposed that the

model suffered from auto-correlation. The autocorrelation problem has been treated, a new problem has come up. The estimation result suffered from a multicollinearity problem. Since there is a high correlation between variable debit card transaction and credit card transaction, and between debit card transaction and e-money transaction, so it was decided that the variable of credit card transaction was deleted from the model. The new model estimation could be presented in table 3.

From the estimation result, it could be concluded that credit card and e-money transactions positively significantly influenced the money supply in Indonesia. The money supply is more elastic in responding to the change in the increase of credit card transactions rather than to the change in e-money transactions.

Table 3: Estimation Coefficient Regression Free of Classical Violation Problems

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-182167.2	37504.88	-4.857159	0.0000
VKT	0.020271	0.001325	15.29613	0.0000
VEMT	0.000135	4.94E-05	2.722850	0.0097
R-squared	0.940354	Durbin-Watson stat		2.067829
F-statistic	299.5465			
Prob(F-statistic)	0.000000			

Note: The sample period is spanned from 2001:01 to 2019:07

The results of this study are following previous studies conducted by Pramono et al. [3], Syarifuddin [4], Nirmala and Widodo [5], Venna and Anggoro [6], Lansody and Syarief [7], which established that non-cash transaction affected money supply. In the long run, the development of credit cards and electronic money will certainly continue to increase the utilization of non-cash transactions due to technological advances in banking and increased demand for credit cards and electronic money to meet transaction needs. Credit cards and electronic money are in demand because they are more convenient. The existence of the use of non-cash transactions will certainly encourage spending and public demand for goods and services, and consecutively encourage the activities of the real sector but also promote inflation.

V. CONCLUSION

The non-cash transaction which consists of credit card payment and e-money payments has a significant role in determining the money supply in Indonesia. The money supply is more elastic in responding to the change in the increase of credit card transactions rather than to the change in e-money transactions.

Since non-cash payment has a significant role in determining the money supply, so it potentially has the power to boost economic growth but also inflation. Since some of the e-money transaction does not go through the banking system, the government should have a strategy to control the potential destabilizing power of e-money transaction.

REFERENCES

- [1] Mishkin, Frederic S., *The Economics of Money, Banking, and Financial Markets*, Tenth Edition, Pearson, Edinburh Gate, England (2013)
- [2] Untoro, P. R., & Widodo, W. Y.. Study on The Application of Payment System Instrument as a Leading Indicator on Financial System Stability. Working Paper Bank Indonesia, 1 - 48. (2014)
- [3] Pramono, Bambang, *The Impact of Non-Cash Payment on the Economy and Monetary Policy*, Woorking Paper Bank Indonesia, 1-50. (2006)
- [4] Syarifuddin, F., *The Impact of An Increasing Non-Cash Payment on the Economy and Its Implication on Monetary Control in Indonesia*, Buletin Ekonomi Moneter dan Perbankan, 1-25 (2014)
- [5] Nirmala Tiara & Tri Widodo. *The Effect Of Increasing Use The Card Payment Instrument in The Indonesian Economy*, *Jurnal Bisnis dan Ekonomi*, 36 – 45.(2011)
- [6] Venna, Tri Kartik & Anggoro Budi Nugroho, *The Analysis on Electronic Money Transaction on Velocity of Money in ASEAN5 Countries*. *Journal of Business and Management*, 1008 – 1020 (2015)
- [7] Lansody, Istanto & Syarief, Fauzie, *The Analysis of Non-Cash Transaction to Money Supply in Indonesia*. " *Jurnal Ekonomi dan Keuangan*, 610 - 621. (2014)
- [8] Nastiti Ninda Lintangari, Nisaulfathona Hidayati, Yeni Purnamasari, Hilda Carolina, & Wiangga Febrianto, *The Impact Analysis of Non-Cash Payment Instruments on Stability of Financial System in Indonesia*, *JEL*, 41 - 52. (2017)
- [9] Ravi, P. K. & Rituparna, *The Dyamics of Money Velocity, External Sectors and Electronic Transactions in India: Connecting dots using Emperical Approach*." *Journal of Applied Economics and Business Research*, 189 - 209. (2014)

-
- [10] Hunter Greg W. & Craig Kerr, Virtual Money Illusion and the Fundamental Value of Non-Fiat Anonymous Digital Payment Methods Coining a (Bit of) Theory to Describe and Measure the Bitcoin Phenomenon, International Atlantic Economic Society, Int Adv Econ Res (2019) 25:151–164 <https://doi.org/10.1007/s11294-019-09737-4> (2019)
- [11] Mankiw Gregory N., Macroeconomics, Ninth Edition, Worth Publishers, New York, p 107 (2016)
- [12] Citradika Didha Putri, Apriani Dorkas Rambu Atahau, & Danang Satrio Universitas Pekalongan, The Use Of Non-Cash Transactions Among Batik Smes: An Empirical Review From Indonesia, International Journal of Business and Society, Vol. 20 No. 1, 2019, 397-416, (2019)
- [13] Cichorska Joanna & Monika Klimontowicz, Financialisation As A Result Of The Network Economy's Development, Financial Internet Quarterly „e-Finanse” 2016, vol.12/ nr 2, s. 1-12, DOI: 10.14636/1734-039X_12_2_001 (2016)
- [14] Munoz Francisco J. Callado, Jana Hromcová & Natalia Utrero-González, Effects Of Institutional Environment And Technology Development On Payment Choice, Technological And Economic Development Of Economy ISSN 2029-4913 / eISSN 2029-4921 2018 Volume 24(1): 81–107 doi:10.3846/20294913.2015.1074952 (2018)
- [15] The Bank Indonesia, The Growth of Money Supply 2019. February 28th , 2019. <https://www.bi.go.id/id/ruang-media/agenda/kalender-kegiatan/pages/perkembangan-uang-beredar-januari-2019.aspx> (accessed April 6, 2019). (2019)
- [16] The Bank Indonesia, The Growth of Money Supply Statistic 2009 - 2019. <https://www.bi.go.id/id/statistik/statistik-ekonomi-dan-keuangan-indonesia/uang-beredar/contents/transaksi.aspx> (accessed Agustus 10, 2019). (2019)
- [17] The Bank Indonesia, The Payment System Statistic: Volume of ATM Card Transaction 2009 - 2019. <https://www.bi.go.id/id/statistik/sistem-pembayaran/apmk/contents/transaksi.aspx> (accessed Agustus 10, 2019). (2019)
- [18] The Bank Indonesia, The Payment System Statistica: Volume of Credit Card Transaction 2009 - 2019. <https://www.bi.go.id/id/statistik/sistem-pembayaran/apmk/contents/transaksi.aspx> (accessed Agustus 10, 2019). (2019)
- [19] The Bank Indonesia, The Payment System Statistic : The Volume of E-Money Transactions 2009-2019. <https://www.bi.go.id/id/statistik/sistem-pembayaran/uangelektronik/contents/transaksi.aspx> (accessed Agustus 10, 2019). (2019)
- [20] Gujarati, D. N. & Porter, D. C., Basic Econometrics, McGraw-Hill, International Edition, Fifth Edition, Printed in Singapore. p-758 (2009)

[21] Engle R. F., & Granger, C. W. J., Long Run Economic Relationships: Readings in Cointegration. New York: Oxford University Press (1992)

Estimation of the Relationship Between Learning Styles Inventory and Online Learning During the Pandemic

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Abstract

The learning model during the Covid-19 pandemic underwent a change in the teaching process. Where the changes are seen in the learning process, where face-to-face in the classroom turns into virtual online learning. This study will measure the extent of the relationship between student grades and their learning styles during the pandemic. The data that will be used are data from the questionnaire results of the Computer Faculty students from the University in Jakarta. This questionnaire was conducted on August 30, 2020. After the questionnaire dataset was fulfilled, it was integrated with student scores for those who took the questionnaire. To determine the learning style using David Kolb's Learning Style Inventory. While the statistical test uses Anova One Way and Post hoc. The results of data analysis will produce the learning style of each student. The results of data analysis will also recommend four roles for the teaching style of the teacher using the Kolb Educator Role Profile (KERP).

Keywords: estimation of KLSI, KLSI during Pandemic, role KERP after KLSI.

I. INTRODUCTION

There are many efforts and ways made by the government of Indonesia and other countries to continue to improve the quality of education so that students can continue to carry out their learning activities even though they are currently in a pandemic. Therefore, we conducted research on the influence of the relationship between learning style investment or the Learning Style Inventory (LSI) and the value of students who took teaching using virtual online during this pandemic. While LSI itself has several trends in category types, but in this study we will use the tendency of the types of categories used by David Kolb, which include diverging, assimilating, converging and accommodating [1]. As shown in **Figure 1 Kolb's Experiential Learning Style Inventory**.

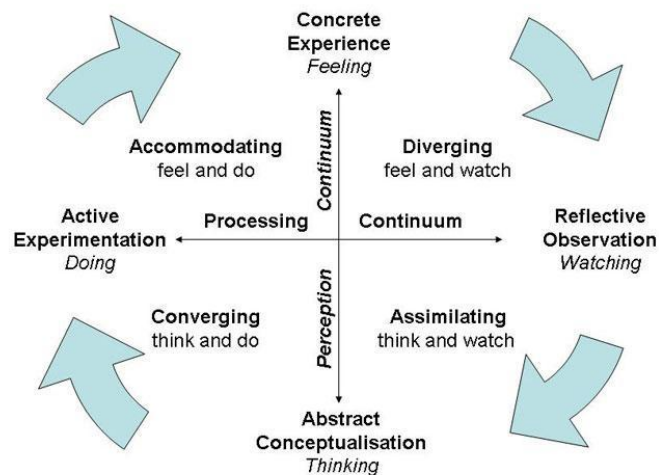


Figure 1. Experiential Learning Style Inventory David Kolb's.

Previously, this research will make a web-based Learning Style Inventory questionnaire application as a place to facilitate the questionnaire data input form which will be filled in by students (Respondents). The website can be visited at <http://quisionerano.com/>. The population of students that will be studied is students in the Information Engineering study program at the Mohammad Husni Thamrin University in Jakarta. The results of the data from the questionnaire will determine the trends of the four types of LSI Kolb [2]. After the data from the questionnaire has been collected, the data will be statistically tested using the Anova and Post Hoc models [3], which will later see if there is a correlation between student achievement scores and the learning styles of each respondent. In addition, the results of this dataset can

create knowledge patterns for teachers or lecturers in choosing what teaching styles are appropriate in the future.

To follow the learning styles of students whose learning styles have been identified, David Kolb said there are four roles of teachers or lecturers in teaching or it can be called four teaching styles [4], namely the Kolb Educator Role Profile (KERP) model where four of them is; Facilitator Role, Expert Role, Evaluator Role and Coach Role which can be seen in

Figure 2. Kolb Educator Role Profile.

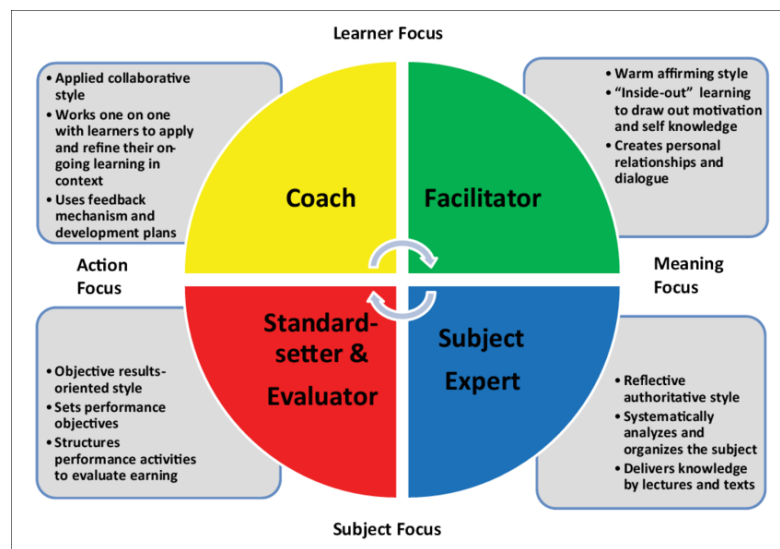


Figure 2. Kolb Educator Role Profile.

II.METHODS

This research is a quantitative analytic study, the dataset obtained from the output dataset of the LSI questionnaire website (<http://quisionerano.com/>). Variable Y (Dependent Variable) in this study is LSI while variable X (Independent Variable) is Nilai_Prestasi (Achievement Value). This study involved 60 students who responded to the questionnaire and the output would be classified into four types of learning styles (LSI), namely; diverging, assimilating, converging and accomodating. After the dataset is classified, it will then be integrated with Achievement Value. The data in **Table 1. Data LSI** shows an example of the output data record integrated with the learning achievement scores.

Tabel 1. Data LSI

Nilai Prestasi	LSI
3	4
3.94	1
3.9	1
1.05	3
3.77	3
3.09	3

This study consists of several stages of research as shown in **Figure 3. Research Stages**, namely: 1) Problem Identification; 2) Problem Formulation; 3) Data Collection; 4) System Development Design; 5) Testing and Implementation; 6) Data Analysis; 7) Conclusion of Results. Of the seven stages, the data analysis stage is the most decisive thing in this study, where at this stage data analysis techniques are carried out in seeing the correlation value of LSI with Achievement Value. In stage 6, the data analysis consisted of descriptive analysis and difference analysis. Descriptive analysis uses mean and percentage values in each learning style group. While the analysis of differences was carried out using the one way Anova statistical test with a significance limit of 5% or 0.05.

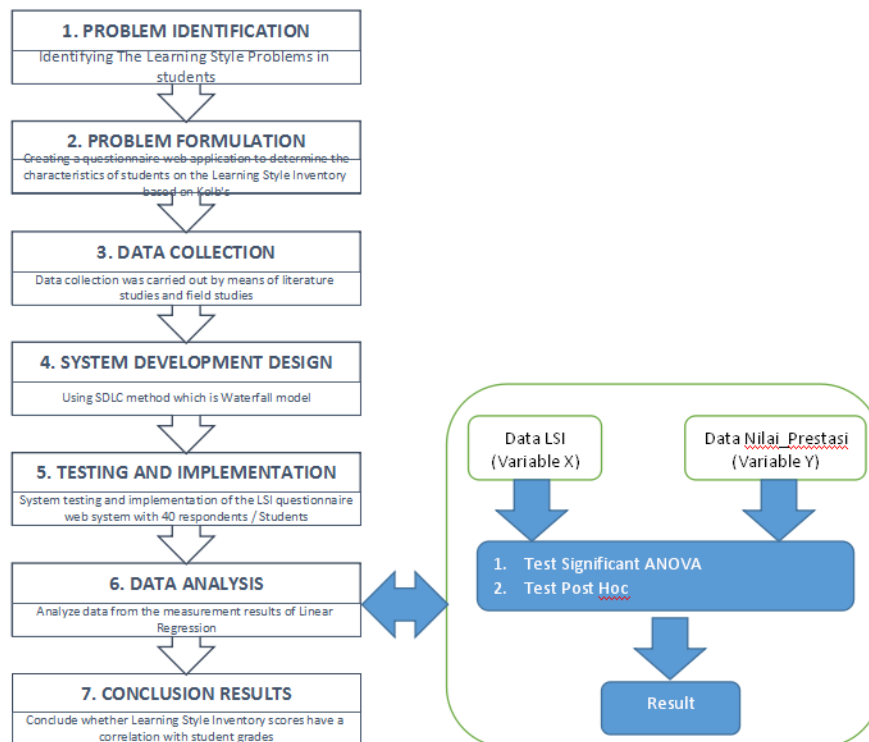


Figure 3. Research Stages.

III. RESULTS AND FINDINGS

3.1 Results

The results of the descriptive study are shown in Table 2. Description of the LSI and the Mean Learning Achievement Value, from a total of 60 respondents, it was found that 3 respondents had an accommodator learning style with a mean value of learning achievement results of 2.87, as many as 20 people had an assimilating learning style with a mean value of learning achievement. 3.47. For the converging learning style, there were 31 people with a mean value of learning achievement of 3.26, while for the diverging learning style there were 6 people with a mean value of learning achievement of 3.89. From these results, it can be seen that the lowest value for respondents who have the Accomodator learning style is 2.87, while the highest value is owned by respondents who have a Diverging learning style is 3.89.

Tabel 2. Description LSI and the Mean Learning Achievement Value

Nama LSI	Jumlah	Nilai rata-rata
Accommodator	3	2,8767
Assimilating	20	3,4715
Converging	31	3,2623
Diverging	6	3,8933

In **Figure 3. The Learning Style Grouping Diagram Based on the Number of Respondents**, shows the learning style grouping based on the number of respondents. There are 5% who have the Accommodating learning style, then 33% are in Assimilating, 52% of respondents who have Converging learning styles and 10% for respondents who have Diverging learning styles. Thus it can be seen that the most learning styles owned by respondents are Converging as much as 52%.

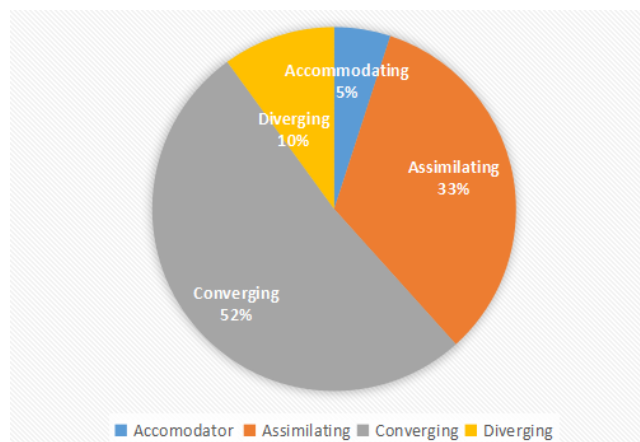


Figure 3. The Learning Style Grouping Diagram Based on the Number of Respondents

In **Figure 4. The Learning Style Grouping Diagram Based on Student Achievement Value**, shows that the learning style grouping is based on the average value of learning achievement of the respondents. The results show that the percentage of learning styles is almost the same in the four learning styles. There are 22% who have the Accomodator learning style, then 24% are in Assimilating, 25% of the respondents who have the Converging learning style and 29% of the respondents who have the Diverging learning style. So the highest average value is in the Diverging learning style and the lowest value is in the Accomodator learning style.

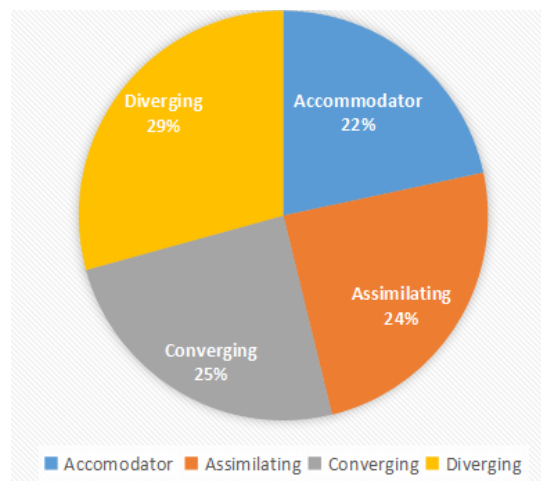


Figure 4. The Learning Style Grouping Diagram Based on Student Achievement Value

In Table 3. ANOVA, the ANOVA explains that the test results using the One Way ANOVA test show that there are differences in learning achievement values in the four LSI groups with a P value of 0.014, where P value <0.05. Followed by testing the Post Hoc, in Table 4. Post Hoc, explaining that the results of the post hoc test show that the significantly different learning style groups are Diverging with Converging with a significant value of 0.04 and Diverging with Accomodator with a significant value of 0.03.

Table 3. ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2,937	3	,979	3,871	,014
Within Groups	14,165	56	,253		
Total	17,102	59			

Table 4. Post Hoc

(I) LSI	(J) LSI	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound
Diverging	Assimilating	,42183	,23410	,462	-,2185
	Converging	,63108 [*]	,22431	,041	,0175
	Accomodator	1,01667 [*]	,35563	,036	,0439
Assimilating	Diverging	-,42183	,23410	,462	-1,0622
	Converging	,20924	,14424	,915	-,1853
	Accomodator	,59483	,31139	,367	-,2569
Converging	Diverging	-,63108 [*]	,22431	,041	-1,2446
	Assimilating	-,20924	,14424	,915	-,6038
	Accomodator	,38559	,30409	1,000	-,4462
Accomodator	Diverging	-1,01667 [*]	,35563	,036	-1,9894
	Assimilating	-,59483	,31139	,367	-1,4465
	Converging	-,38559	,30409	1,000	-1,2174

3.2 Findings

In this case, we use the KLSI model in determining the Learning Style of the students of the Mohammad Husni Thamrin University Jakarta, it can be seen that the learning style tendency of each student (Respondent) can be seen. It is important to know the learning styles of students so that the lecturers know how to take teaching methods. By using the four roles of Teaching Style from Kolb's Educator Role Profile (KERP) model, the lecturer can see the role of teaching styles that are tailored to the learning styles of students. In **Figure 3. The Learning Style Grouping Diagram based on the number of respondents**, shows that the largest number is Converging, namely 52%, so to improve the most students can use the role of the Evaluator in teaching, namely by evaluating the results of students with objective results oriented in order to fulfill the the necessary requirements for quality results.

In another article, research on the online learning experience of a group of ESL students at a higher education institution in Oman. This research was conducted at the time of Covid-19 [5]. This study measures the interaction between students' preferred online learning styles and the technology applications used by students on the e-learning platform. The results of this study indicate that most of the learning styles that students like can be seen

from the technology they use when online classes take place. The results of the questionnaire show that the most convergent learning styles (53.1%), while the least learning styles are Diverging (6.3%). The Chi-Square test shows p-value = 0.021 (≤ 0.05) which indicates a relationship between disciplines and learning styles so that it rejects the null hypothesis. The value of $r = 0.780$ indicates a correlation between student disciplines and their learning styles.

Research conducted at the EFL University in Tehran [6]. This study measures the relationship between Kolb's learning styles and American slang learning in Iranian EFL students with a focus on gender. Respondents were 63 respondents consisting of 27 men and 36 women. The results showed the highest correlation value between Kolb's learning style and American slang learning, namely Concrete Experience (CE) with a value of = 868 and the lowest was Abstract Conceptualization (AC) = 645 and the value of P value = 0.001. Meanwhile, the highest correlation between Kolb's learning style and gender is Concrete Experience (CE) = 0.093 and the lowest is (AE) = 0.003.

This research was conducted in schools in Iranian countries [7], this study examines the relationship between learning styles such as subjective experience, abstract concepts, active experimental, reflective observation with creativity. The number of respondents amounted to 354 students in which 164 male respondents and 190 female respondents. This study shows the results that there is a significant relationship between learning styles and creativity. The results of regression analysis in this study show the variables creativity = 1, Abstract style = 0.637, Light reflection = 0.643, Lightweight concrete experience = 0.685 and Active experimentation Style = 0.69, all of which are not significantly different (<0.05). Where it can be concluded that the results of the linear regression indicate a relationship between relective style and creativity.

This research was conducted in 2012 [3] at the University of Cincinnati's Department of Surgery, Ohio. At the time the Accreditation Council at Graduate Medical Education imposed 80 hours of work per week for the residency program from 2003 to 2012. Statistical analysis was carried out using the chi-squared model, logistic regression and Wilcoxon rank-sum test and was followed by 411 respondents. This research was conducted for 14 years. With male respondents by 89% and women 11%. There was no significant difference between the groups in terms of race or experience. However, there was a significant increase in the number of women after 2003, namely $P < 0.001$.

IV. CONCLUSIONS

In determining how to teach for a teacher or lecturer, first look at the learning style of each student or student. In this study, it shows that the majority of learning styles in students are found to be converging learning styles, so the appropriate teaching role based on the four roles of KERP is Evaluator Role. However, to increase the value of students with the lowest mean score in this study, it was found in the Accomodator learning style, the teacher or lecturer could use the Coach Role Teaching Style. Based on the results of the analysis, the teaching style of lecturers at Mohammad Husni Thamrin University at the time of the pandemic tended to use the Facilitator Role and Expert Role which had an impact on the diverging and assimilator learning styles which found the highest average value.

REFERENCES

- [1] Kolb, A. Y. (2013). The Kolb Learning Style Inventory 4.0: A comprehensive guide to the theory, psychometrics, research on validity and educational applications. Philadelphia, PA: Hay Group
- [2] Joy, S., & Kolb, D. A. (2009). Are there cultural differences in learning style?. *International Journal of intercultural relations*, 33(1), 69-85.
- [3] Quillin III, R. C., Cortez, A. R., Pritts, T. A., Hanseman, D. J., Edwards, M. J., & Davis, B. R. (2016). Surgical resident learning styles have changed with work hours. *Journal of Surgical Research*, 200(1), 39-45.
- [4] Baker, M. A., & Cline, L. L. (2019). The Coach Phenomena: Examining the Validity of the Kolb Educator Role Profile in Preservice Agricultural Education. *Journal of Agricultural Education*, 60(4).
- [5] [5]Syahrin, S., & Salih, A. A. (2020). An ESL Online Classroom Experience in Oman during Covid-19. *Arab World English Journal*, 11(3), 42-55
- [6] Biabani, M., & Izadpanah, S. (2019). The Study of Relationship between Kolb's Learning Styles, Gender and Learning American Slang by Iranian EFL Students. *International Journal of Instruction*, 12(2), 517-538.
- [7] Eishani, K. A., Saa'd, E. A., & Nami, Y. (2014). The relationship between learning styles and creativity. *Procedia-social and behavioral sciences*, 114(1), 52-55.

The Determinants of Entrepreneurial Intention among Generation Z during Covid-19 Pandemic: Evidence from Indonesia

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Abstract

Generation Z, known as people who grow with technology, have a preference for starting their own business which is estimated to be different than other generations during the covid-19 pandemic. Understanding their behavior becomes very important because they will become the next generation that drives the economic sector. This study aimed to investigate the key determinants of entrepreneurial intention among generation Z during the Covid-19 pandemic. 225 data were collected through online tools and analyzed using partial least square – structural equation modeling. The finding indicates that entrepreneurial intention among generation Z is positively correlated and influenced by family's entrepreneurial tradition, profit orientation, and personality traits. This study used the family's entrepreneurial tradition and profit orientation as new variables which have received little attention to determine the entrepreneurial intention. The phenomenon of covid-19aa will bring new contributions to the field of management and entrepreneurship.

Keywords: Entrepreneurial intention, Generation Z, Covid-19 pandemic, Profit orientation, Family's entrepreneurial tradition.

I. INTRODUCTION

Covid-19 pandemic has caused significant impact on the economic sector due to the social distancing rules that force the closure of various types of business starting from start-up, micro, small and medium enterprises (SMEs), to large companies. Since its first case reported in Indonesia in March 2020, 84,20% of SMEs experienced significant losses [1].

The average daily turnover of SMEs was only 10 – 15 percent of normal conditions.

Business routines have certainly been altered as the disease spreads and grows. Majority of companies take such extreme measures to ensure business stability and survival during this uncertain time, such as reducing work hours, wages, and even the number of employees [1]. Declined in interaction and economic transmission is expected to continue to slow down the economy throughout the rest of the year [2].

Despite the negative impacts, the growth of new business ventures online is quite promising, supported by the ever-increasing online purchasing abilities and the constant development of several digitalized industries [3]. During this covid-19 pandemic, there was a significant increase for approximately 59% in the number of businesses entering the e-commerce market and 69% increase in the number of digital transactions [4]. COVID-19 has managed to force traditional business owners such as SMEs including traditional markets to move their ventures online. It means that social distancing rules have encouraged people to be innovative in doing their business.

Generation Z are young people that are highly adapted to technology and use it as their instrument [5]. The emergence of e-commerce during this pandemic is an interesting fact that majority of the business players are young people at aged 16 – 35 years old which is still considered as part of millennials and generation Z [6]. It is important to learn more about the behavior of generation Z because their characteristics are likely to be different than other generations which may have some changes in their behavior [7]. In addition, generation Z also will be the next drivers of the digital economy who prefer to start their own business [8].

There is some previous research that discusses Generation Z's characteristics and preferences toward entrepreneurial intention. Ozaralli and Rivenburgh [10] found that personality traits, such as optimism, innovativeness, competitiveness and risk-taking had correlation with intentions towards entrepreneurship (ITE) in the case of Turkish and American Students. Eysel and Ismet [11] conducted a study about entrepreneurial intention among undergraduate students in Turkey and found that personal attitude is positively correlated to entrepreneurial intention. The other study conducted by Ghazali, Nor, and Fakhrol [12] mentioned that personal traits are found to be significant on the entrepreneurial intention

among students in Malaysia. Ali and Emad [13] added that innovativeness and cultural valuation were found to be significant on entrepreneurial intention among students in Sudan.

In the context of Indonesian young people, only a few studies that tried to find the correlation between entrepreneurial intentions with personal factors. The study conducted by Cindy and Rodhiah [14] found that creativity, education and self-efficacy had positive relationships with entrepreneurial intention among generation Z. Devi and Grace [15] found that academic support, social support, personal traits, and social privilege had positive relationships with entrepreneurial intention among students in Surabaya.

However, the factors that influence them to start have not had their fair share of light in recent years in Indonesia yet. In addition to that, this study is a pioneer to further investigate the implication of Covid-19 pandemic on the entrepreneurial intention among generation Z. This study use family's entrepreneurial tradition and profit orientation as new variables. Family's entrepreneurial tradition is more likely to influence children's behavior in choosing their career whether entrepreneur or non-entrepreneur. In addition, covid-19 pandemic caused income losses in many businesses, it would be very interesting to see the relationship between profit orientation and entrepreneurial intention during this pandemic.

Therefore, this study aimed to fill the gap between practice and theory which further analyse the key determinants of entrepreneurial intention among generation Z using three independent variables, such as personality traits, profit orientation, and family's entrepreneurial tradition. The finding of this study is expected to give an insight for policymakers and the government about the opportunity for maximizing generation Z entrepreneurs' skills and provide a reference for academicians and students in the field of management, especially business strategy. In a crisis that changes the normal business management, personal resilience which is manifested in entrepreneurial attitude possessed by a businessman becomes a very important factor in managing a business [16].

II. LITERATURE REVIEW

One of the most important contributions to the early developments of life is the role of parents, families, and closed ones. Entrepreneurial intention can be influenced by a family's entrepreneurial tradition. When people have an exposure to family business, they are more likely to start their own business or choose to have a career as an entrepreneur [17, 18, 19]. The skills will be transmitted by parents through experience, knowledge, and guiding their children in career options through indirect behavior or direct resources [20]. Students which came from families with entrepreneurial backgrounds may feel pressured to develop

entrepreneurial intentions. For instance, a family which has an entrepreneur within its first two generations might pressure the third to continue their steps [21, 22]. Based on majority of the result, the hypothesis from this study would be:

H1: Family's entrepreneurial tradition has a positive effect on entrepreneurial intention among generation z during covid-19 pandemic

a. Personality traits

There have been many researches discussing the relationship between personality traits and entrepreneurial intention and they found consistent results [23, 24, 25, 26]. Personality traits are considered as a strong indicator to explain the personality of people when they choose their career. Personal characteristics also distinguish entrepreneurs with non-entrepreneurs. People who choose to be entrepreneurs have different personality traits than those who want to have a career in organization. [27] proved in his study that individuals with a high entrepreneurial intention would more likely start a business of their own than those who have lower intentions. People who start their own business have strong entrepreneurship traits, such as profit motivation. It refers to the need for people to make profit and improve in their purchasing and living standard. Based on majority of the result, the hypothesis from this study would be:

H2: Personality traits has a positive effect on entrepreneurial intention among generation z during covid-19 pandemic

H3: Personality traits has a positive effect on profit orientation among generation z during covid-19 pandemic

b. Profit orientation

Entrepreneurship is positively impacting the young as a way to increase living standards, employment rate, and even owning their own reason to success [28]. Previous study conducted by Douglas and Shepherd [29] found that entrepreneurial motives are correlated to their intentions of profit making. It is quite common to expect a specific return on investments and to increase the company's value all at once. This is referred to—often time—as a broad economic-oriented interest. This is supported by the fact that entrepreneurship has such high flexibility in terms of method, time, and resources. Previous study that discussed the entrepreneurial intention in Slovakia and found that they prefer to pursue 'Sole Traders-Entrepreneurs'. This refers to a course of independently pursued business actions on their own behalf for the purpose of earning profits under a trade license

[28]. In the context of covid-19 pandemic, the majority of businesses suffer from income losses. So, getting income could be one of the reasons to start a new business. Based on majority of the result, the hypothesis from this study would be:

H4: Profit orientation has a positive effect on entrepreneurial intention among generation z during covid-19 pandemic

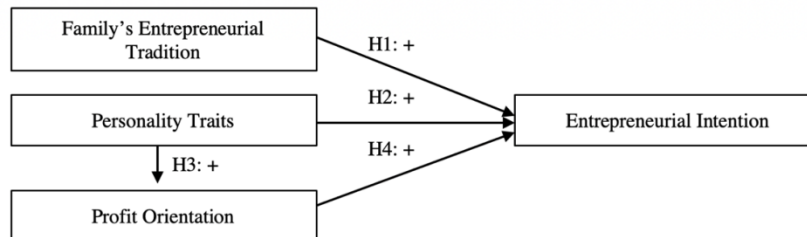


Fig. 1. Theoretical framework and hypothesis.

III. METHODOLOGY

a. Research Design

The objective of this study is to investigate the key determinants of entrepreneurial intention among generation Z during Covid-19 pandemic. Following [28] and [21], the dependent variable in this study is entrepreneurial intention, while the independent variables are family entrepreneurial tradition, personality traits, and profit orientation. This study used a quantitative approach with a survey method. Convenient sampling technique is employed in this study to get more respondents during the pandemic.

b. Data Collection Method

The primary data were collected through questionnaires using online tools. 280 questionnaires were distributed, but 225 data were valid. The questionnaires are divided into two sections. First section is demographic respondents, while the second section consists of variables used in this study. Five-point Likert scale is used to measure their inclination and preferences with a particular statement. The scale 1 (one) will represent the respondents' "strongly disagree" and 5 (five) will represent their "strongly agree". The measurement of this study are as follows:

Table 1. Measurements

Variables	Items	Sources
Family Entrepreneurial Traditions (FET)	My family encourage me to start my own business	Sung and Park (2018)
	I want to start my own business because one of my family members also has his/her own business	
	Starting a business has been a tradition in my family	
Personality Traits (PT)	I want to start my own business because I want to have control on my own time and decisions	Ghazali et al (2012); Eysel and Durmaz (2019); Wei-Loon (2012)
	I believe the business that I started will succeed	
	I feel innovative to start my own business	
	I can identify the potential value of an idea	
Profit Orientation (PO)	Starting a business will generate more money than being employed	Bajziková, et al., 2013; Stacho, et al., 2013
	I'm interested on how many works inside a business	
	I want to start a business because it generates a lot of money	
Entrepreneurial Intention (EI)	I often think about starting my own business	Ghazali et al (2012); Eysel and Durmaz (2019); Wei-Loon (2012)
	I would do anything to start my own business	
	My goal is to have my own business	
	I will start my own business in less than 5 years	

c. Data Analysis Method

Data were analyzed using partial least square. The analysis of this study consists of several steps. In the first step, goodness of fit test was used to determine the suitability of the model. [30] stated that the value of 0.6 is considered good. Followed by validity and reliability tests with the aim to measure the level of validity of the questionnaire and its ability to answer research questions. [31] mentioned that the value obtained from validity and reliability tests should be above 0.5. In the next step, hypothesis testing is performed to answer the research questions and achieve the research objectives using significance value 0.05% or 95% of significance level.

IV. RESULT AND DISCUSSION

a. Profile of Respondents

Below table shows the profile of respondents. The result found that 53.3% of respondents were male and 46.7% of respondents were female. In addition, most of the respondents are aged between 19 – 21 (68%), majority of respondents are educated to undergraduate (72.4%), and students (82,2%).

Table 2. Respondents' Profile

Demographic Variables		Frequency	Percent
Gender	Male	120	53.3
	Female	105	46.7
Age	16 – 18	21	9.3
	19 – 21	153	68.0
	22 – 24	51	22.7
Education	High School	4	1.8
	Diploma - 1	1	0.4
	Diploma - 3	57	25.3
	Undergraduate	163	72.4
Occupation	Students	185	82.2
	Employee	17	7.6
	Entrepreneur	14	6.2
	Freelancer	9	4.0

b. Reliability and Validity Test

Table 3 shows the result of the validity and reliability test. In terms of Cronbach's Alpha and composite reliability, the value of all variables is above 0.7 which is considered as reliable and can be used for further analysis in the research [32]. The value of average variance extracted (AVE) is above 0.5 which shows that the latent variable used in this study fulfills the requirement for validity. In addition, the result shows that the value of loading factor is above 0.5, it indicates that all questions are valid to explain the [31].

Table 3. Reliability and Validity Test

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Entrepreneurial Intention	0,741	0,754	0,837	0,564
Family's Entrepreneurial Tradition	0,805	0,809	0,884	0,718
Personality Traits	0,789	0,790	0,864	0,614
Profit Orientation	0,816	0,815	0,891	0,732

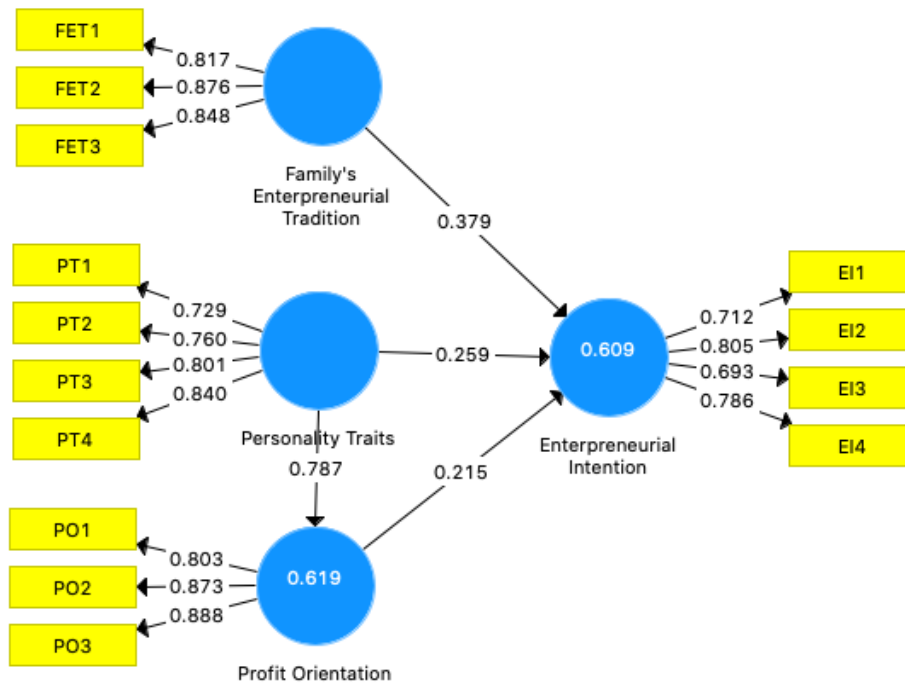


Fig 2. Outer Loading.

c. Multicollinearity Test

Table 4 shows the result for VIF. [33] stated that the common threshold for VIF is 5. Based on the result, this study passed the multicollinearity test.

Table 4. Collinearity Assessment (VIF)

	Entrepreneurial Intention	Family's Entrepreneurial Tradition	Personality Traits	Profit Orientation
Entrepreneurial Intention	0,000	0,000	0,000	0,000
Family's Entrepreneurial Tradition	2,538	0,000	0,000	0,000
Personality Traits	3,420	0,000	0,000	1,000
Profit Orientation	2,790	0,000	0,000	0,000

d. Structural Model

Table 5 shows the result of R-Square. The results show that the values of Entrepreneurial intention and profit orientation are all above 0.6, meaning that the model used is already good.

Table 5. R-Square

	R Square	R Square Adjusted
Entrepreneurial Intention	0,609	0,603
Profit Orientation	0,619	0,617

e. Hypothesis Testing

Table 6. Hypothesis Testing

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Decision
Family's Entrepreneurial Tradition -> Entrepreneurial Intention	0,379	0,377	0,084	4,529	0,000	Accepted
Personality Traits -> Entrepreneurial Intention	0,259	0,259	0,086	3,024	0,003	Accepted
Personality Traits -> Profit Orientation	0,787	0,788	0,031	25,449	0,000	Accepted
Profit Orientation -> Entrepreneurial Intention	0,215	0,219	0,079	2,731	0,007	Accepted

Based on the result, hypothesis 1 is accepted because p-value (0.000) is lower than significant value (0.05) and t-value is 4,529 which means there is a positive and significant relationship between family's entrepreneurial tradition and entrepreneurial intention. This is

because families that have experience in running a business will transfer the experience, skills, knowledge to their children through direct or indirect ways. When there is higher exposure to the business in their family, there will be a higher intention for their children to follow their parents' steps, especially during this pandemic. They will have more confidence to start a new business compared to those who never get exposed to the business in their culture. The finding of this study is in-line with the study conducted by [17] and [21].

Hypothesis 2 is accepted because p-value (0.003) is lower than significant value (0.05) and t-value is 3,024 which means there is a positive and significant relationship between personality traits and entrepreneurial intention. This finding is in-line with the study conducted by [25] and [27]. Personality traits in entrepreneurship combined creativity and initiative with a high need for achievements. They are more likely to take risks compared to non-entrepreneurs. In relation to the covid-19 pandemic, this condition requires everyone to quickly adjust to new work or life patterns. People with entrepreneur characteristics will be more ready to accept this challenge in starting a new business idea. [34] added that a small business owner will perceive a crisis as either a growth vulnerability paradox and risk elasticity. In other meaning, the crisis will frame the personality of the entrepreneur to prevent themselves from taking uncontrolled risks (lack of control and lack of cash) that increases their financial crisis, but they also should be more flexible with the time.

Hypothesis 3 is accepted because p-value (0.003) is lower than significant value (0.05) and t-value is 25,449 which means there is a positive and significant relationship between personality traits and profit orientation. The study conducted by Shaver [35] stated that the reason people start a business in normal condition consist of customers orientation, growth in industry sectors, opportunity or potential, product or service itself, and uniqueness of the business. In a time of crisis, the situation is very uncertain and it affects people mindset to seek more potential in order to gain profit.

Hypothesis 4 is accepted because p-value (0.007) is lower than significant value (0.05) and t-value is 2,731 which means there is a positive and significant relationship between profit orientation and entrepreneurial intention. This is because financial consideration becomes one of the important factors in doing business during the crisis. When the majority of people lose their jobs, income, salary cuts, or even lose family during the pandemic, people will seek other opportunities to gain more income through new business ideas.

V. CONCLUSION AND RECOMMENDATION

The purpose of this study is to investigate the key determinants of entrepreneurial intention among generation Z during the Covid-19 pandemic. The result found that entrepreneurial intention was significantly influenced by the family's entrepreneurial tradition, profit orientation, personality traits. The study also found that profit orientation was influenced by personal traits in doing business. The results imply that the youth's intention to be entrepreneurs is strongly influenced by their internal factors during the covid-19 pandemic.

However, this study has some limitations. First, the variables chosen in this study only consider the internal factors. The future study is expected to expand the research by comparing the internal factors with external factors, such as government support, financial support, technology support, and others. Second, this sample size in this study is small compared to the population of Generation Z in Indonesia. Therefore, future study should collect a bigger sample in order to make the result more generalizable.

Despite the limitation, this study brings contributions to academicians and universities where they could emphasize and develop the curriculum by adding an entrepreneurial environment. Moreover, the finding also can be used by policymakers to develop policies and guidelines to prepare the new generation of entrepreneurs

REFERENCES

- [1] Badan Pusat Statistik.: Analisis hasil survey dampak Covid-19 terhadap pelaku usaha (2020)
 - [2] Wijaya, O: The impact of Covid-19 on micro, small and medium enterprises (MSMEs) in East Java Province, Indonesia and strategies for overcoming. pp. 3454-3469 (2020)
 - [3] Fitriyani, F.: How do small and medium enterprises (SME) survive the COVID-19 outbreak. pp. 53-62 (2020)
 - [4] Nisa, A: 8 tren pertumbuhan e-commerce di tahun 2020 (2020)
 - [5] Joeri. V. D., Behrer, B, M.: How cool brands stay hot: Branding to generations Y and Z. Kogan Page Publishers, London (2016)
 - [6] Fetry. W: Meski pandemic, pendapatan UMKM yang gunakan e-commerce naik 160%. (2020)
 - [7] Mailory. S: Teen generation Z is being called millennials on steroids, and that could be terrifying for retailers (2016)
- Kementerian Perindustrian Republik Indonesia: Jadi penggerak ekonomi digital, Menperin bangun optimisme generasi milenial. (2018)

-
- [8] Sudaryono, S., Rahwanto, E., & Komala, R.: E-Commerce Dorong Perekonomian Indonesia, Selama Pandemi COVID19 Sebagai Entrepreneur Modern dan Pengaruhnya Terhadap Bisnis Offline. pp 2000-2014 (2020)
- [9] Ozaralli, N., Nancy, K. R.: Entrepreneurial intention: antecedents to entrepreneurial behavior in the USA and Turkey. (2016)
- [10] Eysel, C. Ş., İsmet, B. V. D.: Entrepreneurial intentions of generation-Z: Compare of social sciences and natural sciences undergraduate students at Bahçeşehir University. pp 861-868 (2019)
- [11] Ghazali, Z., Nor, A. I., Fakhrul, A. Z.: Factors affecting entrepreneurial intention among UniSZA students. pp 85 (2013)
- [12] Ali, M., Emad, A.: Determinants of entrepreneurial intention among Sudanese university students. pp 2849-2860 (2020)
- [13][14] Cindy, N., Rodhiah.: Pengaruh kreativitas, edukasi dan efikasi diri terhadap intensi berwirausaha dalam generasi Z. pp 164 – 171 (2019)
- [14] Devi, G. A.: Minat berwirausaha pada generasi Z di Universitas Ciputra Surabaya. Diss. Universitas Ciputra (2019)
- [15] Hidayat, M., Latief, F., Nianty, D., Bahasoan, S., Widiawati, A.: Factors Influencing Resilience of Micro Small and Medium Entrepreneur (MSME) during COVID 19 Outbreak in South Sulawesi Province Indonesia. pp 26707 – 26721 (2020).
- [16] Eesley, C.E., Wang, Y.: Social Influence in Entrepreneurial Career Choice: Evidence from Randomized Field Experiments on Network Ties, MA, USA (2016)
- [17] Fairlie, R., Robb, A.: Families, human capital and small business: Evidence from the characteristics of business owners survey. pp 225–245 (2007)
- [18] Ozaralli, N., Rivenburgh, N.K.: Entrepreneurial intention: Antecedents to entrepreneurial behavior in the USA and Turkey. pp 6 (2016)
- [19] Georgescu, M. A., & Herman, E.: The impact of the family background on students' entrepreneurial intentions: An empirical analysis. pp 4775 (2020)
- [20] Sieger, P., Fueglistaller, U., Zellweger, T., Braun, I.: Global Student Entrepreneurship 2018: Insights from 54 Countries. (2018)
- [21] Laspita, S., Breugst, N., Hebllich, S., Patzelt, H. Intergenerational transmission of entrepreneurial intentions. pp 414-435 (2012)
- [22] Khan, M., Ahmed, I.: Impact of personality traits on entrepreneurial intentions of university students. pp 51-57 (2011)
- [23] Tran, A. T. P., Von Korfflesch, H.: A conceptual model of social entrepreneurial intention based on the social cognitive career theory. pp 17-38 (2016)

-
- [24] Michael Crant, J.: The proactive personality scale as a predictor of entrepreneurial intention. pp 1 – 11 (1991)
- [25] Zhao, H., Seibert, S.: The big five personality dimensions and entrepreneurial status: a meta analytical review. pp 259-271 (2006)
- [26][27] Al-Harrasi, A. S., Al-Zadjali, E. B., & Al-Salti, Z. S.: Factors impacting entrepreneurial intention: a literature review. pp 2487-2490 (2014)
- [27] Papulová, Z., & Papula, J.: Entrepreneurship in the Eyes of the Young Generation. pp 514-520 (2015)
- [28] Douglas, E. J., & Shepherd, D. A.: Self-employment as a career choice: Attitudes, entrepreneurial intentions, and utility maximization. pp 81-90 (2002)
- [29] Hair, J., Ringle, C., & Sarstedt, M.: Partial Least Squares Structural Equation Modeling: Rigorous Application, Better Result and Higher Acceptance. pp 1-12 (2013)
- [30] Wilcox, R. R.: Robust generalizations of classical test reliability and Cronbach's alpha. pp 239-254 (1992)
- [31] Malhotra, N. K. (Ed.): Review of marketing research. ME Sharpe. (2004)
- [32] Kline, R. B.: Principles and practice of structural equation modelling. Guilford publications. (2015)
- [33] Herbane, B.: Small business research: Time for a crisis-based view. International small business journal. pp 43-64 (2010)
- [34] Shaver KG, Gartner WB, Crosby E, Bakalarova K, Gatewood EJ.: Attributions about entrepreneurship: A framework and process for analyzing reasons for starting a business. Entrepreneurship Theory and Practice. pp 5-28 (2001)

The Impact of Innovation Capability on Product Innovation Performance (Case Study of Manufacturing Industry in Indonesia)

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Abstract

Manufacturing industry contributes the highest to Indonesian's GDP, but it continues to slide from 2015-2018 due to low number of new products and low diversification products. Thus, this study focuses on the capability in enhancing product innovation performance. Capabilities relate to RBV (resource-based view) of a firm. It explains how firms renew their competencies in order to adapt to the changing environment. In analysing the relation between innovation capability and product innovation performance, this study also considers the role of R&D performance. Many studies mentioned that innovation capability impacts R&D performance and product innovation performance. But there is still limited study that explores innovation capability as a moderating role towards R&D performance and product innovation performance. This study uses Structural Equation Method (SEM) which consist of 100 respondents of senior management in the manufacturing industry in Indonesia. Our study shows that innovation capability enhances product innovation performance better through R&D performance; rather than direct relation. But innovation capability has no moderating role towards the relation of R&D performance and product innovation performance.

Keywords: Innovation capability, Product Innovation performance, R&D performance, Manufacturing Industry.

I. INTRODUCTION

Manufacturing industry sector is often recognized as the economic backbone of most countries [1]. In Indonesia, the manufacturing sector contributed to approximately 20 percent of Indonesia's GDP. However, based on the data from (BPS, 2019) the contribution of the manufacturing industry continues to slide from 2015 to 2018 which is 20.99% to 19.8%. The decrement manufacturing industry in Indonesia caused by lack of creativity and innovation as the critical problem of few new products that appeared in the market Hausmann (2017). It also mentions that a low amount of diversification products in Indonesia's manufacturing industry caused by the industry focus depended on natural resources. At the same time, it would be best for the development of the manufacturing sector to focus on new and innovative electronics and machinery products.

Reddy (2017) [2] states that lack of innovation will suffer losses and won't be able to survive in the long run. This shows that innovation is essential in predicting long term survival of the firm [3]. Moreover, firms with less capability to innovate may find it difficult to practice and sustain targeted innovative projects to improve their competitive advantage, performance, and business operations [1]. Innovation capability has a long history of research; it was developed from the resource-based view (RBV) theory [4]. According to Wernerfelt (1984) [5] RBV shows the firm as integration of resources and capabilities and the firm can achieve excellent performance by developing unique and distinguished organizational resources and capabilities [3]. Innovation capability has the ability to integrate key capabilities and resources to stimulate innovation [6]. According to Lawson and Samson (2001) [7] the essential role of innovation capability is to transform ideas and knowledge into a product; thus, it affects the manufacturing process and product development [8]. The term "innovation" itself is usually related with Research and development (R&D) since it plays major role in creating new product [9]. Therefore, firm with excellent R&D and supported by the ability of innovation will increasingly encourage companies to have the capability to innovate [10]. A study from Lazzarotti (2006) [11] expresses R&D performance as the impact of market dynamic increment, thus the number of competitors also increase, and product complexity also growing.

Therefore, this study aim is to examine the effect of innovation capability to product innovation performance, both directly and indirectly (mediated by R&D performance). This study examines whether R&D performance moderate the relation of innovation capability and product innovation performance.

II. LITERATURE REVIEW

a. Innovation Capability

Innovation capability is an important factor that facilitates an innovative formal culture, characteristic of internal promoting activities and capabilities of understanding and responding appropriately to the external environment [12]. Assink (2006) [13] defines innovation capability as internal driving energy to generate and explore radical new ideas and concepts, to experiment with solutions for potential opportunity patterns and develop it into marketable and effective innovation. Innovation capability is the ability of a firm in generating innovative outputs [14]. Lawson and Samson (2001) [7] define innovation capability as “the ability to continuously transform knowledge and ideas into new products, processes and systems for the benefit of the firm and its stakeholders”. Rangone (1999) [15] defines innovation capability as an organization’s ability to develop new products and processes, and to achieve superior technological and management performance. Innovation capability is usually divided into technological innovations and managerial innovations [16], whereas in this study the perspective of the innovation capability is more towards managerial innovations.

b. R&D performance

According to Avermate (2004) [17] The word research refers to the start of an innovation’s investigation that is expected to contribute in developing new products or improving existing products or processes. While the word development is the result of research conducted to create new products or improve existing products [17]. If those two words are combined and lead to new terms, namely research and development (R&D).

R&D does not simply create something new in terms of technology or engineering, but is related to various aspects of manufacturing [18]. R&D (research and development) is defined as a systematic and creative work to increase the amount of knowledge, which is used to form new technologies, products, services or systems [19]. Medda (2018) [20] mentions that R&D is the main factor that formed technological knowledge of the firm. Therefore, a study from Zahra and George (2002) [21], concludes that R&D is the initial step of a firm in expanding knowledge. In order to increase or expand knowledge in research and development, firms must combine current knowledge and learn new skills to enlarge their capabilities in adapting and sustaining rapid changes in the market [22].

c. Product Innovation Performance

The ultimate dependent variable of most management researches are mostly firm performance. However, according to Alegre (2006) [23] innovation performance could be considered as an intermediate variable between certain processes (in this study context, innovation capability and R&D) with general firm performance. Innovation capability could influence innovation performance through Organization, Process, Product, and Marketing towards firm performance [24]. Our study context focuses on product innovation performance as innovation performance.

Product innovation focuses on bringing or improving products to market [25]. In addition, product innovation is the continuous introduction of new and valuable goods or services which is significantly improved and modified from existing products in respect to its characteristic or intended uses [26], [27]. On the other hand, Tohidi and Jabbari (2012) [28] states that product innovation is a process that includes technical design, research and development, production, management and commercial activities which are associated with marketing a new product.

Product innovation performance therefore can be stated as the innovation performance in terms of industry producing innovative products or services in answering market demands to give certain performance for the firm [29]. Goffin et al., (2000) [30] finds that without frequent introduction of new products to the market, firms can quickly lose competitiveness and market share. Moreover, when a firm can compete in the market price, they can generate more profit and market share [25].

III. THEORETICAL FRAMEWORK AND HYPOTHESES

Innovation capability has the ability to integrate key capabilities and resources to stimulate innovation [6]. Being more innovative promises to open more new directions for a firm can be achieved by gathering new knowledge [31]. R&D is known to increase stock of knowledge, to bring the company to be more innovative and ultimately influence the output produced [31]. R&D is known to have a very important role because its role does not only affect a single performance which affects the process, product and service development of the company so that it can be said that innovativeness of the companies are often characterized by their excellent R&D activities which support the capability of a firm to innovate [10]. In regards, we hypothesize that:

Hypothesis 1. Innovation capability has a positive and significant effect on R & D performance.

Referring to Zahra and George (2002) [21] R&D activities are input innovation and become a combination of new knowledge base and improve existing knowledge to create innovative products. A study from Heij *et al.*,(2019) [32] shows that when a firm wants to produce innovation products, there must be a lot of investment in R&D that will produce optimal results in producing innovative products, thus we describe the hypothesis as follows:

Hypothesis 2. Research and development performance positive and significance effect to product innovation performance.

A study conducted by Wolff and Pett (2006) [33] states that innovation capability has a significant influence on new product improvement. High level of innovation capability has an important role in developing a creative idea to deal with an ever-changing market, then the idea will be transformed into a new product that innovates or enhances the current product that can form a meaningful value for stakeholders, which also improve the firm's economy and the standards of living [14]. Therefore, we describe the hypothesis:

Hypothesis 3. Innovation capability positively impact product innovation performance

Damanpour (1991) [16] and Alegre (2008) [34] finds that innovation is a moderator to enhance firm performance. Innovation activities may moderate the effect of R&D performance in creating new products [16]. So, when innovation activities are carried out such as trying new ideas [7], applying external knowledge [16], and trying to be more creative [35] will enhance the performance of the product innovation. Therefore, this study expects that innovation capability will enhance the effect of R&D performance in producing product innovation performance. Thus, we describe the following hypothesis:

Hypothesis 4. Innovation capability moderates the relation between R&D performance and product innovation performance.

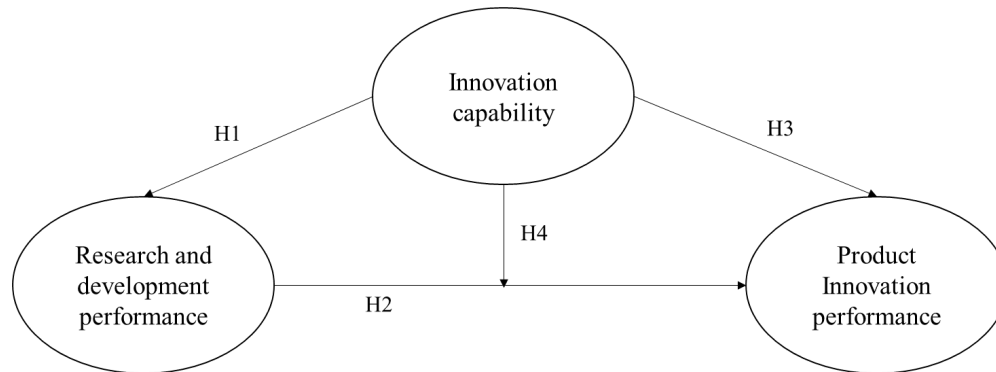


Figure 3-1 Proposed Research Framework

IV. RESEARCH METHODOLOGY

Samples. Referring to the manufacturing directory of the Statistic Center Agency (BPS,2019), the population of this study in the manufacturing industry in Indonesia is 33.923 companies (from small to large scale). The sample targets of this study are senior managers from manufacturing industry in Indonesia due to their current position and experience could supply accurate information of their companies in regard to the issue under this study. In a total of 155 returned, only 100 are valid and adequate to be analyzed. The criteria of the answer for this study are people who have been working more than 10 years in the sub-sector metal and non-metal industry, food and beverages industry, chemical and pharmaceutical industry.

Procedures. Data from 100 respondents are collected via online questionnaires. For data and model analysis, this study used the PLS-SEM approach - more specifically using SmartPLS version 3.0 software.

Measures. For innovation capability (IC) there are 4 dimensions with a total of 19 measurement items adapted from Salimi and Rezaei (2017) [36]. For research and development performance (RDPERF) consist of 6 dimensions with a total of 19 measurement items adapted from Alegre et al. (2006) [23] and Adams et al. (2006) [37]. And for product innovation performance is adapted from Adams et al. (2006) [37] and Saunila and Ukko (2012) [38] which consist of 5 dimensions with a total of 19 measurement items.

V. RESULT

The analysis of data in this study uses SPSS version 26 for the descriptive statistic and SMARTPLS version 3.0 for inferential statistics; likewise, validity and reliability and hypothesis testing using Structural Equation Modelling (SEM). Table 1 shows a descriptive statistic analysis whereas table 2 shows validity & reliability result and table 3 shows hypothesis testing result.

Table 1. Table of Descriptive statistic of latent variable

Latent Variables	Mean	Std. Dev	Min	Max	Variable Correlation**		
					RDPERF	PIP	IC
RDPERF	4.74	0.729	2	6	1		
PIP	4.59	0.846	1	6	.817**	1	
IC	4.75	0.941	1	6	.788**	.793**	1

**) Pearson Correlation is significant at the 0.01 level (2-tailed)

Table 2. Table of Validity and Reliability Measurement

Item		Results			
Construct	Dimension	Factor Loading	AVE	CR	Cronbach alpha
IC	Work climate and well being	0.801	0.642	0.966	0.96
	Individual activity	0.925			
	Know-how development	0.916			
	External knowledge	0.904			
	Strategic orientation	0.858			
	Strategic leadership	0.927			
RDPERF	Internal business	0.836	0.521	0.932	0.925
	Customer Perspective	0.885			
	Innovation and learning	0.902			
	Financial Perspective	0.883			
PIP	Effectiveness of innovation	0.852	0.605	0.953	0.951

	Efficiency of Innovation	0.935			
	Commercialization	0.867			
	Project management	0.874			
	Portfolio management	0.858			

To indicate validity, all variables/constructs have a factor loading (Outer Loading) above >0.7 and Average Variance Extracted above >0.5 ; which according to Sekaran and Bougie (2013) [39] indicates a good validity. To indicate reliability, all variables/constructs have a Cronbach Alpha as well Composite Reliability above >0.7 ; which refers to Sekaran and Bougie (2013) [39] indicates a good reliability. Thus, the variables/constructs in the model proposed by this research study have a good validity and reliability.

Table 3. Table of Hypothesis testing result

Hypothesis	Relation	β - Coefficient	T-stat	P-value	Conclusion
H1	IC-RND	0.785	18.137	0	Accepted
H2	RND-PIP	0.691	7.179	0	Accepted
H3	IC-PIP	0.21	1.966	0.05	Accepted
H4	IC as moderating role	0.025	0.306	0.76	Rejected

This study were using 95% confidence interval for the significance level, therefore as it shown in table 3 all the t-values are above >1.96 indicates the significance level in the path coefficient between construct except t-values for hypotheses 4 which has t-value below <1.96 , whereas the hypothesis was rejected and hypothesis 1,2, and 3 were accepted.

Table 4. Table of comparison result of direct and indirect effect of IC towards PIP (H3)

	Direct	Indirect
β - Coefficient	0.21	0.503
T-stat	1.966	6.649
P-value	0.05	0

Table 4 shows a comparison between indirect path and direct path of *Innovation Capability* affecting *Product Innovation Performance*, whereas the indirect path as bigger β – Coefficient value which indicates stronger path of *Innovation Capability* in affecting *Product Innovation Performance*.

VI. DISCUSSION AND IMPLICATIONS

a. Discussion

This study draws attention to the importance of Innovation Capability on the relationship of R&D Performance and Product Innovation Performance of manufacturing industry in Indonesia. The main findings of this study are summarized below.

Innovation Capability has a positive and significant influence towards those two variables. This particular study analyzes two different roles of Innovation Capability; first as a driving force which facilitates R&D Performance (H1) to further influence Product Innovation Performance (H2 and H3); second as a moderator of R&D Performance relation with Product Innovation Performance.

As it has been mentioned and shown previously in the result interpretation, this study finds that Innovation Capability influence significantly and positively to the Product Innovation Performance mediated through R&D performance as the indirect pathway has stronger influence value (Table 3). Innovativeness is often characterized by the excellent R&D activities which support the capability of an industry to innovate [10]. Innovation Capability allows the firm to have learning environment in order facilitate firm to gain and acquire new knowledge [40] and allows them to have the potential to generate innovative outputs [41] likewise in this study context could lead to the increment of the Product Innovation Performance mediated by R&D since it is an important input to accelerate the formation of innovation products [9]. R&D can be the platform which is capable of combining existing knowledge with new various knowledge [42] and exploit it which further to be implemented through innovative processes and lead to improvement of the production of product innovation [21]. When knowledge is produced rapidly, the variety of innovative products will be produced and the more complex the knowledge, the higher the quantity and quality of innovative products. Since this study found that Innovation Capability more likely to become the main driver (driving force), the second role (moderator) we analyzed was rejected. This study confirms that Innovation Capability does not moderate the relation between R&D Performance and Product Innovation Performance. McClelland and Judd (1993) [43] also confirms the difficulties encountered by researchers to detect moderator effects.

From the theoretical perspective, unfortunately authors could not find the literature or previous studies regarding the moderating role of Innovation Capability in this particular relationship, but previous study conducted by Yang (2012) [35] which find the positive moderating role of Innovation Capability in the relation of Logistic Service Capability towards Firm Performance. In that study it was found that Innovation Capability also influences Firm Performance (which in this particular study context is the Product Innovation Performance) but it is not determined whether Innovation Capability acts as a mediator or has a direct relation with the other variables (Logistic Service Capability). In our logical reasoning perspective, since Innovation Capability has a positive impact towards R&D Performance then later to Product Innovation Performance both directly and indirectly in the context of Manufacturing Industry Indonesia. Therefore, it is fair to say that there is little possibility that Innovation Capability also moderate the relationship of Product Innovation Performance and R&D performance. In line, a study from Rajapathirana and Hui (2018) [24] finds that Innovation Capability influences Firm Performance through 4 different types, which one of them is Product Innovation. Thus, it clears that Innovation Capability positively influences Product Innovation Performance and not acting as a moderator.

b. Implication

This study shows the importance of Innovation Capability; this study also finds that the most preferred factors in shaping the innovation capability is work climate and wellbeing which indicates that in generating innovation, organization needs to create an adequate work climate and well-being. It can facilitate and support employees in generating innovation as it enables industry to transform resources and knowledge into product, process, and etc. In line with this finding, R&D performance in manufacturing industry Indonesia is mainly determined by firm internal business as it found by this study which represented by the competence of the firm such as processes and the behavior of individuals [36] involving in the department itself, which will goes down to the level of the whole R&D Performance in implementing innovation into final goal or products. And the most important factor representing the performance of product innovation in manufacturing industry Indonesia is the commercialization of the product. Thus, this study implies managers in leveraging their innovation capability by paying more attention to the industry work climate and well being since innovativeness of organization depends on the culture which supported by the right people in the organization to produce an idea especially to convert idea into a profitable product and also supported by the commercialization process of the organization [24].

VII. CONCLUSIONS

The main finding of this study is Innovation Capability has a significant role in leveraging the Product Innovation Performance mediated with the Performance of R&D in the firm in forming an innovative product in the Manufacturing Industry Indonesia. Another interesting finding is Innovation Capability has no moderating role/effect in the relation between Product Innovation Performance and R&D Performance. Therefore, Innovation Capability in the Manufacturing Industry Indonesia acts as a driving force to increase Product Innovation Performance that facilitated through excellent performance of their R&D division and could lead the industry to more marketable innovative and diverse product production which further increase the performance of the whole industry.

There are some limitations of this study. First, this study is cross sectional and only represents condition at the specific point of time. Second, the context is specific which only focuses on the manufacturing industry and in specific sub sectors. Thus, the author recommends exploring the impact of innovation capabilities in different industries and exploring the impact of innovation capabilities in manufacturing industries in ASEAN countries.

VIII. ACKNOWLEDGEMENTS

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REFERENCES

- [1] N. Alqershi, "Innovation Capabilities as a Source of Inspiration: Towards a Sustainable Competitive Advantage in Yemen Manufacturing Industry," *Int. J. Knowl. Manag. Pract.*, vol. 7, no. July, pp. 1–6, 2019.
- [2] V. Reddy, "Significance of Innovation in Business Process of Value Chain Significance of Innovation in Business Process of Value," no. March, 2017.
- [3] M. M. Yusr, "Innovation capability and its role in enhancing the relationship between TQM practices and innovation performance," *J. Open Innov. Technol. Mark. Complex.*, vol. 2, no. 1, pp. 1–15, 2016.

-
- [4] M. Wang, S. Asian, L. C. Wood, and B. Wang, "Logistics innovation capability and its impacts on the supply chain risks in Industry 4 . 0 era," *Mod. Supply Chain Res. Appl.* Emerald Publ. Ltd., 2019.
- [5] B. Wernerfelt, "A Resource-based View of the Firm," vol. 5, no. April 1983, pp. 171–180, 1984.
- [6] D. H. Cropley, J. C. Kaufman, and A. J. Cropley, "Measuring creativity for innovation management," *J. Technol. Manag. Innov.*, vol. 6, no. 3, pp. 13–40, 2011.
- [7] B. Lawson and D. Samson, "Developing Innovation Capability in Organisations: a Dynamic Capabilities Approach," *Int. J. Innov. Manag.*, vol. 05, no. 03, pp. 377–400, 2001.
- [8] W. Chamsuk, W. Fongsuwan, and J. Takala, "The Effects of R&D and Innovation Capabilities on the Thai Automotive Industry Part's Competitive Advantage: A SEM Approach," *Manag. Prod. Eng. Rev.*, vol. 8, no. 1, pp. 101–112, 2017.
- [9] S. Kim, E. Kim, Y. Suh, and Z. ZHENG, "The effect of service innovation on R&D activities and government support systems: the moderating role of government support systems in Korea," *J. Open Innov. Technol. Mark. Complex.*, vol. 2, no. 1, pp. 1–13, 2016.
- [10] S. J. Harryson, "How Canon and Sony Drive Product Innovation Through Networking and Application-Focused R&D," *Journal of Product Innovation Management*, vol. 14, no. 4. pp. 288–295, 1997.
- [11] V. Lazzarotti, R. Manzini, and L. Mari, "Int . J . Production Economics A model for R & D performance measurement," *Intern. J. Prod. Econ.*, vol. 134, no. 1, pp. 212–223, 2011.
- [12] G. Akman and C. Yilmaz, "Innovative capability, innovation strategy and market orientation: An empirical analysis in Turkish software industry," *Int. J. Innov. Manag.*, vol. 12, no. 1, pp. 69–111, 2008.
- [13] M. Assink, "Inhibitors of disruptive innovation capability: A conceptual model," *Eur. J. Innov. Manag.*, vol. 9, no. 2, pp. 215–233, 2006.
- [14] D. Esterhuizen, C. S. L. Schutte, and A. S. A. Du Toit, "Knowledge creation processes as critical enablers for innovation," *Int. J. Inf. Manage.*, vol. 32, no. 4, pp. 354–364, 2012.
- [15] A. Rangone, "A Resource-Based Approach to Strategy Analysis in Small-Medium Sized Enterprises," *Small Bus. Econ.*, vol. 12, no. 3, pp. 233–248, 1999.
- [16] F. Damanpour, "ORGANIZATIONAL INNOVATION: A META-ANALYSIS OF EFFECTS OF DETERMINANTS AND MODERATORS," *Acad. Manag. J.*, vol. 34, no. 3, pp. 555–590, 1991.
- [17] T. Avermaete, J. Viaene, E. J. Morgan, E. Pitts, N. Crawford, and D. Mahon, "Determinants of product and process innovation in small food manufacturing firms," *Trends Food Sci. Technol.*, vol. 15, no. 10, pp. 474–483, 2004.

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- [18] M. Tsuji, Y. Ueki, H. Shigeno, H. Idota, and T. Bunno, "R & D and non-R & D in the innovation process among firms in ASEAN countries Based on firm-level survey data," *Eur. J. Manag. Bus. Econ.* Emerald Publ. Ltd., 2017.
- [19] V. M. Dzhukha, A. N. Kokin, A. S. Li, and T. Y. Sinyuk, "Research and development intensity in business: Russia and EU," *Eur. Res. Stud. J.*, vol. 20, no. 1, pp. 64–76, 2017.
- [20] G. Medda, *External R & D , product and process innovation in European manufacturing companies*. Springer US, 2018.
- [21] S. A. Zahra and G. George, "Absorbive Capacity: A review, Reconceptualization and Extention," *Acad. Manag. Perspect.*, vol. 27, no. 2, pp. 185–203, 2002.
- [22] S. A. Zahra, R. D. Ireland, and M. A. Hitt, "Previous re-search has examined the antecedents," *Acad. Manag. J.*, vol. 43, no. 5, pp. 925–950, 2000.
- [23] J. Alegre, R. Lapiedra, and R. Chiva, "A measurement scale for product innovation performance," *Eur. J. Innov. Manag.*, vol. 9, no. 4, pp. 333–346, 2006.
- [24] R. P. J. Rajapathirana and Y. Hui, "Relationship between innovation capability, innovation type, and firm performance," *J. Innov. Knowl.*, vol. 3, no. 1, pp. 44–55, 2018.
- [25] N. Seram and J. Nanayakkara, "Product Innovation 'For Customer'; A Study of Innovation," *Int. Conf. apparel, Text. Fash. Des.*, no. November, 2015.
- [26] OECD, "The Measurement of Scientific and Technological Activities," *Oslo manual. Propos. Guidel. Collect. Interpret. Technol. Innov. data*, 2005.
- [27] C. A. Un, A. Cuervo-cazurra, and K. Asakawa, "R & D Collaborations and Product Innovation," no. May 2008, 2010.
- [28] H. Tohidi and M. M. Jabbari, "Product Innovation Performance in Organization Product Innovation Performance in Organization," no. December 2012, pp. 10–13, 2012.
- [29] R. J. Lin, K. H. Tan, and Y. Geng, "Market demand, green product innovation, and firm performance: Evidence from Vietnam motorcycle industry," *J. Clean. Prod.*, vol. 40, pp. 101–107, 2013.
- [30] K. Goffin, M. Szejczewski, M. Sweeney, and C. New, "Product innovation in UK manufacturing companies," *Int. J. Manuf. Technol. Manag.*, vol. 2, no. 1–7, pp. 620–632, 2000.
- [31] J. Baumann and A. S. Kritikos, "The link between R&D, innovation and productivity: Are micro firms different?," *Res. Policy*, vol. 45, no. 6, pp. 1263–1274, 2016.
- [32] C. V. Heij, H. W. Volberda, F. A. J. Van den Bosch, and R. M. A. Hollen, "How to leverage the impact of R&D on product innovation? The moderating effect of management innovation," *R D Manag.*, vol. 50, no. 2, pp. 277–294, 2019.

-
- [33] J. A. Wolff and T. L. Pett, "Small-firm performance: Modeling the role of product and process improvements," *J. Small Bus. Manag.*, vol. 44, no. 2, pp. 268–284, 2006.
- [34] J. Alegre and R. Chiva, "Assessing the impact of organizational learning capability on product innovation performance: An empirical test," *Technovation*, vol. 28, no. 6, pp. 315–326, 2008.
- [35] C. C. Yang, "Assessing the moderating effect of innovation capability on the relationship between logistics service capability and firm performance for ocean freight forwarders," *Int. J. Logist. Res. Appl.*, vol. 15, no. 1, pp. 53–69, 2012.
- [36] N. Salimi and J. Rezaei, "Evaluating firms' R & D performance using best worst method," *Eval. Program Plann.*, 2017.
- [37] R. Adams, J. Bessant, and R. Phelps, "Innovation management measurement: A review," *Int. J. Manag. Rev.*, vol. 8, no. 1, pp. 21–47, 2006.
- [38] M. Saunila and J. Ukko, "A conceptual framework for the measurement of innovation capability and its effects," vol. 7, no. 4, pp. 355–375, 2012.
- [39] U. Sekaran and R. Bougie, "Research methods for business : a skill-building approach," in WILEY, vol. 53, no. 9, 2013, pp. 1689–1699.
- [40] J. Wu and M. T. Shanley, "Knowledge stock, exploration, and innovation: Research on the United States electromedical device industry," *J. Bus. Res.*, vol. 62, no. 4, pp. 474–483, 2009.
- [41] A. Neely, R. Filippini, C. Forza, A. Vinelli, and J. Hii, "A framework for analysing business performance, firm innovation and related contextual factors: Perceptions of managers and policy makers in two European regions," *Integr. Manuf. Syst.*, vol. 12, no. 2, pp. 114–124, 2001.
- [42] K. Laursen, "Keep searching and you'll find: What do we know about variety creation through firms' search activities for innovation?," *Ind. Corp. Chang.*, vol. 21, no. 5, pp. 1181–1220, 2012.
- [43] G. H. McClelland and C. M. Judd, "Quantitative methods in psychology: Statistical difficulties of detecting interactions and moderator effects," *Psychol. Bull.*, vol. 114, no. 2, pp. 376–390, 1993.

Implementation of Digital Marketing at Printing Company to Increase Customer Acquisition and Customer Retention (Case Study: Citra Kreasindo Mandiri Company)

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Abstract

In facing the global change and technology, PT Citra Kreasindo Mandiri company needs to make a change in the form of the application of technology within the company. The data was collected qualitatively by conducting interviews with business people involved, it's the business owners and employees of PT Citra Kreasindo Mandiri so that data was obtained about current business conditions in terms of strategy, technology, customers, organization and culture and operations. Business priority is in the marketing section which is the sub-dimension of the strategy dimension. From this condition, one of the strategies that can be done is to implement digital marketing at the company PT Citra Kreasindo Mandiri The application of digital marketing is carried out to increase the customer acquisition rate and customer retention rate. The analysis technique is performed by comparing the company's business capabilities with the company's gap analysis. The results given from the application of digital marketing are that companies have the ability to be able to carry out digital transformation and the application will have a positive influence on the customer acquisition rate, customer retention rate and also company revenue.

Keywords: social media, digital marketing, digital transformation, customer acquisition, customer retention.

I. INTRODUCTION

The printing and convection industries are currently developing in Indonesia and have the opportunity to be developed in the community. This happens because of the many needs related to this industry in existing companies and people's lives, as evidenced by the growth of the printing industry by 10% according to PPGI (Kompasiana, 2019). For example, in a company that requires certain forms, books, envelopes, brochures, company promotion needs, goody bags, and others. In people's life, some of the needs are wedding invitations, birthday souvenirs, and so on.

The printing business itself includes several aspects, namely aspects of graphic design, production, and packaging to shipping. The graphic design aspect is the first scope in the printing business, namely the process of visual design and appearance of a work to be printed (in the form of layout or artwork). The output of this design activity can be in the form of print media or digital media. The results used in print output are results that use high resolution and are also in JPG / PDF / TIFF format (an image data storage format for print standards) or other image formats. The graphic design process is the initial process before entering the production stage.

The development of technology is currently one of the threats to the printing business because more and more media are turning to the digital world, such as book publishers, magazines, media, and so on. Based on a survey conducted by Nielsen Media Indonesia, digital media readers are more than print media. As many as 17% of young people aged 10-19 years get information through digital media, while readers aged 20-49 get information from digital media by 80%.

The printing business today is generally owned by a generation who are considered experienced in their field, so the relationship between printing businesses is very strong because they are related to one another. For example, in a printing business that only accepts printing costs, the businessman will network with other business people who have other services, such as finishing, cutting, paper shop, and others. To make a finished product, of course, you need to go through several printing processes as in the table mentioned above.

There are many types of printing business, especially in Jakarta, ranging from modern to what is. Modern printing businesses, for example, are Printerous, Snapy, X Graphic, Digital Dimensi, print.id and others. These businesses on average have switched to digital, so usually

the production costs given are more expensive because they consider the quality of the services provided as well. Meanwhile, the printing business as it is (has not switched to digital) exists in certain areas in Jakarta, such as in Kebayoran Lama, Cipulir, Asshirok, Grogol, and so on. The advantage of this business is that it already has old customers and believes in this printing and also the price given is much cheaper. That is why this business remains by maintaining low prices.

One of the printing businesses in Kebayoran Lama is PT Citra Kreasindo Mandiri. When viewed from previous research, such as research conducted by Akhbar Nurseta (2018), the length of the business is directly proportional to the income owned by the company.

However, in reality, at PT Citra Kreasindo Mandiri, although it has been operating for 16 years, there is no significant difference to this printing business. Therefore it is very necessary to make changes to the company PT Citra Kreasindo Mandiri.

II. BUSINESS OVERVIEW

According to Kotler and Armstrong (2008), a SWOT analysis is an assessment carried out on a company as a whole that involves business strength (Strength), Weakness (Weakness), Opportunity (Opportunity), and also Threats (Threats). The following is a SWOT analysis from PT Citra Kreasindo Mandiri:

a. Strength

This company offers printing services (print) in various media such as paper, t-shirts, bags, souvenirs, and so on. In addition, PT Citra Kreasindo Mandiri also has good quality control so that it creates trust from companies that work with PT Citra Kreasindo Mandiri.

This company has had many customers since 2004. It has been recognized by many companies, such as Watson, Living World Mall, Baywalk Mall, PT Grand Indonesia, hospitals: Eka Hospital, Medika Permata Hijau, Mayapada Hospital, etc. Overseas companies: UNSW, USW. Besides that, the idealistic leader makes this company more concerned about product quality.

b. Weakness

The company also has several weaknesses, namely as follows:

- (1) Customers do not increase
- (2) Price notification takes a long time.
- (3) There is no customer follow up

-
- (4) There has never been an evaluation of the print results
 - (5) Products that have been printed / produced are never promoted
 - (6) Only rely on trust (mouth to mouth)
 - (7) The customer acquisition rate tends to be low
 - (8) Unstable sales rate

c. Opportunity

PT Citra Kreasindo Mandiri as one of the printing businesses that one day could lead the printing market because of the well-known and well-known networking. Besides that, it also has the potential to become a printer that reaches both business companies (B2B) and B2C. The need for printing is increasing, every company must have these needs. Print printing as required.

d. Thread

There are many printing businesses that are currently developing in Jakarta so competition is everywhere, especially in the Kebayoran Lama area which has a lot of printing presses. In addition, many printing businesses have switched to digital, making it easier for customers to reach the business. This is a threat to PT Citra Kreasindo Mandiri at this time if it has not carried out digital transformation.

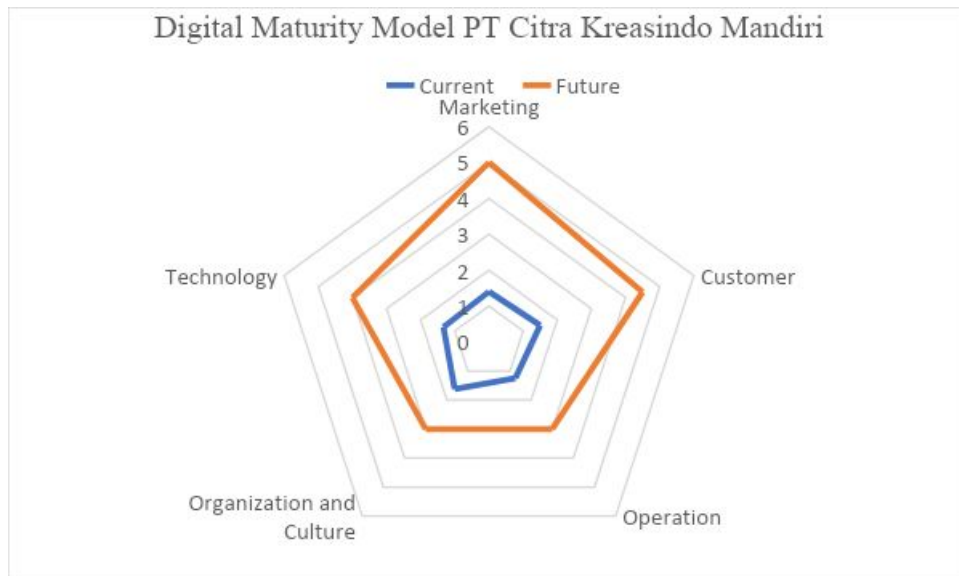
PT Citra Kreasindo Mandiri needs to find new customers so that income and expenses are balanced because of the cash flow. So far, the target customers are large companies, so the cash flow is not going well.

e. Digital Maturity Model

According to the meaning of Deloitte and TM Forum (2018), the Digital Maturity Model is a tool / tool used to activate the digital transformation of a company. There are many digital models available, but at the Deloitte-TM Forum the model is an industry standard maturity model that provides the 5 core dimensions of a business, as well as a benchmark for the business itself. By using this model, business leaders can:

1. Know which position the business is in for its transformation journey
2. Creating goals and plans
3. Make an impactful transformation for project investment.

The following is the digital maturity model of PT Citra Kreasindo Mandiri. The dimensions used to test the maturity model of PT Citra Kreasindo Mandiri are Customer, Strategy, Organization and Culture, Operation and Technology.



Today's business capabilities are still at the initiating level, which is the initial stage in business (initiation).

[1] Marketing (Strategy)

The marketing department has a maturity value of 1.4. At this stage the company is still planning to use marketing analysis and strategies. In addition, the use of technology in marketing activities is still minimal and not maximized. The company also does not focus on customer service and there is no research and evaluation in marketing activities.

[2] Customer

On the customer side, the company PT Citra Kreasindo Mandiri has a maturity value of 1.458 which is still at the initiating level. At this level, the company never creates loyalty programs for customers. In addition, companies rarely build regular relationships with customers. However, there have been several initiatives from the company to establish relationships, such as giving gifts to customers during holidays.

[3] Operation

The operation section has a maturity value of 1.25, which is at the initiating stage. At this stage, the company has a system that is not organized into operational sections. Operational activities do not have records organized by the operation team and only depend on one person.

[4] Organization and Culture

Organization and Culture is a part that aims to develop organizational culture and talent processes to support progress and also the digital maturity model. The aim of this division is to achieve growth and innovation (Deloitte, 2018). From the maturity value obtained at PT Citra Kreasindo Mandiri is 1.625, namely at the initiating stage. At this stage, the company does not have a clear organizational structure and tends to provide jobs spontaneously. The culture that is built is to work according to orders, so that there is no self-development and efforts to create a certain culture.

[5] Technology

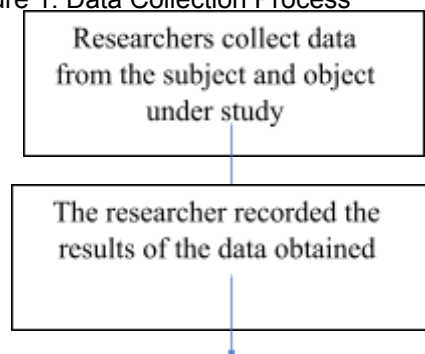
Technology is a processing carried out by humans to make use of existing devices or resources into facilities or infrastructure that help human activities. The technology stage is at a value of 1.333, namely at the initiating level. At this stage, the company has not used technology optimally, especially in terms of production, operations and marketing.

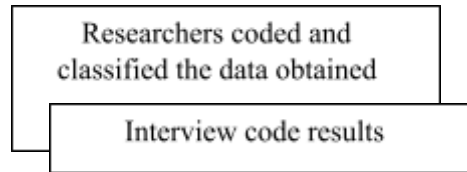
III. METHODOLOGY

Data analysis was done qualitatively by searching for data related to the object under study. The method used is deductive, namely focusing on general things first and then on specific things. This is done to find deeper data and information from the object of the research, namely PT Citra Kreasindo Mandiri.

In analysis, data processing occurs, organizes data, breaks it down into smaller units then looks for themes and patterns from the data obtained.

Figure 1. Data Collection Process

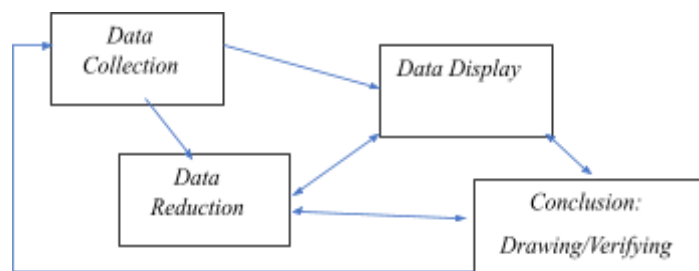




Data analysis was carried out by the initial process, namely collecting data from the subject and object under study. Then, the researcher recorded and coded the results of the data obtained, and obtained the results of the interview code and data collection. Data analysis was also carried out with a deep understanding of the interactions between the concepts that were studied empirically. There are five main characteristics in qualitative research (Semi, 2012, p. 30), which are as follows:

- [1] There is a scientific background as a source of data. Researchers made direct observations in the field to obtain more adequate data.
- [2] Qualitative research is descriptive, so there is verbal language that needs to be considered carefully, and requires interpretations and conclusions conveyed verbally.
- [3] Prioritizing the process not the result, so that the results of the research will be largely determined by the research process.
- [4] Inductive data analysis, namely collecting various phenomena and examining their parts specifically.

General Step of Qualitative Data Analysis



(source: Using Qualitative and Mixed Method Approaches, 1996)

Every research has a variety of objectives, ranging from personal goals, the interests of a particular company, deepening knowledge of certain fields of science, and academic decisions. The method of data collection and methodology used by the researcher also depends on the objectives of the researcher at first. Of course this will affect the audience that the researcher will also research.

According to Prof. Dr. Conny R. Semiawan (2010) in his book entitled Qualitative Research Methods, if the research aims to provide a broad overview of facts and events in depth, so that a new understanding emerges, it will be more appropriate to use qualitative methods. In this case, the researcher intends to know deeply about the systems, facts and

events in the company in depth in the marketing and customer loyalty section of the company PT Citra Kreasindo Mandiri.

In this case, the researcher wants to know about customer retention rate and customer acquisition rate from the company.

$$\text{Customer Retention Rate} = ((\alpha - \beta) / \gamma) \times 100$$

Description:

α : the number of customers at the end of the period

β : the number of new customers obtained during that period

γ : the number of customers at the beginning of the period

Based on the data, the percentage shows that the company's ability to retain its customers is 30%. The data used are $\alpha = 152$, $\beta = 56$ and $\gamma = 312$.

$$\text{Customer Acquisition Rate} = 100$$

Description:

α : variable of the number of current customers obtained in a certain period of time

β : the number of old customers owned in a certain period of time.

Based on the data from the internal company, $\alpha = 112$ and $\beta = 89$. Customer acquisition rate obtained from these data is 0,26 (26%).

$$= 0.26$$

IV. DIGITAL TRANSFORMATION

A. Digital Marketing and Content Creating Process

In digital transformation, there are several technologies that will be involved and used, which are as follows:

a. Website

Website is a digital display or platform created to represent the company in digital form. On the website there are many features, such as the main page, products, history, and so on depending on how the website maker determines the content in it.

b. SEO (Search Engine Optimization)

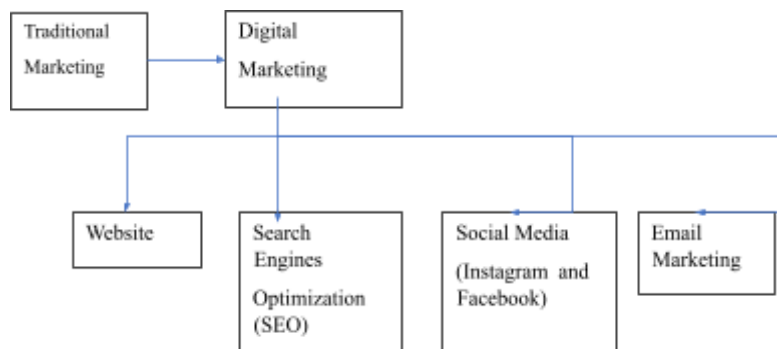
Search Engine Optimization allows people to be able to find digital content on the internet. SEO provides information about navigational searches, information about content, and also purchases.

c. Social Media (Instagram and Facebook)

Social media is a media that is displayed digitally, which is useful for creating interaction between users. Social media can also be used to display content that is suitable for users in order to increase interaction as well.

d. Email Marketing

Email marketing is one of the strategies companies use to be able to establish relationships and interactions with customers via email. In email marketing, you will send various kinds of updates and information about the company via email, so that the email recipient feels that the message received will be more personal and personal.



In the roadmap for the entire digital transformation project of PT Citra Kreasindo Mandiri, the digital transformation process starts with the formulation of a marketing strategy in carrying out digital transformation so that each process is carried out in accordance with the current and future state of digital transformation. The digital roadmap starts with the planning process, then continues with create, design, publish, promote and finally measure (calculation).

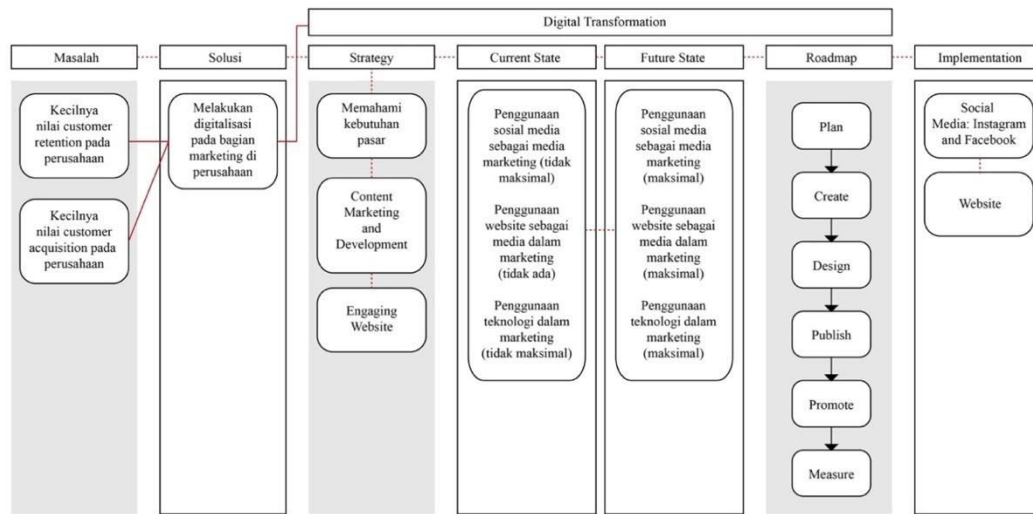


Figure 4. Digital Transformation Full Roadmap of PT Citra Kreasindo Mandiri

Digital roadmap is a process carried out step by step to achieve predetermined digital marketing results. The stage starts from plan, create, design, publish, promote and measure.



Figure 5. Digital Roadmap of PT Citra Kreasindo Mandiri

Plan

At this stage, the company prepares a strategy and maps the customer so that products and services can reach the customer in a targeted manner. The company determines branding as well as brand voice.

Brand voice is a perception that is built by a brand so that customers see the brand in accordance with existing identities. At PT Citra Kreasindo Mandiri company, the brand voice that you want to build is professional, serious, educated and has a purpose of selling and informing.

Brand Voice of PT Citra Kreasindo Mandiri:

- (1) Professional
- (2) Educate
- (3) Purpose: Inform, Sell

After determining the brand voice, the company will determine the Marketing Goal. Marketing goals must be specific, quantifiable and relevant. Setting marketing goals will help the company to achieve the specified goals and objectives in a clearer way and how to achieve there.

The marketing goals set by the company PT Citra Kreasindo Mandiri are:

- (1) Increase customer engagement, customer retention and customer acquisition.
- (2) Increase engagement rate to 20%
- (3) Increase customer retention rate from 30% to 50%
- (4) Increase customer acquisition rate from 26% to 50%

Create

In the Create stage, the company brainstorms and formulates a strategy for a detailed and targeted target market. From this process, the company can determine what type of content will be made according to the needs and targets of the target market.

Target Profile

Demographic	Company in Jabodetabek
Characteristic	Big and small companies in Jabodetabek

Needs	Company marketing needs such as bags, goody bags, calendars, and so on
Aspiration	When using the product, the customer will feel comfortable with the quality and price given
Likes / Dislikes	Customers like printing companies that provide the best service, low prices, and good quality.

Purposes of the content that have been created are to educate customers about the products provided by the company. In addition, the content created also aims to inform customers or audiences that Citra Kreasindo Mandiri is a company that can be trusted by:

- Shows testimonials from clients who have worked with the company
- Shows the power of business
- Describe the product in detail

Design

The design process is carried out by creating digital content based on a predetermined strategy. On Instagram, content is made with a neat and professional design so that the target market knows that the branding of this company is a company that is professional and serves corporate. Then, the website created is designed with a simple and professional appearance to make it easier for the audience to get the information needed by the customer.

Website created with a simple appearance to make it easier for the audience to get the information needed. The colors used are colors that represent the PT Citra Kreasindo Mandiri Brand, namely gray, cyan, magenta and yellow. This color already represents the use of color in the printing world because basically CMYK is the basic color used in the printing process.

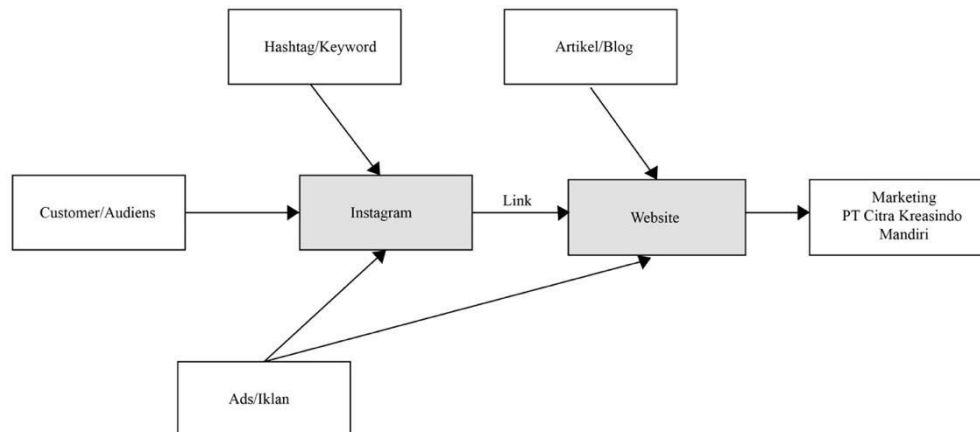


Figure 5. The Digital Marketing and SEO Process

The chart above is a chart of the digital marketing strategy process for PT Citra Kreasindo Mandiri. In this chart, Instagram and Website are the main media in the digital marketing process. These two digital media will become a place to accommodate customers or target markets that are the target of PT Citra Kreasindo Mandiri. The process will begin with creating content on social media and websites first.

From this chart, customers will be obtained from the ads and keywords or hashtags made through Instagram. Then the content created is content related to the printing process, quality, and education to customers about products and services related to the company. Thus the audience or customers who see the content will feel educated and follow the Instagram account. From this, Instagram will be linked with the website as the main platform for PT Citra Kreasindo Mandiri. Then the website will get a customer database that can be directly contacted and carried out by the marketing department of the company.

E. Publish

Publish means displaying content that has been prepared beforehand. The content is displayed based on a schedule that has been prepared by the marketing team or content creator. The schedule that is prepared follows the strategy of setting the target market. Because the target is large companies and usually the people who search for products are the purchasing department, it is better if content publishing is done during working hours, such as in the morning at 9.00-11.00 or in the afternoon at 14.00-17.00. This timing (peak hour) will affect engagement and impressions of the content displayed on the company's social media.

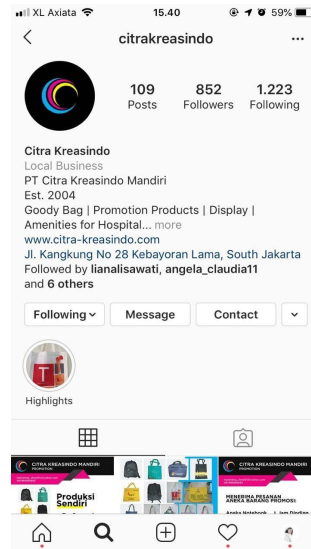


Figure 4.6 Current Situation Social Media Views

This image is an Instagram social media appearance of PT Citra Kreasindo Mandiri in the current situation, when there have been no design changes in Instagram. Posts that are made are not yet organized and there are no adjustments to the posting schedule and feed design.

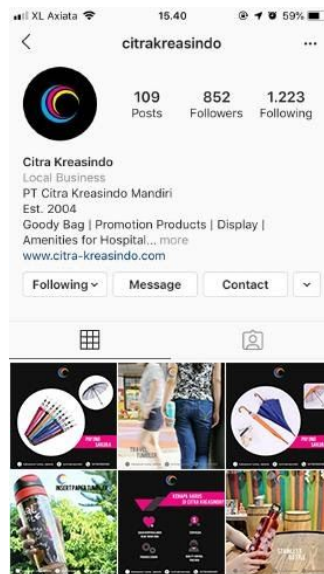


Figure 4.7 Social Media Future Situation Display

This display is an Instagram design setting that has made changes visually, namely by using a more neat design and in accordance with company branding. The content

created is product design content, company advantages, product photos, product descriptions, and so on. In publishing content, another strategy used is the use of hashtags. Hashtag is a keyword used in Instagram search to make it easier for Instagram users to find content that matches existing keywords. Some hashtags used in the caption are #jasapercetakanjakarta #jasapercetakan #jasakonveksijakarta #jasakonveksi #barangpromosi #productionbarangpromosi #barangpromosijakarta.

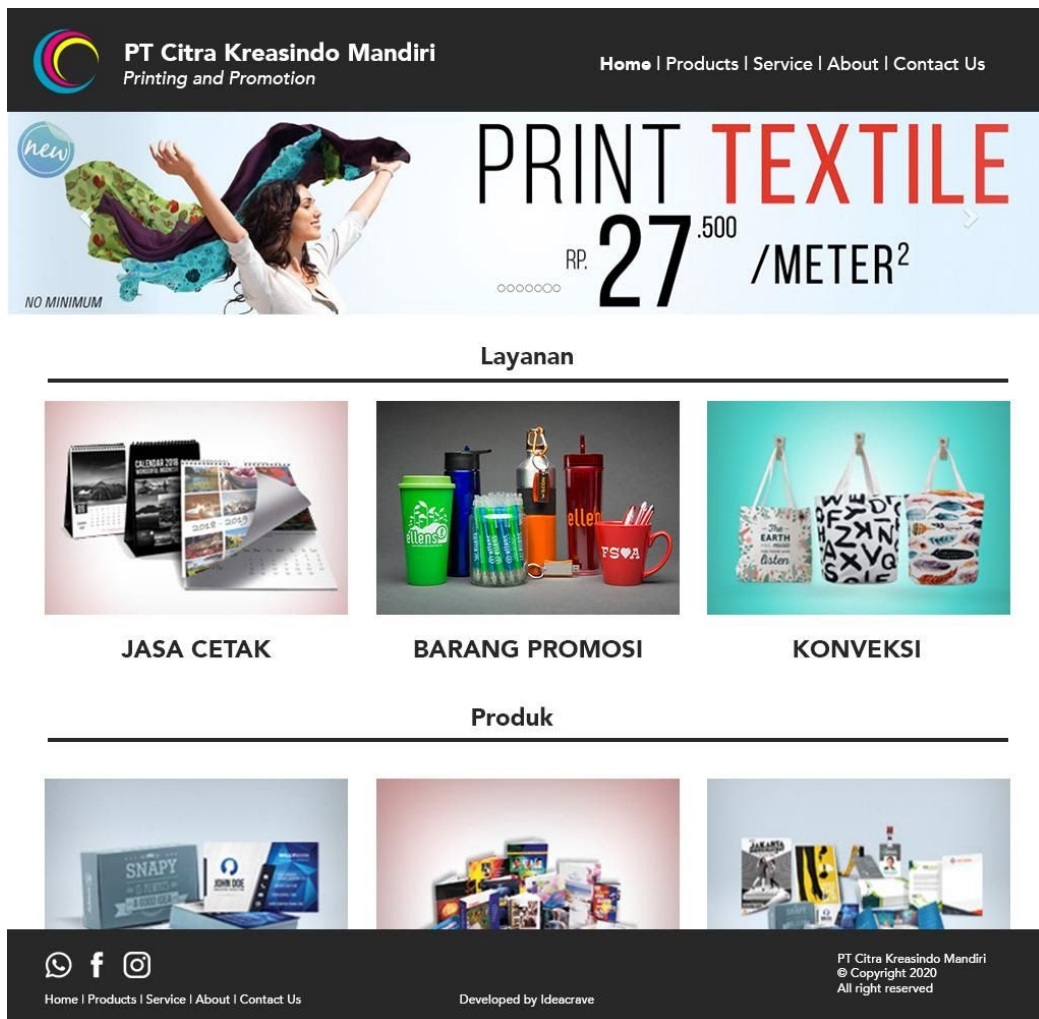


Figure 4.8 Website Design Plan PT Citra Kreasindo Mandiri

Next is a website for PT Citra Kreasindo Mandiri. The website is created with a design that matches the company branding. On the website there are home pages,

products, services, about and contact us. In home there are monthly promotion updates as well as important information that customers need to know at that time. Then, on the product page there is detailed information and images about the products provided or sold by the company. The service page displays what services PT Citra Kreasindo Mandiri provides. These services are printing services, manufacturing promotional items and also convection. On the about service, there are details about the identity and company information.

F. Promote

Promotion talks about marketing communication and the application of the communication mix. The marketing mix will find out what issues occur that attract the attention of customers and customer retention, and the main audience is the customer (Nigel, 2013, p. 106). At the same time, the marketing manager finds the most appropriate way to communicate with his customers and also seeks to cost-effectively. Promotion is carried out using ads on Instagram, which are tools that are directly on Instagram's social media. This tool is used to help social media users to promote content that has been created to get engagement in accordance with the Key Performance Indicator (KPI).

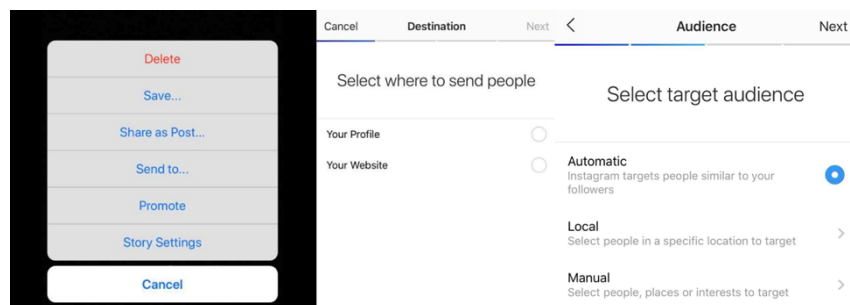


Figure 4.8 Display of Instagram Ads Settings

Advertising on Instagram can be done by selecting the content to be created by the ad. Usually the content that is created is the content with the highest engagement or content that is relevant to the target for that month. After that, in the ads selection setting, it is necessary to select the destination of the ad, namely the profile or website. Profile means the account profile on the Instagram of PT Citra Kreasindo mandiri (@citrakreasindo) while the website is the platform of PT Citra Kreasindo Mandiri (www.citra-kreasindo.com). In this case, the destination of the advertisement is a website so that the audience can see the website directly and make purchases based on the flow of the website.

Audiences can also be adjusted according to the needs of the advertisement. The selected audience is in accordance with the target market of the company Citra Kreasindo Mandiri, namely people who live in Jakarta, aged 18 years - 55 years and have an interest / interest in the Industry business in Jakarta.

G. Measure

Measure is a calculation of data obtained from the results of campaigns and content that has been created in social media or digital marketing. In measure, some calculations or variables that can be calculated are engagement, reach, and impressions. These three variables serve as Key Performance Indicators of the digital marketing process.

Table 4.3 Key Performance Indicators for PT Citra Kreasindo Mandiri

Platform	Action Type	Action	Impression	Estimate CTR
Instagram Ads	Engagement	150	150000	0.1%
Website	Clicks	15	-	-

Source: Personal Documentation, 2020

In the KPI table of PT Citra Kreasindo Mandiri, it can be seen that on Instagram ads have an impression target of 150,000 with an action of 150, which means that there are 150 audiences who take action on the ads that have been carried out, it could mean profile visits or respond to advertisements published. Impression is the number of impressions of the content to the viewing audience. Meanwhile, reach is how much reach the content has seen by the audience.

B. Financial Projection

Financial projections are estimated budgets or costs that will be used in a business project process or business-related activities. The estimate covers the entire business, from the process of running the business to the revenue earned. This projection aims to make plans within a certain period or period. According to Heizer and Render (2015: 113), forecasting is done to find out what things might happen in the future and carry out systematic planning in order to achieve the desired results. Forecasting certainly has a good impact on business development and for investors who want to carry out a project or plan for a business.

In making financial projections, it is necessary to record investment costs and initial capital at the time of project creation. The initial capital used in the application of digital marketing is

website creation and social media maintenance. Website creation includes creating UI and UX designs, website development, and hosting. Meanwhile, in social media maintenance, capital includes content creation, posting schedules, design, copywriting, and product photos.

From the financial projection, customer data that company can get:

[1] Customer Acquisition Rate:

$$CA = \frac{\alpha - \beta}{\beta}$$

$$CA = \frac{106 - 20}{20} = 43\%$$

[2] Customer Retention Rate: $((\alpha - \beta) / \gamma) \times 100$

$$CRR = (179 - 106) / 10 \times 100\% = 73\%$$

The financial projection will display the cost of revenue per month over a period of one year and the number of increases in customers each month. From the number of increases in customers, the project cost per customer will be obtained so that the gross profit for each month is obtained. In addition, monthly operational costs are displayed which include electricity, operational costs, employee salaries, maintenance, machinery, unexpected costs, and so on. Of the total costs, of course, the total operational costs will be obtained. Net income is obtained from the total gross profit minus the total operating costs. The following is a financial projection on the application of digital marketing for PT Citra Kreasindo Mandiri.

[1] Internal Rate of Return (IRR) is the maximum return from a business. In this case, if the IRR value is greater than the expectations of investors or business owners, then the business is feasible to run.

$IRR = IRR (N1, N2, N3, N4, \dots)$

Description:

N1 = cash flow for month 1

N2 = cash flow for month 2

N3 = cash flow for month 3

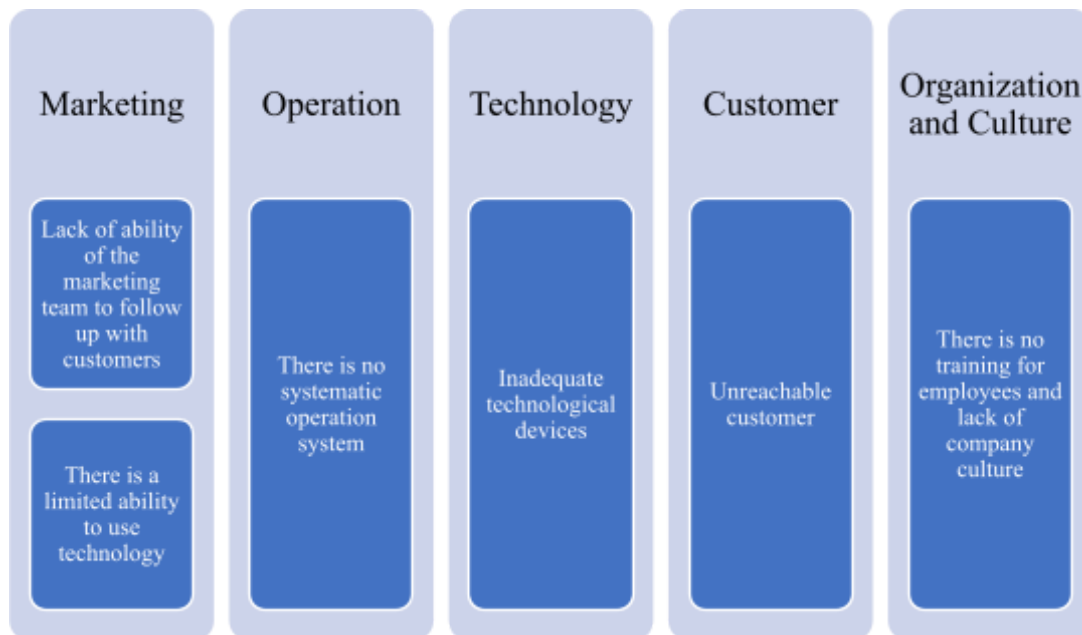
etc.

From the cash flow data for the PT Citra Kreasindo Mandiri project, the IRR data generated is 130%. This means that the digital marketing project carried out has a return of 130% of the expectations of business owners or investors.

[2] Net Present Value (NPV) is the added value that can be generated from a project or business. If the NPV is 0, then there is no added value from the project. Thus, the business will be said to be feasible if the NPV is positive. From the cash flow data for the PT Citra Kreasindo Mandiri project, it was found that the resulting NPV data was positive, so this project was said to be feasible to run.

C. Potential Failures and Corrective Action

The potential for failure can be determined by the Failure Modes and Effect Analysis (FMEA) method. This method is an investigative method to find out how a process can fail and the effects of existing errors (Ron Snee, 2007). For example, a product or business may fail due to user error or system error. Businesses may also fail due to errors in training, no quality control and inadequate equipment.



V. CONCLUSION AND FUTURE WORKS

Based on the results obtained through the process of calculating business feasibility and potential failures, digital marketing implementation projects have several things to consider. Overall, digital marketing is an important thing to do because now the world has entered the era of internet development and digitalization is almost focused on all businesses, especially in the marketing department. The internet is used by 2.4 billion users worldwide and of course users will always increase every year (Baig, Ahmed, 2016, p. 18).

The potential for failure remains, and each division has the potential to create failure with different problems for each division. However, the possibility that can be done is to take action or corporate action to minimize losses in the future. Digital marketing projects have good prospects for the future because the increase in the number of customers will of course have a positive impact on the entire business. The increase in the number of customers will increase the company's turnover, so that the company can have the opportunity to fix minor problems in each division that have the potential for failure. Thus, this potential can be minimized and the company will continue to make improvements.

The implementation of digital marketing of PT Citra Kreasindo Mandiri needs to be evaluated continuously so that it can be implemented optimally and targeted. The right and right strategy will make the project maximal and have a big impact on the whole company.

A. Conclusion

From the process of qualitative research and analysis from the author regarding the digital marketing implementation project at the company PT Citra Kreasindo Mandiri, it can be concluded as follows:

- (1) The digital marketing project has a positive impact on the company PT Citra Kreasindo Mandiri with an IRR financial projection of 130% and a positive NPV result. Thus this project is said to be feasible on a financial scale.
- (2) The application of digital marketing has a positive impact on customer retention and customer acquisition at PT Citra Kreasindo Mandiri. There will be an increase in customer (customer acquisition) by 43% per month and customer retention by 73%.
- (3) The digital marketing project of PT Citra Kreasindo Mandiri is feasible to do.

B. Future Works

The author provides suggestion on the application of digital marketing at PT Citra Kreasindo Mandiri:

- (1) Maximizing training for employees and building a positive culture in the company so that employees have a sense of belonging and empathy for the work done. Thus employees will try to do their best for every job. This will have a positive effect on product quality and customer service.
- (2) Increase the use of technology even more and teach employees how to use it.

VI. ACKNOWLEDGEMENTS

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REFERENCES

- [1] Choerudin, Achmad., Dewi, SN., Haryanto, AT., & Latifah, Ifah. 2018. Traditional Market Management Model-Based Public Participation: An Empirical Studies in Indonesia. IJIBM, 10 (4): 153-159.
- [2] Hyde, Yura. 2011. The Secret of Printing Business in Indonesia. Cirebon.Zuhrotun Nisak. (2013).
- [3] Jeston, John. 2018. Business Process Management: Practical Guidelines to Successful Implementations. New York: Taylor & Francis Group
- [4] Kristanto, Titus et al. Increasing the Quality of Production of Printing SMEs in Karangpilang Surabaya and Krian Sidoarjo. Journal of Community Service Vo. 2 No. 1.
- [5] Muhammad, Achmad. 2009. Implementation of the 7S McKinsey Concept Management Strategy Case Study at POLMAN Bandung. Polman Bandung.
- [6] Raco, Dr. JR 2010. Qualitative Research Methods. Jakarta: PT Grasindo.
- [7] Sahara, Ain et al. Development of the Ideal Concept for Digital Transformation Systems (Internet of Things - IoT_ Perlogistikan Indonesia. 2017.
- [8] Sanjaya, Ridwan and Tarigan Josua. 2009. Creative Digital Marketing. Elex Media Komputindo: Jakarta.
- [9] Shaharudin, Mohd Rizaimy, Abdul Sabur bin Ismail, Suhardi Wan Mansor, Samsul Janel Elias, Muna Abdul Jalil, and Maznah Wan Omar, 2011, Innovative Food and Its Effects Toward Consumers' Purchase Intention of Fast Food Product. Journal of Canadian Social Science, Vol. 7, No. 1., pp. 110-118
- [10] Tjiptono, Fandi. 1997. Marketing Strategy. Second Edition. Andi: Yogyakarta.

Role of Dynamic Capability and Customer Relationship Management: a Case Study of Fintech Lending Platforms in Indonesia

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Abstract

The key point for this study is to understand the role of dynamic capability in managing customer relationships for improved business performance. Of utmost interest to this research, the study proposes and tests a model that assumes that dynamic capability has a positive relationship towards customer relationship management; in order to develop organizational agility which has a positive relationship towards firm performance. Upon confirming our hypotheses, our findings offer a clearer picture of the aspects to which the sustainability of a customer relationship management system depends on different organizational capabilities. Hence, dynamic capability can be seen as a catalyst for customer relationship management and business management overall. CRM helps develop agility within an organization and agility strengthens an organization to adapt quickly to its customers' needs, optimize the operational processes of the organization and establish external relations which influences the firm's performance.

Keywords: Dynamic capability, Customer Relationship management, Organizational agility, firm performance.

I. INTRODUCTION

The financial service sector has seen the rapid advent of emerging technological advances and changes of systems. One of the common features of Financial innovation today is Peer-to-Peer (P2P) lending / fintech lending [1]. Looking at Indonesia's finTech lending industry, the sector has drawn the interest of both local and international investors, who have pumped millions into new start-ups across the industry as seen in 2019 [2]. Considering the 2018 report, the finTech lending sector has granted access to financing for more than 600,000 people and generated over 200,000 employment opportunities. The overall distributed loan disbursement as from March 2018 to March 2019 increased by 606 percent [2]. Despite the success stories of finTech lending in Indonesia, the industry has encountered several challenges that have further drawn huge press and public attention. The Indonesian Consumers Foundation/ Yayasan Lembaga Konsumen Indonesia (YLKI) report, as stated by The Jakarta Post, shows that online lending platforms are the third most complained about business sector [3]. Overall, the sector and several Fintech start-ups are searching for new avenues towards sustainable business structures, better customer service and innovations that can transform the market [4]. Hence, the rapid changing and competitive business and technological environment of finTech lending in Indonesia makes it an appropriate context for testing firm's dynamic capability and customer relationship management empirically. This study seeks to explore the role of dynamic capability in managing customer relationships to generate organizational agility and improve firm performance. In doing so, it sets out to examine the relationships among dynamic capability, customer relationship management, organizational agility and firm performance. It proposes and tests a model which assumes that dynamic capability has a positive relationship towards customer relationship management to develop organizational agility which has a positive relationship with firm performance.]

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

A. Literature Review

- a. **Dynamic Capability.** In recent years, the construct dynamic capability has acquired an increasing interest in the management literature, not just in the original context of the term which is strategic management, but also in many other aspects of business administration [5]. Although there is no generally agreed view of a framework to explain the method of creating dynamic capabilities, the rapid growth of the literature of dynamic capabilities and its complexity has led to a vast yet diverse and very fragmented research collection pointing in various directions [5]. For example, some

scholars concentrated on the essence of dynamic capabilities while others tried to investigate how these capabilities were developed and handled [5]. Some scholars proposed dynamic capabilities as applied to quickly evolving environments [6] while some others thought more of the external environments that are stable [7], [8]. Early pioneers in this area specifically believed that dynamic capabilities had a direct impact on firm performance [6]. On the other hand, some researchers argue that having dynamic capabilities does not necessarily result in higher productivity or enhanced performance overtime, but instead, the ability to obtain and deploy the organizations resources in ways that are in line with the dynamic environment could contribute to a sustained competitive edge [9], [10].

- b. **Customer Relationship Management.** Managing Customer Relationships means different things for different individuals. To some people, Customer Relationship management (CRM) is the term used to describe a series of IT structures that simplify the process of marketing, delivery and services that customers face [11]. For some others, it is more about an organizations' drive to become more customer-oriented, which requires considering consumers, procedures, and perhaps not just technology [11]. Extensive research on customer relationship management analysis indicates that many organizations have struggled to implement and maintain their customer relationship management systems without interruption [12]. For instance, companies all over the world spend large amounts of money on CRM, but approximately 70% of Customer Relationship Management programs do not deliver the overall quality performance anticipated [12]. Some reports suggested that these businesses were failing because they could not access the CRM resources that they required to develop superior management capabilities for customer experiences and gain competitive advantages [13].
- c. **Organizational Agility.** Although the notion of agility has received recognition in the many literatures, the scope of this concept is often greatly varied. Some researchers defined agility in terms of customer, organizational and relationship measures highlighting the capacity of an organization to respond rapidly to the demands of its customers, streamline the organization's operating processes and develop external ties [14]. Others formulated agility in contexts of sensing and responsiveness, the argument was that companies exhibit different forms of agility based on their sensing and reaction systems [15]. Although there is no best known way of developing an

agile organization; concretely, an organization may become more agile but never completely agile [16]. Therefore, agility is a continuous mechanism involving continual change. Organizational agility is perceived as an integral capability for competitive advantage and differentiating factor that requires strategic thought process, creative innovations, shift adaptation and the need to be vigilant continuously [17].

- d. **Firm Performance.** Performance appraisal is a powerful method for decision taking by an organization [18]. Firm performance is commonly seen as a market analysis dependent variable, and is regarded amongst the most important management frameworks [19], [20]. In organizational theory, the three dimensions of performance are productivity, effectiveness, and efficacy. Measuring and evaluating organizational performance has a significant role to play in transforming goals into realities that are vital to an organization's growth and sustainability in today's competitive world [21].

B. Hypothesis Development

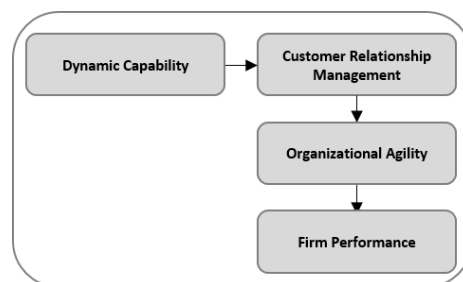


Fig. 1. Proposed Research Model.

- a. **Dynamic Capability and Customer Relationship Management.** While the dynamic capability theory has already been excoriated as tautological, constantly repetitive, and inoperative [22], there are claims that this method is suitable for evaluation of customer relationship and organizational strategy [10]. Some researchers described that business awareness and learning capabilities are profoundly ingrained in the Customer Relationship Management framework, creating consumer insight and discovering knowledge, evaluating value and performance processes [13]. Several authors debate the importance of an organization's capabilities when implementing Customer Relationship Management [13]. It has been acknowledged that maintaining relationship with a client/customer is an organizational dynamic capability [23]. Hence, this study advances the following hypothesis:

Hypothesis 1: *Dynamic capability has a positive relationship with customer relationship management*

- b. **Customer Relationship Management and Organizational Agility.** With a global shift toward "everywhere retailing" contemporary information networks such as CRM systems are emerging. Companies invest heavily in new breeds of information systems anticipating improved organizational agility and superior competitive advantage through improved customer relationships. Customer agility represents the extent to which an organization can quickly sense and respond to customer-based challenges taking advantage of innovation and competitive action opportunities [24]. Hence, this study advances the following hypothesis:

Hypothesis 2: *Customer relationship management has a positive relationship with organizational agility*

- c. **Organizational Agility and Firm Performance.** Organizational Agility is seen as a state of organizational performance and can be achieved by the activities of the organization. The concept of Organizational Agility is developed from an agile organization's performance characteristics and is embedded in two related principles-"organizational adaptability "and" organizational flexibility" [25]. Hence, this study therefore advances the following hypothesis:

Hypothesis 3: *Organizational agility has a positive relationship with firm performance*

III. RESEARCH METHODOLOGY

Sample and Procedure. The target population for this study comprises fintech lending organizations in Indonesia that are duly registered with the Financial Service Authority/Otoritas Jasa Keuangan (OJK). The administration of the survey was done via google forms due to the current covid-19 pandemic. The administration of the surveys occurred over a period of 1 months, from May 2020 to June 2020. The resulting data sample was of 182 valid respondents. Of the respondents, 73 percent were male, 74 percent had bachelor degrees, 45 percent had one-year experience in the industry, 49 percent were middle-level workers and 52 percent had one-year experience in the company they work in.

Measurement. Dynamic Capability (DC) was measured using 9 measurement items adopted from [26]. Customer Relationship Management (CRM) was measured using 10 measurement items adopted from [11]. Organizational Agility (OA) was measured using 6

measurement items from [27]. Firm Performance (FP) was measured using 9 measurement items adopted from [27]. All of the variables were measured using 5-point Likert-type scales ranging from “1” being “strongly disagree” to “5” being “strongly agree”.

IV. RESULT

Data analysis for this study was done using SPSS for descriptive analysis and LISREL version 8.8 for hypothesis testing using Structural Equation Modelling (SEM). The Cronbach’s Alphas of the constructs were all above 0.7, indicating good reliability. The Construct Reliability (CR) and Variance Extracted (VE) were also evaluated, where $CR \geq 0.7$ and $VE \geq 0.5$ indicates good reliability. The structural model fit was assessed by goodness of fit indices shown in Table 1 below. The result of the structural model fit showed an overall good fit model. The descriptive statistics are displayed in Table 2 below. Table 3 shows the correlation of the variables. The hypotheses testing results shown in Table 4 indicated that all hypotheses are supported.

Table 1. Result of Structural Model Fit Indices.

χ^2	df	χ^2/df	RMSEA	SRMR	GFI	NNFI	CFI	IFI
212.13	173	1.22	0.03	0.05	0.90	0.99	0.99	0.99

Table 2. Descriptive Statistics Result.

Item	Result						
	Mean	SD	Min	Max	CR	VE	Cronbach alpha
DC	4.05	0.14	3.84	5.00	0.88	0.72	0.85
CRM	3.86	0.15	3.61	5.00	0.94	0.85	0.91
OA	3.95	0.10	3.74	5.00	0.91	0.64	0.83
FP	3.77	0.27	3.39	5.00	0.89	0.50	0.83

Table 3. Correlation Test result

Construct	DC	OI	OTE	CRM	OA	FP
DC	1					
CRM	.351**	.417**	.225**	1		
OA	.421**	.377**	.322**	.421**	1	
FP	.361**	.346**	.420**	.334**	.420**	1

** indicates significant correlation at the 0.01 level (2-tailed).

Table 4. Result of Hypotheses Testing

No	Hypothesized Relationship	Structural Coefficient	T-value	Result
1	DC has a positive relationship with CRM	0.51	6.57	Supported
2	CRM has a positive relationship with OA	1.14	5.92	Supported
3	OA has a positive relationship with FP	1.08	6.58	Supported

V. DISCUSSION

The findings of this study show that dynamic capabilities play a key role in managing customer relationships. Fintech Lending firms need to concentrate on their organizational capabilities and resources to facilitate improved customer experience within the organization so as to create a competitive edge in the finTech lending industry. Companies, and particularly Fintech Lending platforms core competence is to build financially innovative approaches that boost its customer experience [28]. CRM has become one of the advances in the Information System (IS) available to business managers that help provide valuable business data for business decision-making[29].

The study also shows that maintaining efficient customer relationships are a core strategy in developing agility within the organization to improve performance. Organizational agility strengthens an organization to adapt quickly to its customers ' needs, optimize the operational processes of the organization and establish external relations that influence the firm's performance. Hence, in order to build competitive advantages, Fintech lending

companies must use CRM systems to build agility, increase revenue and achieve their business objectives.

VI. CONCLUSION

This study sought to clarify and empirically validate the role of dynamic capabilities in managing customer relationships and generating agility to improve performance within the Indonesian finTech lending industry. The study has some limitations. Firstly, the study is a cross-sectional study and only focuses on the Indonesian finTech lending industry. Thus, Future research could investigate longitudinal studies to as well as examine other industries.

REFERENCES

- [1] C. Hendriyani and S. J. Raharja, "Business Agility Strategy : Peer-to-Peer Lending of Fintech Startup in the Era of Digital Finance in Indonesia," *Rev. Integr. Bus. Econ.*, vol. 8, no. 4, pp. 239–246, 2019.
- [2] PwC Indonesia, "Indonesia ' s Fintech Lending :," no. June, 2019.
- [3] News Desk, "P2P lending third most complained about business sector", *The Jakarta post*, January 30, 2019.
<https://www.thejakartapost.com/news/2019/01/30/p2p-lending-third-most-complained-about-business-sector.html>
- [4] P. Gomber, R. J. Kauffman, C. Parker, and B. W. Weber, "On the Fintech Revolution: Interpreting the Forces of Innovation, Disruption, and Transformation in Financial Services," *J. Manag. Inf. Syst.*, vol. 35, no. 1, pp. 220–265, 2018,
- [5] I. Barreto, "Dynamic Capabilities: A review of past research and an agenda for the future," *J. Manage.*, vol. 36, no. 1, pp. 256–280, 2010
- [6] Teece, David J, G. Pisano, and A. Shuen, "Dynamic capabilities and strategic management," *Strateg. Manag. J.*, vol. 18:7, no. March, pp. 509–533, 1997
- [7] S. A. Zahra and G. George, "Absorptive capacity: A review, reconceptualization, and extension," *Acad. Manag. Rev.*, vol. 27, no. 2, pp. 185–203, 2002
- [8] M. Zollo and S. G. Winter, "Deliberate learning and the evolution of dynamic capabilities," *Organ. Sci.*, vol. 13, no. 3, pp. 339–351, 2002
- [9] K. M. Eisenhardt and J. A. Martin, "Dynamic capabilities: What are they?," *Strateg. Manag. J.*, vol. 21, no. 10–11, pp. 1105–1121, 2000,

-
- [10] R. Makadok, "Toward a synthesis of the resource-based and dynamic capability view of rent creation," *Strateg. Manag. J.*, vol. 5, no. May, pp. 387–401, 2001.
- [11] R. Iriana and F. Buttle, "Strategic, Operational and Analytical Customer Relationship Management: Attributes And Measures," no. February, 2005.
- [12] W. Reinartz, M. Krafft, and W. D. Hoyer, "The customer relationship management process: Its measurement and impact on performance," *J. Mark. Res.*, vol. 3, no. 41, pp. 293–305, 2004
- [13] E. Plakoyiannaki and N. Tzokas, "Customer Relationship Management: A capabilities Portfolio Perspective," *J. database Mark.*, vol. 9, pp. 228–237, 2002.
- [14] V. Sambamurthy, A. Bharadwaj, and V. Grover, "Shaping Agility Through Digital Options: Reconceptualizing the Role of Information Technology in Contemporary Firms," *MIS Q.*, vol. 27, no. 2, pp. 237–263, 2003.
- [15] R. E. Overstreet, J. B. Hanna, T. A. Byrd, C. G. Cegielski, and B. T. Hazen, "Leadership style and organizational innovativeness drive motor carriers toward sustained performance," *Int. J. Logist. Manag.*, vol. 24, no. 2, pp. 247–270, 2013
- [16] A. E. Alzoubi, F. Alotoum, and A. Albataineh, "Factors Associated Affecting Organization Agility on Products Development," vol. 9, no. 3, 2011.
- [17] A. Harraf, I. Wanasika, K. Tate, and K. Talbott, "Organizational agility," *J. Appl. Bus. Res.*, vol. 31, no. 2, pp. 675–686, 2015
- [18] Y. M. Lee and C. Yang, "The relationships among network ties, organizational agility, and organizational performance: A study of the flat glass industry in Taiwan," *J. Manag. Organ.*, vol. 20, no. 2, pp. 206–226, 2014
- [19] M. Pagell and D. Gobeli, "How Plant Managers' Experiences and Attitudes Toward Sustainability Relate to Operational Performance," *Prod. Oper. Manag.*, vol. 18, no. 3, pp. 278–299, 2009.
- [20] P. J. Richard, T. M. Devinney, G. S. Yip, and G. Johnson, "Measuring Organizational Performance: Towards Methodological Best Practice," *J. Manage.*, vol. 35, no. 3, pp. 718–804, 2009
- [21] V. Popova and A. Sharpanskykh, "Modeling organizational performance indicators," *Inf. Syst.*, vol. 35, no. 4, pp. 505–527, 2010
- [22] R. I. Priem and J. E. Butler, "Is the resource-based 'view' A useful perspective for strategic management research?," *Acad. Manag. Rev.*, vol. 26, pp. 22–24, 2001.
- [23] C. D. Pedron and M. Caldeira, "Customer relationship management adoption: Using a dynamic capabilities approach," *Int. J. Internet Mark. Advert.*, vol. 6, no. 3, pp. 265–281, 2011

-
- [24] N. Roberts and V. Grover, "Leveraging Information Technology Infrastructure to Facilitate a Firm's Customer Agility and Competitive Activity: An Empirical Investigation," *J. Manag. Inf. Syst.*, vol. 28, no. 4, pp. 231–269, 2012
- [25] B. Sherehiy, W. K. Á, and J. K. Layer, "A review of enterprise agility: Concepts, frameworks, and attributes," *Int. J. Ind. Ergon.*, vol. 37, pp. 445–460, 2007
- [26] A. Protopogerou, Y. Caloghirou, and S. Lioukas, "Dynamic capabilities and their indirect impact on firm performance," *Ind. Corp. Chang.*, vol. 21, no. 3, pp. 615–647, 2012
- [27] J. G. Cegarra-Navarro, P. Soto-Acosta, and A. K. P. Wensley, "Structured knowledge processes and firm performance: The role of organizational agility," *J. Bus. Res.*, vol. 69, no. 5, pp. 1544–1549, 2015
- [28] O. Nadav, "Fintech firms and incumbent banks: competition or collaboration?," 2019.
- [29] H. Gil-Gomez, V. Guerola-Navarro, R. Oltra-Badenes, and J. A. Lozano-Quilis, "Customer relationship management: digital transformation and sustainable business model innovation," *Econ. Res. Istraz.*, vol. 33, no. 1, pp. 2733–2750, 2020

Analyzing Factors Influencing Supply Chain Management Practices in Medical Device Industry Indonesia

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Abstract

Amidst rapid advancement of technologies; rapid changes of market demands & uncertainties and many competitors in industry, Supply Chain Management has emerged as a leading strategic management tool to create efficiency and effectiveness with the aims to increase organization performance to survive in the market. This study focuses on several organizational capability factors such as Knowledge Management, Organization Agility, and Innovation Capability in relationship with Supply Chain Management Practices. This study uses Structural Equation Modelling (SEM) based on Partial Least Square (PLS) Technique involving 93 respondents whose activities involve supply chain practices in the medical device firms operating in Indonesia. The result of this empirical study shows that those 3 capabilities have significant influence towards the practice of Supply Chain Management.

Keywords: Supply Chain Management Practices, Knowledge Management, Organization Agility, Innovation Capability, Medical Device Industry.

I. INTRODUCTION

In Indonesia, the industry of medical devices is currently a fast-growing healthcare market which is experiencing constant growth over the years growing rate is currently at 12% per year, and valued at USD 3.5 billion prior to the implementation of the National Health Services (JKN) programme back in 2008. According to data from Social Health Security Administrator (BPJS-Kesehatan) and Indonesian Statistic (BPS) Indonesia the demand for health services has increased and are predicted to increase further (EIBN Medical Device Sector Report, 2018). This opens an opportunity for the increasing number of both local medical device companies as well as multinational companies. This is supported by local organizations which report that the increase in demand for medical equipment at this time is too large for the suppliers to fulfil.

Therefore, in this challenging and competitive business environment, firms are demanded to operate and work together more effectively and competitively [1]. Over two decades they have been trying to form a strategic partnership with partners to create an integrated firm which many believe that this approach is becoming the most effective and efficient way for firms to successfully operate their business [2]; which this collaborative approach refers to the terms of Supply Chain Management (SCM). Recently SCM has been a common practice and has become a major factor of securing competitive advantage and improving organizational performance [3] and firms' success now depended on how they design and manage their SCM [4].

While performing or practicing SCM within a firm, information sharing between players is considered as one of the integral parts [5] and as one of the organization capabilities, Knowledge Management can be well implemented to increase the level and quality of the information shared [6]. This will also help the supply chain system perform better in facing uncertainties in the market as today's business world is characterized by rapid changes and constantly evolving. As for instance, supply chains in the medical device industry have a unique and complex structure that is governed by many standards and regulations [7] therefore firms need to be Agile in assessing these kinds of issues as well as Innovative. As many healthcare institutions are now assessing innovative ideas for optimizing their medical device supply chains [7].

An inefficient in practicing SCM could lead to many problematics, a recent report (MedTech Intelligence) by McKinsey stated that medical device industry in US experience a significant loss estimated between \$2.5 and \$5 billion a year which is due failures originating somewhere in the supply chain. Cases also happen in one of Medical Device equipment in Indonesia [8] which experiencing problem which result delay in goods delivering. Lou (2006)

[9] identified that these problems are partly due to ineffectiveness in practicing SCM. In fact, a good SCM practice could save approximately 10 – 15 % of expenses cost of a firm according to a recent study conducted by the Medical Device Supply Chain Council (2011) [4]. While many SCM studies published out there trying to analyze the impact of SCMP towards operational and performance [10], the study is more concerning on whether organization capabilities factors namely Knowledge Management, Organization Agility, and Innovation Capability would have significant influence towards Supply Chain Management Practices in the study context of medical device industry Indonesia which was the main objective of this study. As today business activities are affected by the covid-19 pandemic, the Medical Device Industry in Indonesia currently cooperates with the government and universities to domestically produce innovations as a response to the situation. In this era of globalization, today's business world is characterized by many uncertainties with market demands and rapid advancement of information and technology. Prior to this, authors realize that these 3 capabilities could be essential and will go down to the supply chain level and would lead firms to sustain in today's business world.

II. THEORETICAL FRAMEWORK

A. Literature Review

- a. **Knowledge Management.** Girard (2015) [11] defines Knowledge Management (KM) as the systematic management of intangible assets such as knowledge, experience, and information in an organization. KM refers to the process of creating, sharing, using and managing those intangible assets which enable firms to develop rare and valuable knowledge through organizational learning and lead firms to being progressive to the new products and services, conquer and create new markets [12] [13]. KM is consist of three different dimensions which are (1) creation - stated as process of collecting and transforming data into information and knowledge through various level of organization learning; (2) storage and transfer – stated as mechanism which stored the knowledge and transfer it within organization and between organization; (3) application – stated as process of exploitation and exploration of resources as part of applying and using knowledge [6].
- b. **Organization Agility.** The term “agility” refers to the capacity of an organization to resist, absorb, respond, and even reinvent to cope or in response to rapid and disruptive changes in the environment which cannot be neglected by any organization competing in the market. Chung (2012) [14] defines Organization Agility (OA) as the

ability to predict and sense environmental changes and create appropriate responses by effectively redirecting resources. Organization Agility consist of 4 major categories which broke down into; (1) responsiveness; (2) competency; (3) flexibility; and (4) speed [15].

- c. **Innovation Capability.** Assink (2006) [16] defines Innovation Capability (IC) as internal driving factors in order to establish and explore radical new ideas and concepts, and to develop or generate marketable and effective innovation output. Iddris (2018) [17] then assess IC into 4 different dimensions which are (1) *Innovation strategy* - ability to identify external opportunities to match with internal capabilities to create innovation (2) *Organizational Learning* - bridge between working and innovating; (3) *Innovation Process* - innovative application towards the process and (4) *Idea Management and Implementation* - development and investment of idea management to achieve innovation outcomes.
- d. **Supply Chain Management Practices.** Supply Chain Management (SCM) has recently become an important common practice in the last decade across various industries. SCM can be seen as a systematic and strategic coordination which addresses long-term alliances across all business functions [18]. Meanwhile, Supply Chain Management Practices (SCMP) defined as the set of complete actions applied by organization to improve the effectiveness of management of their internal supply chain process [3], and it defined as 4 dimensions which are (1) strategic partnership - long-term relationship between supply chain players to work effectively and closely between each other; (2) customer relationship – practices to build relationship to manage customer suggestions or input and increase customer satisfaction; (3) Level of information sharing – refers to access of all related data between business partners in various processes in the supply chain; (4) Quality of information sharing – relate with accuracy, adequacy, timeliness, and credibility of information being exchanged.

B. Hypotheses Development

- a. **KM and SCMP.** Shakerian *et al* (2016) [12] recognized KM as the vital element of intensive information sharing and multi-cultural organizational environment, therefore it acts as the major capability in supply chain management. Within this context, knowledge in the supply chain is defined as the use of knowledge resources (information,technology,experience,etc.) obtained from other players for fundamental managerial decision making and to ensure strategy development [19]. Based on such understanding, this study advances following hypotheses:

H1: Knowledge Management has a positive and significant relationship towards Supply Chain Management Practices

- b. **OA and SCMP.** Firms can successfully promote their agility by the synchronous flow of information within supply chain partners [20] making the term of “agile supply chain”. Liu (2014) refers to the agility of a firm as their ability to collaborate between partners in response to market changes. Following this logic, agility in the supply chain level will enable firms to increase adaptability and flexibility to respond and react quickly and effectively to the demand network [21]. Based on such understanding, this study advances following hypotheses:

H2: Organization Agility has a positive and significant relationship towards Supply Chain Management Practices

- c. **IC and SCMP.** Recently, Seo (2014) [22] believed that firms with the capability to innovate could well enhance the performance of supply chain management. Suppliers or supply chain partners could be the source to innovation thus, organization’s capability to innovate and capture ideas from suppliers has become an important driver of collaboration in the supply chain. Innovation capability allows firms to acquire and utilize knowledge effectively and crucial for the supply chain practices or activities to further develop ideas, services, and products [23]. Based on such understanding, this study advances following hypotheses:

H3: Innovation Capability has a positive and significant relationship towards Supply Chain Management Practices

- d. **KM and OA.** According to Teece (2016) [24], implementation of KM could arise the dynamic capability of a firm which enables them to be adaptable and innovative to the turbulent market. By having the right management of knowledge, firms are able to get market insights and can modify organizational decision-making activities to seek the new way to adjust with the market [20]. Based on such understanding, this study advances following hypotheses:

H4: Knowledge Management has a positive and significant relationship towards Organization Agility

- e. **KM and IC.** By generating and utilizing knowledge, firms would be able to rapidly transform and implement new knowledge across the organization and would be able to generate innovation; following this logic, knowledge activities such as gathering, distributing, learning, sharing, and managing play an important role in generating

innovation [25]. Based on such understanding, this study advances following hypotheses:

H5: Knowledge Management has a positive and significant relationship towards Innovation Capability

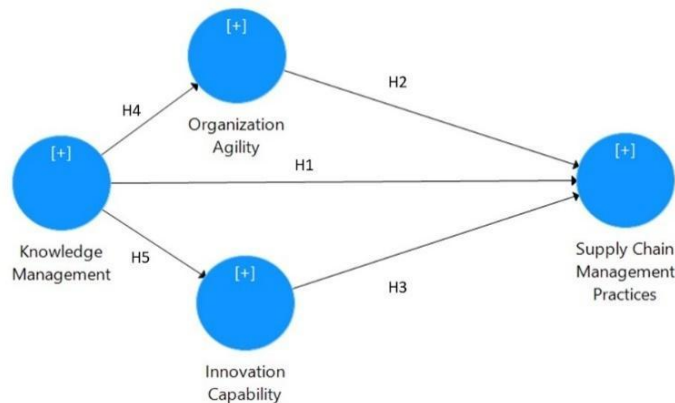


Figure 1. Research Framework (SmartPLS output)

III. RESEARCH METHODOLOGY

Research methodology of the study consist of 4 phases as the following:

1. **Item generation.** Any good measurement requires content validity, meaning that the measurement items of each variable construct covers the major content of that particular construct which in this phase author achieved the item generation through comprehensive literature reviews. Dimensions of each variable construct have been mentioned previously. SCMP measurement consist of 16 items adapted from Li *et al* (2006) [3]; KM measurement consist of 13 items adapted from Garcia (2015) [6]; OA measurement consist of 11 items adapted from Taghizadeh (2015) [15] & Cegarra (2015) [26]; and IC measurement consist of 10 items adapted from Saunila (2012) [27] & Iddris (2018) [28]. Besides literature review, *Focus Group Discussion (FGD)* was also conducted by interviewing respondents from the industry to achieve content validity as well as ensuring that the respondents are capable to answer questions and misinterpretation can be neglected.
2. **Pilot study.** In this phase, questionnaire was deployed into small scale respondents (23) from medical device companies with aim to measure the Validity and Reliability of

the questionnaire before it was spread out to larger scale. From this pilot-study evaluation there were no any modification in the questionnaire

3. **Large-Scale method.** Questionnaire (google form) was spread out to medical device companies in Indonesia through online platforms. A total of 124 respondents completed the survey (includes the first 23 respondents in the pilot study), of which a total of 93 of them considered valid after data screening which most of them [83%] coming from "Large Business" Firm; 76% of the respondents hold bachelor degree and 24% of them hold master degree. The screening was aimed to sort in people whose recognized to have knowledge or understand briefly about supply chain activities in their firm (i.e. Strategic & Operation Planner, Supply Chain Analyst & Manager, Logistic Department, Team leader or Supervisor, Senior Managers).

Table 1. Table of respondent profile

Profile Characteristic	Frequency (%)
Functional Operation	
Supplier/Principal	39%
Distributor	41%
Local Manufacturers	20%
Job level	
Staff/Officer	83%
Middle Level Manager	15%
Top Level Manager	2%
Working Experience	
< 5 years	36%
5-10 years	38%
10-15 years	23%
15-20 years	3%

4. **Model and Data Evaluation.** For the descriptive statistic analysis, study used. SPSS version 26 For model evaluation, this study conducts PLS-SEM analysis technique using SmartPLS 3.0 software. Evaluating models using a *Partial Least Square* technique consist of 2 model evaluation, namely measurement model; in which to evaluate the validity and reliability of the observed variables / items representing each latent variable construct, and structural model; in which to evaluate the relation and significance between latent variable constructs.

IV. RESULT

Table 2 below shows the descriptive table from each latent variable construct as well as the correlation between constructs.

Table 2. Table of descriptive statistic analysis

Latent Variables	Mean	Std. Dev	Min	Max	Variable Construct Correlation*			
					KM	OA	IC	SCMP
KM	3.675	1	1.23	5	1			
OA	3.68	0.928	1.27	5	0.685*	1		
IC	3.65	1.01	1.3	5	0.729*	0.652*	1	
SCMP	3.604	1	1.31	5	0.843*	0.766*	0.792*	1

*) Spearman Correlation; indicates significant at the 0.01 level (2-tailed)

Table 3 below shows the measurement model evaluation which assesses the validity and reliability of each variable construct along with their respective dimensions. To assess the validity, all variables/constructs have a factor loading (Outer Loading) above >0.7 and Average Variance Extracted above >0.5; which according to Hair *et al* (2014) [29] indicates a good validity. To indicate reliability, all variables/constructs have a Cronbach Alpha as well Composite Reliability (CR) above >0.7; which indicates a good reliability.

Table 3. Table of validity and reliability (Measurement Model analysis)

Item		Result			
Construct	Dimension	Factor Loading	AVE	CR	Cronbach Alpha
KM	Creation	0.892	0.569	0.943	0.935
	Storage & Transfer	0.827			
	Application	0.89			
OA	Responsiveness	0.781	0.561	0.927	0.913
	Competency	0.736			

	Flexibility	0.83			
	Speed	0.782			
IC	Organization Learning	0.794	0.537	0.922	0.905
	Idea Management	0.83			
	Innovative Strategy	0.843			
	Innovative Process	0.739			
SCMP	Strategic Partnership	0.9	0.575	0.95	0.943
	Quality of information	0.872			
	Level of information sharing	0.777			
	Customer Relationship	0.892			

The result obtained qualified the requirement. Therefore, the variables/constructs in the model proposed by the research study have a good validity and reliability. Table 4 below shows the structural model evaluation, which informs the conclusion of the hypothesis testing. Study tested the path coefficient at 95% confidence interval level (2-tailed).

Table 4. Table of hypothesis testing (Structural Model analysis)

Hypothesis	Path	β -Coefficient	T-Statistic	Conclusion
H1	KM -> SCMP	0.426	3.311	Supported*
H2	OA -> SCMP	0.319	1.978	Supported*
H3	IC -> SCMP	0.275	2.05	Supported*
H4	KM -> OA	0.826	12.963	Supported*
H5	KM -> IC	0.848	16.384	Supported*

*Indicates significant at 0.05 level, t-value of 1.96

Notes: Goodness Of Fit (GOF) = 0.656; Normed Fit Index (NFI) = 0.51; Standardized Root Mean Square Residual (SRMR) = 0.071; RMS_Theta = 0.147

V. DISCUSSION AND IMPLICATION

In this globalization era, firms began to realize that they are required not only to improve the efficiencies within the firm but the whole Supply Chain Management (SCM) needs to be made effective and competitive. A set of activities conducted within a firm to promote the effectiveness of its whole management of supply chain called SCM practices [30].

The main objective of this study was to analyze organization capabilities with a positive relation towards the practices of firm's management of supply chain. According to the result KM has a significant relation towards SCMP. Thus, Hypothesis 1 (H1) is accepted, which supported previous studies as examples, Shakerian (2016) [12] and Attia (2018) [13] who recognized the KM of the firm plays a major role in information integration and organizational learning within the firm. KM enables and facilitates knowledge sharing among employees as well among supply chain players, which in turn enhances the flow of knowledge, cooperation & long-term relationships, and improves the effectiveness and efficiency of the supply chain [13] [19] resulting value-added products or services to the market.

Besides KM, OA was also found to have significant relation towards SCMP, based on the supported Hypothesis 2 (H2). This result is consistent with previous study from Khastoo (2017) [21]. Agility of a firm as one of the vital characteristics to achieve superior supply chain practices [31]. In such a competitive market, firm needs to improve flexibility and responsiveness necessity to survive. Firms must unite with supplier and customers in advance the the operations and activities associated with the flow of material, technology, and information in order to achieve an agility in supply chain since the terms of agile supply chain refers to a set of firms which are dependent on each other in terms of the business side [21]. Agility of a firm influences the practices of the whole supply chain management to inventory reduction, adapting to market variations more efficiently, enabling enterprises to respond to market demand more quickly, and integrating with suppliers more effectively [32].

Hypothesis 3 (H3) was also supported based on the result meaning that IC has significant relation towards SCMP. This result is consistent with the findings from previous studies from Seo (2014) [22] & Lintukangas (2019) [33] which stated that IC could well enhance the practices and performance of the overall supply chain. In the supply chain context, IC might involve in product, process, and services transformation [34]. For instance, collaboration with supply chain partners play a crucial role in driving innovation in the organization both upstream and downstream, from product development phase until the launch of the product to the market.

Another interesting finding of the study is by confirming that KM does positively influence both OA and IC which is seen by results which supported hypothesis 4 and hypothesis 5. Teece (2016) [24] Olivia (2018) [35] believed that the implementation of knowledge management in firm allows the firm to gain more the dynamic capability in facing today rapid advancement and rapid changing demand meaning firm will have the ability to be more agile or responsive and creative or innovative in response to market volatility and

dynamism. By having the right knowledge firm would be able to exploit for market insight to sense and predict market changes [36] and by integrating knowledge through organization learning, firm would have the ability to capture ideas and implement it into innovative output products, services, and processes [27].

Study Implication

As SCM study continues to increase and develop, many of them have not been able to offer much by way of guidance to help the practice of SCM and the role of organization capabilities factor which influence it [3]. The study contributes theoretically as this study confirms the relationships among the latent variable construct taken from previous studies with different research contexts. While many of studies published focus more focusing of what SCMP can bring to the performance of the firm, this study provides development of factors affecting SCMP in a more integrated and holistic way the different perspectives of such relationships whereas previous studies have not comprehensively examined such relationships by extending the theoretical development previously developed by several researchers. With the study context SCM in medical device industry Indonesia, the study also extended the validity of previous findings with the cross-industry validity.

The study also contributes practically by giving insight for medical device firms in Indonesia to enhance their Supply Chain Management Practice, by paying attention to Knowledge Management, Innovation Capability, and Organization Agility strategy in their day-to-day management. This study implies that Knowledge Management implementation has the biggest influence not only based by the β -coefficient value but also by the significant influence towards both Organization Agility and Innovation Capability.

In the context of supply chain management, having a right knowledge management utilization such as external learning from the chain members can help an organization to improve its innovativeness and help firms to respond to market changes quickly and efficiently [32]. For example, in the industry of medical devices; with the unexpected market demands caused by the COVID-19 pandemic, firms with a knowledge could get a market insight about the high demand of products (i.e. ventilators) in the future. Then it will increase their flexibility and responsiveness and the firm will therefore do collaboration (i.e. suppliers, universities, etc.) to manage and implement the idea to produce marketable innovative products in order to answer market demands. The whole process involved many firms in their practices of SCM.

VI. CONCLUSION

Supply Chain Management has emerged as the strategic management tools to enhance the performance of the whole management in order for firms to sustain in this very competitive market as well as help firms in obtaining competitive advantage over their competitors. The study contributes by showing that organization capabilities such as knowledge management, organization agility, and innovation capability are key drivers in enhancing Supply Chain Management Practices in the industry. Knowledge Management was found to be the most essential part in driving agility and innovativeness of firms to leverage the SCM practices.

VII. LIMITATIONS AND FUTURE RESEARCH

This study has several limitations, all of which open up opportunities for any future research to be conducted. First, this study is a cross-sectional study, therefore it cannot determine causality relationship between variables studied; therefore study should be conducted in a longitudinal timeline. Second, this study focused only upon the Medical Device Industry in Indonesia; As SCM research continues to develop, many researchers are focusing on the cross-industry validity of previous findings; therefore there is a need to re-study the hypothesized relationship between different industrial sectors in Indonesia. Third, this study only conducted in a quantitative method; conducting a mix-method (collecting data also through qualitative method) could add further value and interpretation to the respective findings.

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REFERENCES

- [1] P. Gyaneshwar and S. Kushwaha, "Operational Performance through Supply Chain Management Practices Department of Management Studies," vol. 3, no. 2, pp. 222–232, 2012.
- [2] K. C. Tan, S. B. Lyman, and J. D. Wisner, "Supply chain management: a strategic perspective," *Int. J. Oper. Prod. Manag.*, no. <http://www.emeraldinsight.com/0144-3577.htm>, 2002.
- [3] S. Li, B. Ragu-nathan, T. S. Ragu-nathan, and S. S. Rao, "The impact of supply chain management practices on competitive advantage and organizational performance," vol. 34, pp. 107–124, 2006.
- [4] K. Lenin, "Measuring supply chain performance in the healthcare industry," vol. 2, no. 5, pp. 136–142, 2014.
- [5] J. D. Vanvactor, "A case study of collaborative communications within healthcare logistics," vol. 24, no. 1, pp. 51–63, 2011.
- [6] M. García-fernández, F. Burstein, and W. B. Lee, "How to measure knowledge management: dimensions and model," 2015.
- [7] K. Liao and Y. G. Wang, "Proposing a Framework for Developing Supply Chains of Medical Devices," no. August, 2019.
- [8] I. Alfiansyah, F. Renaldi, and P. N. Sabrina, "Pembangunan Sistem Informasi Supply Chain Management Pada PT . ABN Medical Indonesia," pp. 426–430, 2019.
- [9] A. M. Lou and J. Razaenour, "The Impact of Knowledge Management Processes on Agile Supply Chain (Case The Impact of Knowledge Management Processes on Agile Supply Chain (Case Study: Irankhodro Foundry Co .)," *African J. Environ. Assess. Manag.*, vol. 21, no. 6, 2016.
- [10] A. B. Abdallah, B. Y. Obeidat, and N. O. Aqqad, "The Impact of Supply Chain Management Practices on Supply Chain Performance in Jordan : The Moderating Effect of Competitive Intensity," vol. 7, no. 3, pp. 13–27, 2014.
- [11] J. Girard, "Defining knowledge management : Toward an applied compendium," vol. 3, no. 1, pp. 1–20, 2015.
- [12] H. Shakerian, H. Dehghan, and F. Shateri, "A framework for the implementation of knowledge management in supply chain management," vol. 230, no. May, pp. 176–183, 2016.
- [13] A. Attia, I. E. Eldin, A. Attia, and I. E. Eldin, "Organizational learning , knowledge management capability and supply chain management practices in the Saudi food industry," 2018.

-
- [14] T. R. Chung and D. Chen, "Knowledge Creation and Financial Firm Performance: Mediating Processes from an Organizational Agility Perspective," 2012.
- [15] H. Taghizadeh, "Investigation the Effect of Knowledge Management on Organizational Agility," vol. 3, no. 1, pp. 67–86, 2015.
- [16] M. Assink, "Inhibitors of disruptive innovation capability: A conceptual model," *Eur. J. Innov. Manag.*, vol. 9, no. 2, pp. 215–233, 2006.
- [17] F. Iddris, "Examining Innovation Capability In A Supply Chain Context," no. 9, pp. 62–71, 2018.
- [18] K. Burgess and R. Koroglu, "Supply chain management : a structured literature review and implications for future research," *Int. J. Oper. Prod. Manag.*, vol. 26, no. 7, pp. 703–729, 2006.
- [19] T. Schoenherr and D. A. Griffith, "Knowledge Management in Supply Chains : The Role of Explicit and Tacit Knowledge," June 2018, 2014.
- [20] H. Liu, "KNOWLEDGE MANAGEMENT CAPABILITY AND FIRM PERFORMANCE : THE MEDIATING ROLE OF," 2014.
- [21] M. Khastoo, B. Dori, and A. Raad, "Impact of Agility Capabilities in the Supply Chain Network," vol. 5, no. 3, 2017.
- [22] Y.-J. Seo, J. Dinwoodie, and D.-W. Kwak, "The impact of innovativeness on supply chain performance : is supply chain integration a missing link ?," 2014.
- [23] M. Storer and P. Hyland, "Dynamic Capabilities and Innovation in Supply Chains," no. May 2014, 2009.
- [24] D. Teece, "Dynamic Capabilities and Organizational Agility:," vol. 58, no. 4, pp. 13–35, 2016.
- [25] K. Akram, S. H. Siddiqui, M. A. Nawaz, and T. A. Ghauri, "Role of Knowledge Management to Bring Innovation: An Integrated Approach Role of Knowledge Management to Bring Innovation : An Integrated Approach," no. May 2014, 2011.
- [26] J. G. Cegarra, P. Soto-acosta, and A. K. P. Wensley, "Structured knowledge processes and firm performance : The role of organizational agility" *J. Bus. Res.*, vol. 69, no. 5, pp. 1544–1549, 2015.
- [27] M. Saunila and J. Ukko, "A conceptual framework for the measurement of innovation capability and its effects," *Balt. J. Manag.*, vol. 7, no. 4, pp. 355–375, 2012.
- [28] F. Iddris, "Examining Innovation Capability In A Supply Chain Context," no. 9, pp. 62–71, 2018.

-
- [29] J. F. Hair, C. M. Ringle, M. Sarstedt, J. F. Hair, C. M. Ringle, and M. Sarstedt, "PLS-SEM : Indeed a Silver Bullet PLS-SEM : Indeed a Silver Bullet," no. January 2015, pp. 37–41, 2014.
- [30] S. C. L. Koh and M. Demirbag, "The impact of supply chain management practices on performance of SMEs," vol. 107, no. 1, pp. 103–124, 2007.
- [31] K. Aziz, A. A. Rahman, N. H. Kamarulzaman, and M. Sambasivan, "Agility and Supply Chain Management : Issues and Challenges," no. March, 2014.
- [32] Y. K. Tse and M. Zhang, "Supply Chain Management : An International Journal Article information : Embracing supply chain agility : an investigation in the electronics industry," 2016.
- [33] K. Lintukangas, A. Kähkönen, and J. Hallikas, "Journal of Purchasing and Supply Management The role of supply management innovativeness and supplier orientation in firms ' sustainability performance," vol. 25, no. June 2018, pp. 1–10, 2019.
- [34] R. Subroto and I. F. Wilkinson, "Innovation Generation in Supply Chain Relationships : A Conceptual Model and," no. December, 2004.
- [35] [35] F. L. Oliva et al., "The integration between knowledge management and dynamic capabilities in agile organizations," 2018.
- [36] H. S. Tooranloo and S. Saghafi, "The relationship between organisational agility and applying knowledge management " *Int. J. Agil. Syst. Manag.*, vol. 11, no. 1, 2018.

Strategic Marketing for Indonesia Local Game Company To Increase Product Attractiveness

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Abstract

The current games industry growth in Indonesia is quite good and is growing rapidly to date. The value of the game industry in Indonesia already reached 800 million USD or around Rp.11 Trillion based on the survey in 2017. However, even though the growth of the games industry is high, most of the market is still untapped by local game companies. Because of that, the local game companies in Indonesia need to develop a strategy to get more market share in the local game market. This research aims to measure the influence of the 4P marketing mix in the Indonesia games market, and formulate a suitable strategy to increase the product attractiveness based on the Indonesia game market characteristic. The variable for this research is the 4P marketing mix combined into a marketing strategy and product attractiveness. The research is done through qualitative interview method, and quantitative method through survey to 75 respondents with SPSS as the data analysis tool for the results. The study finds that the marketing strategy has low influence on the product attractiveness variable, also, between the 4P marketing mix, the promotion has the highest relation to the product attractiveness compared to price, place/position, or product.

Keywords: Games, Local games, Marketing strategy, Marketing mix, Product attractiveness.

I. INTRODUCTION

Game was perceived as a hobby or for entertainment, but now it can be considered as a job through occupation or profession such as E-sport (Electronic Sports) “athlete” or game developer. Games industry growth in Indonesia is quite good and is growing rapidly to date. Based on an article from Kompas.com (2018), from the survey conducted in 2017, the game industry value in Indonesia already reached 800 million USD or around Rp.11 Trillion. However, even though the growth of the games industry is considered high, most of the market is still mostly untapped by the local game developer. Based on the data from AGI (Asosiasi Game Indonesia), out of 100% of gaming market share in Indonesia, the local game company only got less than 0.4% share with the rest of the market share dominated by foreign companies [1]. The number of local game developers active in Indonesia is still also relatively low, only around 1000 which count as less than 2% of the online game played in Indonesia, with the rest 98% dominated by foreign game companies [2]. Based on that number, it shows that the Indonesian local game market is still dominated by foreign companies.



Figure 1 SEA Region Games Market Growth and Population.

The Indonesia game market is on a constant rapid growth with the highest percentage of CAGR (Compound Annual Growth Rate) of +37.3% [3]. With the rapid growth of the game industry, the game market of Indonesia has become one of the major contributors of revenue in the SEA (South East Asia) region which can be seen based on the figure 1, has a CAGR of +28.8%. The high CAGR is supported by the fact that Indonesia has the highest number of gamers in SEA with over 34 million gamers [2] with around 19.9 million paying gamers out of the total 59.9 million gamers in SEA [3]. The numbers shown means that around 1/3 of the SEA paying gamers population comes from Indonesia. One of

the milestones for the growth is during the 2018 Asian Games event held in Jakarta-Palembang in 2018, games were officially completed as E-sport. Although it was not included in the medal count, many representatives of the state sent their teams to compete in this sport. E-sport also planned to be officially contested for medals at the 2022 Asian Games [4].

The growth of the Indonesia games industry also directly contributes to the growth of the Indonesia creative industry sector. However, the games industry is still small compared to other sub sectors like fashion or culinary and still need to be researched to be utilized better. In order to help develop the gaming industry environment, many mobile operators have created incubation programs to support the game developers. Some of the incubation programs that have been running are *TemanDev* by Telkomsel and *Gudang Aplikasi* by XL Axiata. The incubation programs are created to help support growing local game developers in the development process in conjunction with the government program called *Bekup* (Bekraf for Startup) that is launched by Bekraf in collaboration with PT. Telekomunikasi Indonesia or Telkom [2]. In the near future, the dominance of the foreign game company won't be overthrown just by the improvement from the programs, it requires more improvement from the company itself, especially in the marketing strategy.

Because of the domination of the foreign company, there are several choices of strategy that can be taken to market or promote the Indonesian game market and there are also factors that should be considered. Marketing mix are some of the factors that should be considered in choosing the market strategy. Marketing mix for the game industry can be classified into main 4P, which is product, price, place, and promotion out of several other indicators of 7P from the expanded "marketing complex" [5]. Product for this case is the item which is the game itself and the several aspects that are related with the said item, such as the engine the game uses to run, the appearance of the game, etc. Price usually differs based on the games nature and type. People mainly focus on the growing number of mobile gamers and the local game company. Lastly, the promotion can be done through social media such as Facebook, and marketing through various gaming or digital based expo or events. From the marketing mix, the suitable strategy can be formulated for the local game industry by formulating the strategy through analysis of the marketing mix, from that strategy, it can help increase the local game industry competitiveness through the product attractiveness.

One of the reasons why foreign companies still dominate the local Indonesia game market is because there is a lack of investors from government or private companies and

the fact that the public still doesn't consider games as not much of a business. Because of that reason, it is important to research what strategy has the most significant influence to effectively and efficiently increase the product attractiveness of games from the local games company in Indonesia.

Hypothesis

Hypothesis 1b: Products don't have significant influence on the product attractiveness.

Hypothesis 2a: Price have the significant influence on the product attractiveness

Hypothesis 2b: Price doesn't have significant influence on the product attractiveness.

Hypothesis 3a: Promotion have the significant influence on the product attractiveness

Hypothesis 3b: Promotion doesn't have significant influence on the product attractiveness.

Hypothesis 4a: Place/position have the significant influence on the product attractiveness

Hypothesis 4b: Place/position don't have significant influence on the product attractiveness.

II. METHODS

The study conducted in this research is in the form of conclusive research with the aspect of mixed method. Conclusive research can be defined as research conducted to generate general findings that can help in making conclusions or decision-making [6]. In this research, the main objective is to formulate the strategy that can support the decision-making in the Indonesia local game company.

2.1 Unit analysis

For this research, the unit analysis is the local game developer and publisher in Java Island, mainly in Jakarta. The study is conducted with the focus of the on how the game developer and publisher promote/market strategy of their product to the local market, and the response of the local market (which is gamer in Java Island) toward how the local game developer and publisher market their products/games.

2.2 Sampling design

The population for this research will be everyone that works in a game company in

Java Island, mainly around Jakarta and Tangerang. The number of the sample will be around 70 to 140 respondents decided based on number of indicator (14 indicators) with the basis on the minimum sample size rule of thumb of 5 to 10 time number of indicators and not less than 50 respondents [7], based on that method, the number of respondents taken for this research is 75 respondents.

2.3 Location and time frame of study

The research takes place around Java Island which includes Tangerang, Jakarta, and South Tangerang, possibly Bandung, Surabaya, and other major cities in Java. The research makes use of internet surveys for easier access to farther locations. The time frame for this research will be around 1 month, from early December 2019 until January 2020.

2.4 Type of data

The data uses both primary and secondary data with both quantitative and qualitative data. The primary quantitative data come from surveys and the primary qualitative data come from interviews. The secondary data comes from literature review, both quantitative, in form of data and figures, and qualitative in form of theories and citations [8].

2.5 Data Processing

The data processing procedures will be done through validity and reliability tests. The reliability test method used will be by testing the Cronbach alpha [9]. and for the validity test method will be by using bivariate correlation analysis. Both tests will be done by using SPSS as the data processing tool.

2.6 Data Analysis

Based on the nature of the research being from business administration in the marketing section, the data analysis method used is descriptive statistics analysis. Some of the data analyzed through classical assumption methods such as regression using the data processing tool.

III. RESULTS

3.1 Respondent Profiles

The respondent consists of two types, which is game developers and game publishers. The developers can be in the size of a single person company or as large as hundred person teams, the publishers usually come in the form of an agency or a company. Some of the developers have chosen to self publish or market their games on their own. However, there are some developers that have chosen to let other parties, which is the publishers to market or pitch their games.

The age range of the respondents is dominated by the age range of 20-30 years old, or classified as young adults numbering 68% of the respondents, and adults only about 13.3% of the respondents, and few of the respondents are aged over 40s and some aged below 20s.

3.2 Survey Result

In this research, there are two research variables consisting of marketing strategy and product attractiveness, the number of questions and respondents' answers results differ based on variables. Based on the result, the equation based on the model would be $y = 12.52 + (-0.5 \times p1) + (0.851 \times p2) + (0.356 \times p3) + (0.421 \times p4)$. Based on the equation, it shows that promotions have the highest coefficient α_n affecting the product attractiveness and price have negative value because basically, the higher the price, the less attractive a product will be which in this case, works the opposite of the place, product, and promotion.

The marketing strategy variable consists of 36 questions with 75 respondents. Each respondent chooses one of the available answers given weighted value, namely answers strongly agree = 5, agree = 4, hesitant = 3, tend to disagree = 2, and disagree = 1. The ideal value is when all of 75 respondents chose strongly from 36 questions. The total weighted value is $75 \times 5 \times 36 = 13500$. The ideal marketing strategy score is when the choice of respondents either chose strongly agree and agree, with the weighted value of each answer strongly agree and agree namely $792 \times 5 + 768 \times 4 = 7032$.

The distribution result of respondents that strongly agree and agree is 7032 out of a maximum weighted value of 13500, from there, the value of around 52,09% can be acquired. This means that more than half of the respondents agree with the marketing strategy variables which consists of various indicators such as payment channel, type of price, promotion channel, methods of promotion, segmentation, features, etc.

The dimensions for the marketing strategy are measured through 8 questions each

price, promotion, and place/positioning which comes from 4 questions for each indicator (2 indicators/dimension), and 12 questions for product which splits into 3 indicators with 4 questions each with 75 respondents for all dimensions. The weighted value used for each dimension is basically the weighted value used for marketing strategy variables.

Based on the measured weighted value, the ideal score for each price, promotion, and place are 3000 and for product is 4500. Compared with the acquired answer (weighted) from the research, the price dimension has a score of 1466 out of 3000 which leads to the agreement percentage of around 48.87% which means less than half of the respondent agreed with the statement for the price dimension. For the second dimension of the marketing strategy, which is promotion, the received score is 1679 out of 3000 which leads to an agreement percentage of 55.97% which means more than half of the respondents agreed with the statement for the promotion dimension. The placement or positioning dimension, which is the third dimension, received a score of 1483 out of 3000 which leads to agreement percentage of around 49.43% that translates into less than half of the respondent agreeing to the statement for the positioning dimension. The last dimension which is the product or the item (local games) itself has the score of 2404 out of 4500 which translates into agreement percentage of 53.42% or more than half of the respondent agreed with the statement for the product dimension.

From the weighted value analysis, it can be found that the dimension that more than half of the respondent agreed with is the promotion and product dimension. On the other hand, the other two dimensions which are price and place/positioning have less than half of the respondents that agree or strongly agree.

The second variable, product attractiveness, consists of 20 questions with 75 respondents with the same weighted value as the first variable. The ideal value is when all respondents choose strongly agree. The maximum total weight is $75 \times 5 \times 20 = 7500$. The ideal value on this variable when the respondent chooses to strongly agree and agree, by giving a weight according to each answer when they strongly agree and agree, the result from the survey is $499 \times 5 + 367 \times 4 = 3963$.

From the results of calculations based on the weighted value of the product attractiveness variable, the score of 3963 can be acquired, when divided by the overall weight of the maximum ideal value of 7500, a percentage value of 52,84% can be received. The percentage value means that more than half of the overall respondents agree with the product attractiveness variable which includes the games technical balance, the graphical quality, the engine used for running the games, etc.

3.3 Interview Result

The interview is done to several gamers and developers through direct means such as face to face field interview, and through indirect messaging services. The interview is done to 5 respondents.

Based on the general answer from all of the interview, most of the answers about the potential and how promising the current state of the local gaming Indonesia around 4 out of 5 respondent answers that the state is quite promising. From the interview it can also be taken to the conclusion that most of the gamer have desire and willingness to support the local gaming Industry, but only if the local company also supports the game continuously and the game have “acceptable” qualities. That fact shows that the gamer community expects good quality games as a product, and a good communication with the community through things like promotion, which in line with the result of the questionnaire in the way that product and promotion plays a more dominant role, even though not by a huge margin.

The conclusion that can be taken is that based on most of the interview is that Indonesian local gamers expect a good role playing game with Indonesian background. That conclusion leads to one of the possible approaches or strategies that can be taken for a local game company which is to try to make a quality role playing game with Indonesian cultural theme and market it with a decent amount of marketing.

3.4 Hypothesis Testing

Paired Samples Correlations

		N	Correlat ion	Sig.
Pair 1	Place & Product attractiveness	75	,635	,000
Pair 2	Product & Product attractiveness	75	,656	,000
Pair 3	Price & Product attractiveness	75	,648	,000
Pair 4	Promotion &	75	,766	,000

	Product attractiveness			
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Referring to the table, the N column shows the number of samples received and processed in the research, which in this case, is 75 paired samples. The correlation column shows the correlation between the paired variable, the correlation is shown in the value of $r = 0.635$ which translates as a fairly strong linear relationship for the first pair, $r = 0.656$, which also means fairly strong relationship for the second pair, $r = 0.648$ for the third pair also means the same relationship level as the previous two pair, and for the fourth pair, the $r = 0.766$ means it has a moderate to strong relationship, a level stronger than the previous three pair. The rightmost column shows the p value of the processed data, the p value determines whether the null hypothesis (the a hypothesis) is rejected or not. The null hypothesis is rejected if the p value is equal or less than the α , for this research the α is 0.05. Because the p value for all pairs is 0 which is less than 0.05, all null hypotheses are rejected and each alternate hypothesis (the b hypothesis) is accepted.

IV. CONCLUSION

1. Based on the hypothesis testing, the marketing strategy variable doesn't have a significant influence on the product attractiveness, even though they have moderate linear relationship between the two.
2. more than half of the respondents agree with the marketing strategy variable of the questionnaire
3. more than half of the respondents agree with the product attractiveness variable of the questionnaire
4. The marketing strategy has insignificant effect towards influencing the product attractiveness of a local game in Indonesia games market, which means, the level of influence the 4P marketing mix has towards product attractiveness is low.
5. Because marketing strategy variables don't really influence product attractiveness, each variable should have their own approach for the games market in Indonesia.

4.1 Implications

The marketing strategy for the local game market in Indonesia should focus on increasing the market awareness of the local game for the mass market. Based on the questionnaire, most of the respondents consider games as a more “public” or “non-luxurious” item and because of that, the local game should try to acquire the market for the more mass gamer market. The promotion method suitable for the Indonesian games market is most likely through social media, considering that Indonesians spend a lot of time browsing the social media, it would be better to focus on promoting through social media. However, that doesn't mean the company should ignore other promotion channels, even though most respondents consider television to be unsuitable for promoting games, there are also other method or channels where local game company can promote games and attract more people to buy local games, such as through events and gaming competitions, which can lead to more mouth to mouth promotions that most respondents still consider a suitable promotion method for Indonesia game markets.

Based on the interview with several gamers in Indonesia, most of them prefer games with RPG (role playing game) genre more compared to other genres. For the aspect that should be focused, in the current state of the gaming market, games with better appearance, either graphically or package-wise, is more preferred in the Indonesian games market, because of that, it is better for local game company to try making a good RPG games with beautiful graphic to attract the Indonesian games market. The fact that most local game only makes casual games tend to make a more “hardcore” gaming market in Indonesia to lose interest in the local games.

REFERENCES

- [1] JawaPos, "Indonesia Masih Jadi Pasar, Industri Game Lokal Sulit Maju," 10 July 2019. [Online]. Available: <https://www.jawapos.com/oto-dan-teknologi/aplikasi/10/07/2019/indonesia-masih-jadi-pasar-industri-game-lokal-sulit-maju/>.
- [2] English-Indonesia Business Network, "EIBN Sector Reports: Gaming Industry," 2016.
- [3] Newzoo, "Southeast Asian Games Market: Opportunities in the world's fastest growing region," Newzoo, 2015.
- [4] S. Khidhir, "Game On! Indonesia," 28 March 2019. [Online]. Available: <https://theaseanpost.com/article/game-indonesia>.
- [5] M. Išoraitė, "MARKETING MIX THEORETICAL ASPECTS," International Journal of Research – Granthaalayah, Vol. 4, No. 6, pp. 25-37, 2016.

-
- [6] J. Dudovskiy, "conclusive research - research methodology," 2018. [Online]. Available: <https://research-methodology.net/research-methodology/research-design/conclusive-research/>.
- [7] J. F. Hair, W. C. Black, B. J. Babin and R. J. Anderson, *Multivariate Data Analysis*, England: Pearson Education Limited, 2014.
- [8] Sugiyono, *Metode Penelitian Manajemen*, Bandung: Alfabeta, 2013.
- [9] P. Chetty and S. Datt, "Reliability test in SPSS using Cronbach Alpha," 7 February 2015. [Online]. Available: <https://www.projectguru.in/publications/reliability-test-cronbach-alpha/>.
- [10] Bekraf, "Hasil Survei Khusus Ekonomi Kreatif," 2017.
- [11] B. Schnurr, A. B. Sperdin and N. E.-S. Sauer, "The effect of context attractiveness on product," *Springer Mark Lett*, pp. 241-253, 2017.
- [12] T. G. Fiala, "What Do Patients Want? Technical Quality Versus Functional Quality: A Literature Review for Plastic Surgeons," *Aesthetic surgery journal*, pp. 751-759, 2012.
- [13] Martin, "Understanding The Marketing Mix Concept-4Ps," 4 August 2014. [Online]. Available: <https://www.cleverism.com/understanding-marketing-mix-concept-4ps/>.
- [14] T. Dobbelstein and F. Gwosdz, *Virtual Marketing Mix: Marketing applied for Virtual Goods in F2P Games.*, 2016.
- [15] M. Jennejohn, "Innovation and the Institutional Design of Merger Control," *The Journal of Corporation Law*, pp. 15-24, 2015.
- [16] W. M. Trochim, "Social research methods-Knowledge Base-Unit of Analysis," 20 October 2006. [Online]. Available: <https://socialresearchmethods.net/kb/unitanal.php>.
- [17] Stephanie, "Sampling design-Statistics How to," 9 August 2017. [Online]. Available: <https://www.statisticshowto.datasciencecentral.com/sampling-design/>.
- [18] A. Bhat, "DATA ANALYSIS IN RESEARCH: WHY DATA, TYPES OF DATA, DATA ANALYSIS IN QUALITATIVE AND QUANTITATIVE RESEARCH," 2019. [Online]. Available: <https://www.questionpro.com/blog/data-analysis-in-research/>.
- [19] S. Pearlman, "What is Data Processing? Definition and Stage," 11 March 2019. [Online]. Available: <https://www.talend.com/resources/what-is-data-processing/>.
- [20] M. Bhatia, "Your Guide to Qualitative and Quantitative Data Analysis Methods," 5 September 2018. [Online]. Available: <https://humansofdata.atlan.com/2018/09/qualitative-quantitative-data-analysis-methods/>.
- [21] P. Trowe, "The Difference between a Video Game Developer and Publisher," 17 June 2018. [Online]. Available: <https://medium.com/@PaulTrowe/the-difference-between-a-video-game-developer-and-publisher-c6038324ee56>.

Creation Capacity and Dispersion Capacity the Role of Opportunity to Learn in Knowledge Creation Performance

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Abstract

This article aimed to investigate the opportunity to learn into the capacity of creation (team orientation and learning) and the capacity of dissemination (memory and system orientation). The capacity of creation and dispersion can each increase practice and exploitation in the creation of knowledge. We use survey questionnaires to collect data from 145 members of IKAPI in Central Java. In this research, creation capacity and dispersion capacity are expected to increase knowledge creation performance. Providing opportunities for learning that is expected to be able to increase the creation capacity and dispersion capacity and potentially affect the increase in knowledge creation performance. This article provides information on the importance of providing opportunities to learn in developing and managing creation capacity and dispersion capacity that support the practice of exploration and exploitation and develop knowledge creation performance. In improving organizational competence it is important to provide learning opportunities as large as human resources so that they are able to provide accessibility to the exchange and creation of knowledge.

Keywords: Opportunity to learn, Creation Capacity, Dispersion Capacity, knowledge creation performance.

I. INTRODUCTION

Organizational Learning is a dynamic process for creating new knowledge and transferring it to where it is needed and used, resulting in the creation of new knowledge for later transfer and use. Knowledge creation, transfer, and retention can largely be considered social processes involving communication, interaction, collaboration, and discourse among organization members. Organizational Learning is related to the concept of knowledge management (KM), which is also mainly related to the ability of organizations to create and transfer knowledge. However, knowledge management tends to emphasize the static knowledge stock possessed by an organization and the characteristics of that knowledge organization, rather than the dynamic process by which knowledge is developed by the organization.

Organizational Learning is an organization that has an increased capacity to learn and transform. The four main versions describing the definition of Organizational Learning are learning at work, climate for learning, organizational learning and learning structure. Learning at work implies that the organization has re-directed its way of dealing with development so that employees learn at work and in close contact with the work (i.e., as long as the work task is done) rather than taking formal courses, away from work. In this case, the Organizational Learning aspect comes in the form of an organization that organizes learning to take place in the workplace. Climate for learning implies that organizations offer tools and opportunities to learn to individuals and groups within them[6],[7]. Employees are encouraged to experiment, and "failure" is considered a learning opportunity. Time to reflect on experiments and the results of these during business hours is generously offered. The learning structure here is that the organization facilitates and, to some extent, regulates learning[5].

Organizational Learning is what individuals learn, as agents for organizations, stored outside a single individual in the form of organizational memory. The organization's memory is constantly updated and serves as the basis for performing further work and learning tasks[8]. Organizational Learning when associated with differentiation networks created through the learning process still leaves some contradictions in previous research studies. When organizational learning becomes an organizational routine because the individual contains the content (fraught) of problems then organizational learning becomes a guide in behaving then organizational learning that occurs in the long term will lead the individual to competence traps [9]. Inductive learning comes from the experience of individuals, it will be different results if applied to different organizational situations [10]. So many researchers are concerned that if learning happens for a long time, there will be waste, financial spending, boredom, and stagnation[9].

Two forms of organizational learning are exploration learning and exploitation learning. Exploration involves developing new knowledge or replacing existing content in an organization's memory. Exploitation refers to incremental learning that focuses on diffusion, refinement, and reuse of existing knowledge. March's article states that exploration (search, variety, risk-taking, experimentation, gaming, flexibility, discovery, innovation) and exploitation (refinement, choice, production, efficiency, selection, implementation, and execution) have changed over time. Literature shows that the learning abilities required for successful exploration differ from those necessary for exploitation[13],[14].

Dispersion capacity (memory and system orientation) will be directly associated with exploitation and creation capacity (team orientation and learning). The dual combination of creative capacity and deployment can be central to managing innovation challenges. The deployment capacity of the proposed creation as a mode of managing exploration and exploitation[9]. Organizations that encourage learning will encourage communication and sharing of tacit knowledge, routines, and past experiences for exploration (long-term) or exploitation (short-term) practices.

Creative deployment capacity helps identify, classify, allocate, and utilize human capital, devote learning efforts, allocate incentives and budgets, and develop the routines and management systems necessary for exploration and exploitation ([15]. Classifying learning orientation based on creation-dispersion capacity helps identify ways to allocate appropriate learning resources to improve exploration and exploitation practices and ultimately the company's performance. But the lack of learning opportunities for employees (opportunity for learning) often raises problems in the learning process in organizational learning. The lack of opportunity for learning is due to seniority not on the equalization of learning opportunities, but rather given to those who have a position. So often the process of transfer of knowledge stops without being shared with other human resources.

IKAPI members play a key role in determining the fate of knowledge created and shared in books to be printed and disseminated. Different learning activities will result in different types of knowledge sets. IKAPI members are still insensitive to how the ownership of different knowledge in terms of content, complexity, will be very potential if it can be integrated properly so as to grow the creation of new knowledge as a result of bundling existing knowledge. This is important to note because the variety of knowledge in IKAPI varies greatly, contributing differently to complementing and expanding the IKAPI knowledge base. The ability to influence the creation of knowledge and the use of knowledge that has been possessed will be very helpful in improving the capabilities of IKAPI members.

This research aims to examine how providing a good opportunity to learn can improve exploration learning and exploitation learning that ultimately impacts knowledge creation performance.

II. LITERATURE REVIEW

1. *Knowledge creation performance*

Knowledge creation has the highest weighting associated with performance, represented by several financial factors, including share price, price-to-income ratio, and research and development expenditures (R&D), which translates from management performance [2]. The index for evaluating knowledge creation performance includes five aspects:

- 1) product or service creation performance measures the technical performance of the development of new products or services, such as effectiveness and adaptability.
- 2) manufacturing or service process creation performance, (Manufacturing process or CP service process) relates to the process of a program, service, and product, including cost, quality, delivery due date, flexibility, and innovation.
- 3) management creation performance, researching the effect on the organization through the implementation of managerial processes, plans, flexibility, integration, communication, coordination, and employee cohesion.
- 4) Strategy creation performance focuses on positioning new products or services, new uses, and redistribution of value activities to improve competitiveness.
- 5) Organization creation performance handles the creation of behaviors that measure capabilities and experience, such as coordination with international sales, improvement and service, international brand formation, and international distribution planning and management.

Knowledge creation depends on the process of generating new knowledge through the accumulation and integration of existing knowledge to achieve goals such as the development of new products or services, improved management, and improvement of manufacturing processes. The creation of knowledge is a multidimensional problem that has developed its own process characteristics. Basically, the knowledge that the organization has is the result of the process of personal knowledge collaboration. This study only adopted three indexes of knowledge creation performance developed [2] namely product or service, manufacturing or service process, and management.

2. *Opportunity to Learn (Kesempatan Belajar)*

Opportunity to Learn is a program where human resources have opportunities for the development of personality, skills, competencies and changes are displayed in the form of improving the quality and quantity of behavior such as improving skills, knowledge, attitudes, habits, understanding, skills, thinking power, and other abilities [5]. The opportunity to Learn construct is based on how organizations provide specific settings in facilitating the development of individuals to learn over time. Opportunity to Learn is influenced by students, the nature of assignments, and the tools used in the learning process. Opportunity to Learn indicators according to [22] are formal training and development programs, informal sharing groups, and job rotations.

Opportunity to Learn is required for successful exploration different from that required for exploitation. Opportunity to Learn supports the needs of organizations to improve exploration and exploitation learning.

H1 : *Opportunity to Learn* meningkat maka akan meningkatkan learning *Creation capacity*.

H2 : *Opportunity to Learn* meningkat maka akan meningkatkan learning *Creation capacity*.

Opportunity to Learn emphasizes the culture of learning and improves outcomes in the form of new knowledge. [24] states that building successful learning relationships between organizations and individuals requires long-term investment, understanding and adaptation on the part of both parties at several levels of the organization. Opportunity to Learn facilitates knowledge sharing, creation, and integration by aligning attitudes and how they work.

H3 : *Opportunity to Learn* meningkat maka akan meningkatkan learning *knowledge creation performance*.

3. *Creation capacity*

Creation capacity is defined as a combination of team orientation and learning orientation that represents the investigation and production of new knowledge to be utilized for new products or processes, using individuals and teams and their knowledge as production tools. Creation capacity represents the search and production of new knowledge to be utilized for new products or processes, using individuals and teams and their knowledge as production tools. Creation capacity includes people (team orientation) and provides infrastructure support for learning (learning orientation) to improve the tools, people, and processes needed for exploration[9]. Creation capacity aligns with the practice of exploration, exploring, experimenting, and discovering ([11] enhanced by proper development and active management of learning resources that emphasize team orientation and orientation learning.

Creation capacity is the result of the organization's team orientation and learning orientation. Creation capacity is operationalized by taking products from the average team orientation and learning orientation scale. The four items used to measure Creation capacity are: explore, experiment, and discover [11]. These two learning orientations work together to develop the capacity of creation and to improve exploration practices.

H4 : *Creation capacity* meningkat maka akan meningkatkan learning *knowledge creation performance*.

4. *Dispersion capacity*

Dispersion capacity is a combination of system orientation and memory orientation, representing the organization's ability to distribute knowledge and skills learned throughout the organization and to store knowledge for future access, expansion, and refinement. Dispersion capacity represents an organization's ability to distribute knowledge and skills learned throughout the organization, thereby improving future access, extensions, and improvements. Dispersion capacity consists of system orientation and memory orientation [9]. Learning behaviors that develop organizational dispersion capacity make organizations more reliable and efficient (exploitation) through knowledge improvement, memory orientation, and understanding various environmental inputs (system orientation). Dispersion capacity encourages and strengthens knowledge recycling, sharing, application, replication and refinement necessary for exploitation practices. Dispersion capacity is measured using refinement of knowledge, knowledge sharing (memory orientation), and understanding the multiple inputs of an environment (system orientation)[9].

Dispersion capacity mendorong *knowledge recycling, sharing, application, replication* dan *refinement* yang memungkinkan *knowledge creation*.

H5 : *Dispersion capacity* meningkat maka akan meningkatkan learning *knowledge creation performance*.

III. MEASUREMENTS

This study only adopted three indexes of knowledge creation performance developed[2]. namely product or service, manufacturing or service process, and management. The Opportunity to Learn indicators used in this study are those developed by [22] are formal training and development programs, informal sharing groups, and job rotations. Creation capacity indicators are: explore, experiment, and discover [11]. Dispersion capacity is

measured using indicator refinement of knowledge, knowledge sharing (memory orientation), and understanding the multiple inputs of an environment (system orientation) [9].

IV. METHODS

This research is an explanatory quantitative research that examines the causality relationship between variable knowledge creation performance, Opportunity to Learn, Creation capacity and Dispersion capacity. The study used nominal data from a likert scale of 1 to 5 to measure questionnaires shared with respondents. The population is all members of IKAPI in Central Java as many as 175 members. Determination of respondents using purposive sampling techniques, namely IKAPI members who are still actively counted as many as 145 members of IKAPI in Central Java. The data obtained is processed using SEM PLS statistics analysis tool.

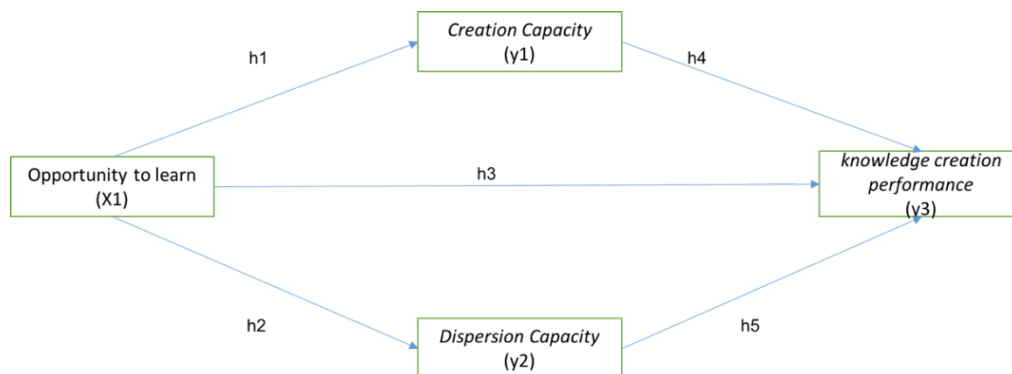


Fig 1. Empirical model of research.

V. CONCLUSION

In this study, creation capacity and dispersion capacity are expected to increase knowledge creation performance. The provision of appropriate opportunity to learn is expected to increase creation capacity and dispersion capacity and potentially affect the increase of knowledge creation performance.

VII. IMPLICATION

This article provides information on the importance of providing opportunity to learn in developing and managing creation capacity and dispersion capacity that supports exploration and exploitation practices and develops knowledge creation performance. In improving the competence of the organization is important to provide learning opportunities as large as the amount of human resources so as to provide accessibility to the exchange and creation of knowledge

VIII. RESEARCH LIMITATION

The results showed the opportunity to learn potential in developing and managing creation capacity and dispersion capacity that supports exploration and exploitation practices and develops knowledge creation performance but has not been supported by statistics data or supporting field evidence. Further studies are expected to provide practitioners with an understanding to increase the level of knowledge creation to improve IKAPI's competitive position by displaying statistical analysis data that supports the findings in order to be more generalized.

REFERENCES

- [1] L. M. Greco, S. D. Charlier, and K. G. Brown, "Trading off learning and performance: Exploration and exploitation at work," *Hum. Resour. Manag. Rev.*, vol. 29, no. 2, pp. 179–195, 2019, doi: 10.1016/j.hrmr.2018.06.001.
- [2] S. C. Kao and C. H. Wu, "The role of creation mode and social networking mode in knowledge creation performance: Mediation effect of creation process," *Inf. Manag.*, vol. 53, no. 6, pp. 803–816, 2016, doi: 10.1016/j.im.2016.03.002.
- [3] K. B. Dahlin, Y. T. Chuang, and T. J. Roulet, "Opportunity, motivation, and ability to learn from failures and errors: Review, synthesis, and ways to move forward," *Acad. Manag. Ann.*, vol. 12, no. 1, pp. 252–277, 2018, doi: 10.5465/annals.2016.0049.
- [4] K. E. Watkins and K. Kim, "Current status and promising directions for research on the learning organization," *Hum. Resour. Dev. Q.*, vol. 29, no. 1, pp. 15–29, 2018, doi: 10.1002/hrdq.21293.
- [5] Anders Örténblad, "Editorial What does 'learning organization' mean?," *Learn. Organ.*, vol. 0, 2018, doi: 10.1108/09604529710186606.

-
- [6] A. J. Leach, "The climate change learning curve," *J. Econ. Dyn. Control*, vol. 31, no. 5, pp. 1728–1752, 2007, doi: 10.1016/j.jedc.2006.06.001.
- [7] V. Tran, "The role of the emotional climate in learning organisations," *Learn. Organ.*, vol. 5, no. 2, pp. 99–103, 1998, doi: 10.1108/09696479810212060.
- [8] A. Salas Vallina, M. D. Moreno-Luzon, and A. Ferrer-Franco, "The individual side of ambidexterity: Do inspirational leaders and organizational learning resolve the exploitation-exploration dilemma?," *Empl. Relations*, vol. 41, no. 3, pp. 592–613, 2019, doi: 10.1108/ER-02-2018-0050.
- [9] D. Ojha, E. Struckell, C. Acharya, and P. C. Patel, "Supply chain organizational learning, exploration, exploitation, and firm performance: A creation-dispersion perspective," *Int. J. Prod. Econ.*, vol. 204, pp. 70–82, 2018, doi: 10.1016/j.ijpe.2018.07.025.
- [10] J. Brix, "Ambidexterity and organizational learning: revisiting and reconnecting the literatures," *Learn. Organ.*, vol. 26, no. 4, pp. 337–351, 2019, doi: 10.1108/TLO-02-2019-0034.
- [11] J. G. March, "Exploration and exploitation in organizational learning 'التنقيب والاستغلال في مؤسسات التعلم'" *Organ. Sci.*, vol. 2, no. 1, pp. 71–87, 1991, doi: 10.1287/orsc.2.1.71.
- [12] T. orcid. org/000.-0002-4867-1861 Wilden, R, Hohberger, J, Devinney, "Revisiting James March (1991): Whither Exploration and Exploitation?," vol. 16, no. 3, pp. 352–269, 2018.
- [13] E. Knight and W. Harvey, "Managing exploration and exploitation paradoxes in creative organisations," *Manag. Decis.*, vol. 53, no. 4, pp. 809–827, 2015, doi: 10.1108/MD-03-2014-0124.
- [14] J. Birkinshaw and K. Gupta, "Clarifying the distinctive contribution of ambidexterity to the field of organization studies," *Acad. Manag. Perspect.*, vol. 27, no. 4, pp. 287–298, 2013, doi: 10.5465/amp.2012.0167.
- [15] A. K. Gupta, K. G. Smith, and C. E. Shalley, "'The Interplay between Exploration and Exploitation' , *Academy of Management Journal*," *Acad. Manag. J.*, vol. 49, no. 4, pp. 693–706, 2006.
- [16] G. C. Kane and M. Alavi, "Information technology and organizational learning: An investigation of exploration and exploitation processes," *Organ. Sci.*, vol. 18, no. 5, pp. 796–812, 2007, doi: 10.1287/orsc.1070.0286.
- [17] O. Oyemomi, S. Liu, I. Neaga, H. Chen, and F. Nakpodia, "How cultural impact on knowledge sharing contributes to organizational performance: Using the fsQCA approach," *J. Bus. Res.*, vol. 94, pp. 313–319, 2019, doi: 10.1016/j.jbusres.2018.02.027.

-
- [18] D. McIver, S. Fitzsimmons, and C. Lengnick-Hall, "Integrating knowledge in organizations: examining performance and integration difficulties," *Knowl. Manag. Res. Pract.*, vol. 17, no. 1, pp. 14–23, 2019, doi: 10.1080/14778238.2018.1538667.
- [19] R. A. I. Abueed and M. Aga, "Sustainable knowledge creation and corporate outcomes: Does Corporate Data Governance Matter?," *Sustain.*, vol. 11, no. 20, 2019, doi: 10.3390/su11205575.
- [20] J. Cohen and R. Berlin, "What Constitutes an 'Opportunity to Learn' in Teacher Preparation?," *J. Teach. Educ.*, vol. 71, no. 4, pp. 434–448, 2020, doi: 10.1177/0022487119879893.
- [21] S. Blömeke, U. Suhl, G. Kaiser, and M. Döhrmann, "Family background, entry selectivity and opportunities to learn: What matters in primary teacher education? An international comparison of fifteen countries," *Teach. Teach. Educ.*, vol. 28, no. 1, pp. 44–55, 2012, doi: 10.1016/j.tate.2011.08.006.
- [22] T. W. H. Ng, M. M. Butts, R. J. Vandenberg, D. M. DeJoy, and M. G. Wilson, "Effects of management communication, opportunity for learning, and work schedule flexibility on organizational commitment," *J. Vocat. Behav.*, vol. 68, no. 3, pp. 474–489, 2006, doi: 10.1016/j.jvb.2005.10.004.
- [23] H. Park and C. C. Chung, "The role of subsidiary learning behavior and absorptive capacity in foreign subsidiary expansion," *Int. Bus. Rev.*, vol. 28, no. 4, pp. 685–695, 2019, doi: 10.1016/j.ibusrev.2019.01.006.
- [24] C. Hoadley, Y. Kali, A. Baram-tsabari, and A. Schejter, *Learning In a Networked Society: Spontaneous and designed learning communities*. 2019.
- [25] L. Kunttu and Y. Neuvo, "Balancing learning and knowledge protection in university-industry collaborations," *Learn. Organ.*, vol. 26, no. 2, pp. 190–204, 2019, doi: 10.1108/TLO-06-2018-0103.
- [26] Y. Gong, T. Y. Kim, D. R. Lee, and J. Zhu, "A multilevel model of team goal orientation, information exchange, and creativity," *Acad. Manag. J.*, vol. 56, no. 3, pp. 827–851, 2013, doi: 10.5465/amj.2011.0177.

Important Entrepreneurial Characteristics to Survive in the Covid-19 Pandemic Era (Case Study on Alumni Business Administration Program of Atma Jaya Catholic University of Indonesia)

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Abstract

This Covid-19 pandemic era not only caused problems in the health sector but also in the economic sector. Indonesia's neighbouring country, has entered a recession. We have not yet entered a recession, but it seems unavoidable. One important thing that is expected to support national economic resilience from recession is entrepreneurs, especially the MSMEs entrepreneurs. This study will analyze the essential characteristics possessed by six alumni of the Business Administration Program, Atma Jaya Catholic University of Indonesia, who are MSMEs entrepreneurs. The main concept used in this study is the entrepreneurial characteristics from Longenecker and Hornaday. The research method used is qualitative with descriptive data analysis techniques. Researchers used convenience technique sampling and used the first data source by interviewing informant and secondary data sources about informant business activity. The conclusion from this research is that the six informants have the entrepreneurial characteristics from Longenecker.

Keywords: Entrepreneurial Characteristics, MSMEs Entrepreneur Longenecker.

I. INTRODUCTION

This Covid-19 pandemic era not only caused problems in the health sector but also in the economic field. The latest news informs that Indonesia's neighboring country, Singapore, has experienced a recession in July 2020 [1]. Korea Selatan, Hong Kong, France, Italy, Germany, and even the USA [2] have also reportedly experienced a recession. Although, until now, Indonesia has not experienced a recession, but it seems that economic recession will be unavoidable. From BPS data, it is said that in the 1st quarter of 2020, Indonesia's economic growth was only 2.97% [3].

Meanwhile, BPS data shows that consumption in the 1st quarter of 2020 has been affected by Covid-19. It can be seen that spending or household consumption only grew by 2.84%. Compare this data with the same period last year, which rose 5.02% [4]. This condition is predicted to decrease along with the length of the pandemic.

One important thing that is expected to support national economic resilience from recession in Indonesia is entrepreneurs, especially the MSMEs entrepreneurs. The Indonesian Ministry of Cooperatives and MSMEs noted that in December 2018, the contribution of 60 million MSMEs units to Gross Domestic Product (GDP) was 60.34 percent and was able to contribute up to 97 percent of the employment to the total national workforce [5]. The data shows that the GDP contributed by MSMEs is more than 50 percent of Indonesia's GDP, not a small amount.

The role of MSMEs in sustaining Indonesia's national economy is increasing because, as we all know, in this pandemic era, many employees are not getting a salary, facing reduced salary, or even being laid off. Based on the Ministry of Manpower Ministry as of May 1st, 2020, the number of formal sector workers that have been laid off due to the COVID-19 pandemic has reached 1,032,960 people, and the number of formal and informal sector workers that have been laid off has reached 689,998 people. Thus, formal and informal sector workers affected by COVID-19 are 1,722,958 people [6]. Many employees or workers affected by Covid-19 are "forced" to switch professions to become entrepreneurs because they no longer have a regular income.

It is not easy for people who are used to being employees to become entrepreneurs. There needs to be a mental change for these people, as stated by one businessman named Ipong Sudarsono [7].

However, this condition is also not easy for entrepreneurs who already owned businesses before the pandemic occurred. It is because everyone must tighten their belts, reduce unnecessary spending, and prioritize consumption only for basic needs, given these conditions are feared to last a long time. Specific characteristics are needed for these entrepreneurs to survive in this era of uncertainty.

This article will analyse the essential characteristics possessed by entrepreneurs in the Covid-19 pandemic era. This article is expected to provide information for entrepreneurs about the character that is expected to make them survive in a situation like this.

II. LITERATURE STUDY

A. Entrepreneurship and Entrepreneur

Entrepreneurship is one of the most important inputs in the economic development of a country [8]. Many people have often expressed the statement because, according to Nishanti, cited from Professor Nathaniel H. Leff, "Entrepreneurship is the capacity for innovation, investment, and expansion in new markets, products, and technique" [9]. From the definition, it is clear that entrepreneurship is the capacity to enter new markets, produce new products, and implement new technologies. It means that entrepreneurship enables the formation of new jobs, which also means it can reduce unemployment.

There is one reasonably complete definition of entrepreneurship. Kuratko, cited from Kuratko and Hodgetts, said about the integrative definition of entrepreneurship: "Entrepreneurship is a dynamic process of vision, change, and creation. It requires an application of energy and passion towards the creation and implementation of new ideas and creative solutions. Essential ingredients include the willingness to take calculated risks, in terms of time, equity, or career; the ability to formulate an effective venture team; the creative skill to marshal the needed resources; the fundamental skill of building a solid business plan; and, finally, the vision to recognize opportunity, where others see chaos, contradiction, and confusion" [10]

Kuratko says that entrepreneurship is a dynamic process that involves vision, change, and creation. Carrying out this process requires energy and a desire to create and implement new ideas and creative solutions. That process is carried out by an entrepreneur. An entrepreneur can be regarded as a person who has the initiative skill and motivation to set up a business or enterprise of his own and always look for high achievements [11].

B. Entrepreneurial Characteristics

Entrepreneurs have unique characteristics. As quoted by Kuratko and Hodgett, Hornaday said that there are 42 entrepreneurial characteristics [14]. From his research, some entrepreneurial attributes are found. Different from Hornaday's entrepreneurial characteristics, Wickham [15] said that an entrepreneur actually could be considered as a manager, an agent of change, and an individual. Wickham states that an entrepreneur must

have the character associated with his personality as an individual and must have the role of a manager and not be afraid to face change by becoming an agent of change. Meanwhile, Longenecker said, a successful entrepreneur must have four main characteristics: need to be successful, willingness to take risks, confident, strong willingness/motivation [16]. The entrepreneurial characteristics proposed by Longenecker explicitly discuss the characteristics that are important if you want to be a successful entrepreneur.

This article will analyze Longenecker's and Hornaday's entrepreneurial characteristics because researchers feel that the entrepreneurial characteristics of Longenecker and Hornaday are the most appropriately possessed by entrepreneurs in the pandemic era of Covid-19.

III. METHODOLOGY

The research method used in this research is a qualitative research method with descriptive data analysis techniques. Descriptive data analysis techniques make the data obtained will be described in detail in order to provide a full understanding of the reader. The population of this research is alumni of the Business Administration Department, Atma Jaya Catholic University of Indonesia, class of 2000-2010.

Informants for this research were six informants that were chosen by purposive and convenience technique sampling. The criteria for purposive sampling are: alumni have been entrepreneurs for at least five years and consist of three male and three female informants. In addition to these criteria, researchers have informants who can be contacted directly for interviews, given the current pandemic conditions, and talkative so that the information obtained can be useful.

The data source used by researchers is the primary data source by interviewing informants and secondary data source about informant business activity.

Operationalization variables for this research are entrepreneurial characteristics from Longenecker and Hornaday, where the 42 Hornaday entrepreneurial characteristics were grouped into 4 main entrepreneurial characteristics of Longenecker as follow:

1. Need to be successful: perseverance, resourcefulness, need to achieve, versatility & knowledge of product; market; machinery; technology, intelligence, accuracy & thoroughness, profit orientation, perceptiveness, efficacy.
2. Willingness to take risks: the ability to take a calculated risk, creativity, ability to influence others, initiative, flexibility, foresight, cooperativeness, imagination, toleration for ambiguity, ability to trust workers,
3. Confident: confidence, ability to get along well with people, independence, responsiveness to suggestions and criticism, dynamism and leadership, ability to

make a decision quickly, ability to learn from the mistake, pleasant personality, egotism, courage, aggressiveness, sensitivity to others, honesty & integrity, maturity & balance,

4. Strong willingness/motivation: energy & diligence, optimism, orientation to clear goals, positive response to challenges, time competence & efficiency, responsibility, sense of power, capacity for enjoyment, commitment.

VI. DATA ANALYSIS

As stated above, this study will interview six informants. Table 1 below illustrates the informant's profile.

These are data analysis related to Longenecker's entrepreneurial character from the six informants:

1. Informant A, who initially became an entrepreneur due to conditions, managed to maintain his business for more than ten years and developed his motorcycle repair business. Informant A did not change the business type during this pandemic era and did not think of closing his business even though his business had decreased. Closing the business would make the mechanics in his workshop lose their income. He is trying to find other income from online sales of motorcycle spare parts, which has been done before the pandemic. Informant A said that even though his income had been decreased, he was sure he could get through this condition.
2. Informant D opened a coffee shop, not because of the pandemic. From the fourth quarter of 2019, informant D has planned to open a coffee shop at the end of March 2020, which turns out to coincide with the occurrence of this pandemic. D's action to keep opening a coffee shop during this pandemic is quite courageous, despite the conditions that require her to stay open because she has already paid for renting the shop and buying coffee shop equipment. At the beginning of his coffee business, informant D only sold coffee by delivery services in the form of bottled coffee. D is also the type of entrepreneur who doesn't want to give up everything to her baristas. Before the coffee shop opened, informant D learned the correct coffee brewing techniques and learned latte art. In managing her coffee shop business, informant D is quite aggressive in making promotions and creating new menus that are quite creative and unique. D is an outgoing person and has many friends, and she collaborates with many of his friends to fill cakes or food at his shop and to do activities at her coffee shop.
3. Informant F did not make changes in her business and even said that the demand for tower cranes increased during the pandemic. But, F limited herself to accept many

-
- projects because she was worried about her workers' health problems. F felt surprised that the construction business is doing well during this pandemic season, and it made her not need to make many adjustments in her company. In conducting her coffee shop business, similar to what D did, informant F sold bottled coffee when the coffee shop was not allowed to serve dine-in. In her barbershop and coffee shop business, F creates advertisements on social media, informing the public about the actions to maintain cleanliness and health protocols that are carried out in her coffee shop and barbershop.
4. Informant G made several adjustments in the beanbag business, where the shop no longer served direct purchases. Purchases are only made online to reduce health risks and keep the number of buyers from decreasing much. G said that this pandemic condition is like a war with invisible enemies from various sides, and you still have to walk or drown. G stated, there is no other way but to continue to run this business very carefully. In this pandemic era, G had opened PO for cooked food, but it was only done just before the partial lockdown was loosened.
 5. Informant M made a few modifications in his photography business. Usually, pre-wedding photoshoot activities carried out outside the city or even abroad, are now carried out in the study. M also opens PO for cooked food, pork potato chips, although he doesn't leave its primary business. M does not deny that this pandemic has made his business a little bit pause, but he still maintains this business. Until now, he has not had any thoughts of quitting this photography business, a business that started from his hobby.
 6. Informant R did business switching. During the pandemic, where traveling was impossible, R turned her business into a frozen food reseller and all forms of food and some fashion products, such as shorts or hats. This was solely done in order to have an income. The speed at which R changed its business was extraordinary. As if there is no time to lament your fate because it's useless if you just lament your fate without taking real action. Currently, when the partial lockdown has been relaxed, the traveling business has started to grow again. It seems that R also has no intention of quitting the traveling business that has raised her name.

Data analysis categorization made in Table 2.-The six informants have the four indicators of Longenecker's entrepreneurial character. Still, if we examine the three most reliable indicators possessed by the six informants, it can be seen from the coloured table columns. Informants D and R seem very willing to take risks, where D opened a coffee shop right at the time of the pandemic, and R changed her business during this pandemic.

Table 1 Profile of Informants & Informant's Business

Initial	Class of	Time being an entrepreneur	Business before pandemic	Business after pandemic
A	2002	>10 years	Motorcycle workshop and selling spare part online	Motorcycle workshop and selling spare part online
D	2005	6-10 years	Beauty consultant	Coffee shop
F	2006	6-10 years	Tower crane, outdoor blackboard, coffee shop, barbershop	Tower crane, outdoor blackboard, coffee shop, barbershop
G	2007	6-10 years	Bean bag, photography	Bean bag, cooked food
M	2008	6-10 years	Pre-wed photography (outdoor)	Pre-wed photography (studio) and cooked food
R	2002	>10 years	Travel agent	Reseller frozen food and any kind of product and travel agent

Table 2 Informant's Business and Data Categorization

Initial	Need to be successful	Willingness to take risks	Confident	Strong willingness/motivation
A	√	√	√	√
D	√	√	√	√
F	√	√	√	√
G	√	√	√	√
M	√	√	√	√
R	√	√	√	√

V. CONCLUSION AND SUGGESTION

The six informants all have the Longenecker's entrepreneurial characteristics. All of them have a strong motivation or desire to stay in the business world, for different reasons. This strong desire or motivation is actually driven by the need to succeed or to continue to have a business, even though conditions are tough like today. The need for success made the six entrepreneurs willing to take (measurable) risks with considerable self-confidence.

The advice that can be given is, the six entrepreneurs should often attend online training or seminars to enhance their business skills and also broaden their knowledge in the business world. Another suggestion is assistance from their alma mater in the form of discussion sessions with all entrepreneurial alumni to expand the network for entrepreneurial alumni.

REFERENCES

- [1] L. Tambunan, Resesi ekonomi: Korea Selatan dan Singapura Masuk Resesi, Indonesia Diprediksi juga akan Masuk Jurang Ekonomi (Economic Recession: South Korea and Singapore in Recession, Indonesia is Predicted will also Enter the Economic Deep Hole), BBC News Indonesia, July 27th, 2020. Retrieved from <https://www.bbc.com/indonesia/indonesia-53544365> on July 29th, 2020.
- [2] A. N. Dzulfaroh, Pandemi Virus Corona Membuat 7 Negara Ini Alami Resesi (Corona Virus Pandemic Make These Seven Country Experienced Recession), Kompas.com, August 2nd, 2020. Retrieved from <https://www.kompas.com/tren/read/2020/08/02/192700865/pandemi-virus-corona-membuat-7-negara-ini-alami-resesi?page=all> on August 3rd, 2020.
- [3] P.A.M. Fajrin. Konsumsi Masyarakat Lockdown, Ekonomi RI Langsung Jatuh (Public Consumption Lockdown, Indonesia's Economics Fall), Katadata.co.id, May 7th, 2020. Retrieved from <https://katadata.co.id/yuliawati/indepth/5eb4c3030760a/konsumsi-masyarakat-lockdown-ekonomi-ri-langsung-jatuh> on July 29th, 2020.
- [4] Biro Pusat Statistik, Laju Pertumbuhan Kumulatif Domestik Bruto Menurut Lapangan Usaha (persen) 2017-2020 (Cumulative Growth of PDB According Business Field [percentage] 2017-2020), last update May 5th, 2020. Retrieved from <https://www.bps.go.id/dynamictable/2017/05/05/1253/-seri-2010-laju-pertumbuhan-kumulatif-produk-domestik-bruto-menurut-lapangan-usaha-persen-2017---2020.html> on July 29th, 2020.
- [5] Bappenas, IDF 2019: Modernisasi UMKM Atasi Permasalahan Masyarakat, Bantu Perekonomian Nasional (IDF 2019: Modernisation of MSME Handle Community Problem, Help National Economic), July 3rd, 2019. Retrieved from <https://www.bappenas.go.id/id/berita-dan-siaran-pers/idf-2019-modernisasi-umkm-atasi-permasalahan-masyarakat-bantu-perekonomian-nasional/> on July 29th, 2020.
- [6] S. Novika, Kena PHK di Tengah Corona, Bisakah Tuntut Perusahaan?, (Getting Fired in the Middle of Covid-19, Could Sued Company?), finance.detik.com, May 12th, 2020. Retrieved from: <https://finance.detik.com/berita-ekonomi-bisnis/d-5010998/kena-phk-di-tengah-corona-bisakah-tuntut-perusahaan> on July 29th, 2020.
- [7] A.S Gunawan, A. Cahayani, Kisah Anak Muda Biasa Perintis Bisnis Luar Biasa (Story of Ordinary Young People who Build Extraordinary Business), Penerbit Universitas Katolik Indonesia Atma Jaya, 2020.

-
- [8] A. Dhaliwal, Role of entrepreneurship in economic development in International Journal of Scientific Research and Management (IJSRM), vol. 4, Issue 06, 2016, pp. 4262-4269. Website: www.ijsrm.in ISSN (e): 2321-3418.
- [9] H.M. Nishanthi, Analysis of entrepreneurial traits of the small business owners in Sri Lanka in International Journal of Scientific and Research Publications, Volume 4, Issue 10, October 2014, pp. 1-7. ISSN 2250-3153.
- [10] D. F. Kuratko, Entrepreneurial leadership in the 21st century, guest editor's perspective, in Journal of Leadership and Organizational Studies, vol. 13, No. 4, 2007. 1-11. Retrieved from <http://search.proquest.com/docview/203134024?accountid=48149> on March 2nd, 2014.
- [11] A. Dhaliwal, Role of entrepreneurship in economic development in International Journal of Scientific Research and Management (IJSRM), vol. 4, Issue 06, 2016, pp. 4262-4269. Website: www.ijsrm.in ISSN (e): 2321-3418
- [12] D.F. Kuratko & RM Hodgetts, Entrepreneurship: Theory, Process, Practice, 7th ed., Thomson, 2007.
- [13] P. A Wickham, Strategic Entrepreneurship, 3rd ed., Essex: Prentice Hall, 2004.
- [14] Logenecker, Kewirausahaan: Manajemen Usaha Kecil (Entrepreneurship: Management of Small Business), Salemba Empat, 2001.

The Role of Local Governments in Increasing the Human Development Index as a Barometer in Achieving SDGs in Boalemo District

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Abstract

This study aims to: 1) determine the trend of the Human Development Index in Boalemo District and 2) describe the role of local governments in increasing the Human Development Index as a barometer in achieving SDGs. The research method used was a survey with secondary data obtained through various supporting documents available at the Statistics Indonesia and related Service Apparatus Organizations in time series and cross-sections. Data were then processed using descriptive analysis. The results showed that: 1) The Human Development Index in Boalemo District tends to increase from year to year and 2) Local government plays a vital role in developing human resources through education and health, which is implemented starting from the process of planning, organizing, implementing, to evaluating the program. Besides, the government's role is manifested in a commitment to support sustainable budgeting to increase the HDI SDGs optimally.

Keywords: Human Development in Boalemo District.

I. INTRODUCTION & RESEARCH PROBLEM

Development is a continuous process of improving people's welfare. Since 2015, all development at the global level has been referred to as sustainable development goals or better known as sustainable development goals (SDGs). SDGs are formed by three pillars, with 17 goals to be achieved. The three main pillars that become indicators in the formation of the SDGs development concept are (1) indicators inherent in human development, which is education and health; (2) Indicators attached to their small environment (socio-economic development), which is the availability of environmental facilities and infrastructure as well as economic growth; (3) Indicators attached to the broader environment (environmental development), which is the availability of natural resources and good environmental quality. The Human Development Index is also used as the basis for measuring the success of developing human life quality. Human development efforts are a synergy of all development sectors, both at the central and regional levels. Improving human development status involves all sectors that must start from monitoring and evaluating the achievements obtained. Monitoring and evaluation are useful as a joint performance assessment of all sectors and as an input for future planning. Human development is an effort to acquire and form more individual abilities to enjoy more opportunities to use those abilities in their activities.

Boalemo is one of the districts in Gorontalo Province, with 1,831.33 km² (0.15% of the total area of Gorontalo) and 162,181 people. This large population has vast potential and can bring significant benefits if balanced with good quality human resources. On the other hand, a large population with low-quality human resources will become a burden and cause various social problems. One of the elements that can be used to measure the success of the development of the quality of human life (community/population) is the Human Development Index (HDI). Data obtained from the Statistics Indonesia (BPS) in 2020 shows that the HDI of Gorontalo (including Boalemo District) is still below the national standard of 68.49. The three basic dimensions of HDI, namely: (1) long life and healthy life (AHH), (2) knowledge (HLS & RLS), and (3) decent living standards, are still below the national average.

Table 1. Life Expectancy (AHH) for the Community of Gorontalo Province

Area	2017		2018		2019	
	M	F	M	F	M	F
Gorontalo	65.22	69.20	65.51	69.53	66.01	69.94
Indonesia	69.16	73.06	69.30	73.19	69.44	73.33

Source: Statistics Indonesia 2020

Table 2. Average Length of Schooling (RLS) By Gender

Area	2017		2018		2019	
	M	F	M	F	M	F
Gorontalo	6.98	7.56	7.14	7.76	7.37	8.00
Indonesia	8.56	7.65	8.62	7.72	8.81	7.89

Source: Statistics Indonesia 2020

Meanwhile, the dimension of decent living with an indicator of people's purchasing power towards several basic needs shows that per capita expenditure (at constant prices) has reached IDR 10,070,000 in 2019, an increase of IDR 236,000 compared to the previous year's IDR 9,834,000. Also, Gorontalo's economic growth has shown a slowdown in the past three years, namely 6.74% in 2017, 6.51% in 2018, and 6.41% in 2019. Even the highest poverty rate is in Boalemo District, which is 18.87%.

Therefore, in line with the development of the industrialized area, reliable human resources are needed. Human resource development is inseparable from three things: the health, education, and purchasing power indexes, all of which are called the HDI (Human Development Index) (Syarif & Jakfar: 2019). It was also revealed that education and health positively contribute to regional economic growth (Anwar, 2017). It indicates the critical role of education as one of the primary sources for achieving better economic development. Meanwhile, this study's human capital indicators are the average length of schooling for the education index and life expectancy for the health index. Furthermore, Prasetya (2018) also found that improving the quality of Human Resources as one of the factors that trigger economic development needs to be planned appropriately. The same thing is stated by Ita Rustiati Ridwan (2020) in her research that investment in education means investment in human resources where the rate of returns on profit is not as fast as economic ones. However, the high quality of human resources produced through education will increase economic growth. Freshka Hasiani. S (2015) also shows that the quality of human resources in the aspect of life expectancy (X1), average length of schooling (X2), and per capita income (X3) has a positive effect on economic growth.

II. METHODS

This study employed a survey method and secondary data. Secondary data in the form of time series and cross-section were obtained from the website of Statistics Indonesia and documents available in several official organizations. Data were processed through descriptive analysis. Data analysis was carried out by focusing on 3 (three) basic forming dimensions of HDI: (1) long life and healthy life (AHH), (2) knowledge (HLS & RLS), and (3) a decent standard of living.

III. RESULTS AND FINDINGS

In general, the trend of all human development indicators in the Boalemo District is positive and has increased over the past decade. Life expectancy, the average length of schooling, length of schooling expectancy, and purchasing power of the community, as indicated by the increase in per capita expenditure levels, are consistent. It means that there has been an improvement in welfare in Boalemo District. From 2010 to 2019, the average life expectancy is 67.48 years, the length of schooling expectancy is 11.8 years, the average length of schooling is 6.2 years, and the average expenditure is almost IDR 8,000,000 million per person per year. The following is data on the development of Boalemo's HDI in the last few years.

Table 1. Data on Human Development Index in Gorontalo Province in 2010-2019

Province / District / City	Human Development Index									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Boalemo District	59.92	60.52	61.11	61.71	62.1 8	62.8 6	63.4 2	64.2 2	64.9 9	65.5 3
Gorontalo District	60	61.04	61.87	62.22	62.9 0	63.6 3	66.2 9	67.0 1	65.7 8	66.6 9
Pohuwato District	59.11	59.85	60.48	61.38	61.7 4	62.5 0	63.1 7	63.8 8	64.4 4	65.2 7

Bone Bolango District	64	64.44	65.13	65.82	66.03	66.83	67.48	68.11	69.06	69.63
Gorontalo Utara District	59.26	59.95	60.71	61.60	61.92	62.55	63.02	63.52	64.06	64.52
Gorontalo City	73.07	73.56	74.06	74.43	74.97	75.62	75.75	76.09	76.53	77.08
GORONTALO PROVINCE	62.65	63.48	64.14	64.70	65.17	65.86	64.22	64.95	67.71	68.49

These indicators impact the increase in the stable human development index during 2010-2019, in which the average is at 62.64. However, this figure requires local government efforts to increase supervision and also demands a firm commitment. Education and health are crucial issues and become mandatory government affairs. Therefore, the Boalemo district government has taken various efforts to increase the human development index. In the education sector, the Boalemo district government has implemented the expansion of access to education, equitable distribution of education, and tuition assistance through BOS and DOS funds. Also, to improve the health status and life expectancy of the community, they have programmed various activities including providing health facilities to remote hamlets, assigning doctors and midwives to villages, providing nutritious food for pregnant women with Chronic Energy Deficiency (CED), increasing the intensity of Posyandu, conducting early detection of pregnancy, establishing alert villages, and coaching alert husbands. As a form of commitment, they also increase the budget from year to year and continue to disseminate information to the public, especially pregnant women and mothers with children under five, through Posyandu activities.

Based on the data description using SWOT analysis, the strategies that should be considered by the Boalemo District Government in increasing the HDI are as follows.

1. Strategies to Improve Health Quality

- a) The demographic bonus of the Boalemo District needs to be accompanied by better nutritional quality to increase community productivity. Malnutrition in toddlers is the leading cause of low growth and development in children. This problem can cause

certain diseases or interfere with the cognitive development of children. The problem of malnutrition is related to direct food intake for toddlers and mothers' nutritional intake since pregnancy. Therefore, steps that need to be taken are (1) preventing malnutrition in children by providing better nutritional intake to pregnant women. The district government plays an important role, especially for underprivileged families, in preparing adequate nutritional intake for both mothers and children, and (2) providing adequate nutritional intake to children such as exclusive breastfeeding for at least six months, complementary foods in sufficient quantities and adequate time, and breastfeeding for two years. This step must be supported by an adequate budget from the Health Office / Health Center / Posyandu.

- b) Improving the quality and access to health services needs to be carried out by adding more health workers and health facilities, especially the First Level Health Facilities / Health Center located in each district. In health workers, the number of doctors, for example, is inversely proportional to the number of patients. Every year, the number of doctors does not increase significantly, while the number of patients continues to increase in line with the increasing population of the Boalemo District. The contract system for doctors that have been implemented so far should also be accompanied by investment in local human resources prepared as regional health workers. In addition to health workers, health facilities also need to be improved to improve the quality of services and facilitate access to health services for people in isolated and outermost areas.

2. Strategies to Improve the Quality and Relevance of Education

- a) The integration of education delivery and information technology is both a necessity and a demand that must be met in the delivery of education in the Boalemo District. This step requires several infrastructures, primarily an internet network and other supporting facilities such as computers/laptops or smartphones and management and technicians. The increasing attention of the government in the education sector, shown by the increase in the budget, is an opportunity that the Boalemo District Government needs to encourage the integration of education delivery and information technology. This integration will make the educational process more comfortable, dynamic, and useful because teachers can develop exciting learning materials using embedded learning systems that students can easily access. Besides, teachers' communication and guidance to students and parents will also be more accessible, more flexible in terms of time, and effective.
- b) The relevance of education delivery to the needs of the regions and the working world

must be increased so that school or university graduates can easily find jobs or meet labor needs in the regions. This increase in relevance is carried out by increasing the number of vocational education institutions relevant to regional potential such as vocational schools and polytechnics. Boalemo District has potential in the agricultural, marine, livestock, and tourism sectors. The more human resources available in this field, the better the support for developing leading sectors. The dominance of human resources in the public sector and irrelevant to the potentials and needs of the regions makes many high school and university graduates unemployed and unable to contribute positively to regional development.

- c) The participation of school-age children at every level of education at their age, as reflected in the Net Enrollment Rate (NER), must continue to be increased, especially at the higher education level. The NER of Higher Education is still very low, which reflects the limited availability of skilled personnel in the Boalemo District. The low NER of Higher Education is caused by various factors, where the economy is the most dominant factor affecting children's access to higher education. The availability of scholarships/tuition assistance has had a significant impact. In general, students do not continue their education after completing SMA / SMK / MA due to cost factors. To increase the GER (Gross Enrollment Rate) and NER of Higher Education, various central government programs such as the Indonesia Smart Card and the Bidik Misi Scholarships should be utilized optimally, even though it has to go through a long struggle.
- d) The district government must continue to implement programs related to efforts to reduce dropout and illiteracy rates and the Back to School Movement, specifically for school dropouts.
- e) The budgeting policy of 20% must be implemented immediately, accompanied by planning based on the district government's needs and vision.

3. Strategies to Increase Public Purchasing Power

- a) Encouraging the implementation of community empowerment, village fund allocation, as well as cross-sectorial OPD (Regional Apparatus Organization) planning;
- b) Building, improving, and maintaining infrastructure supporting community economic improvements such as village roads/farm roads, dams/irrigation, traditional markets, and others;
- c) Designing special programs that can quickly boost the family economy, such as the Sustainable Food Houses (RPL), Family Farming, animal husbandry, home industry for processing fishery products, and others;

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- d) Encouraging the growth of small and medium enterprises that focus on processing local food into superior and innovative products of the village/region and conducting studies on the development of village potentials that can encourage the village economy's growth and increase people's purchasing power.

IV. CONCLUSION, IMPLICATIONS, AND SIGNIFICANCE

1. The Human Development Index in Boalemo District tends to increase from year to year. If it continues to be encouraged, various aspects may be affected, including reducing poverty, better economic growth, and others. Therefore, stakeholders need to continue to make improvements in order not only to increase the HDI figures but also to improve the welfare of the people of Boalemo by the vision and mission carried out by the current district government.
2. Based on the interviews and tracing of program and budgeting documents, the district government is committed and consistent in encouraging improvements in the quality of education and health. This commitment and consistency provide strength and opportunity for improving public health so that maternal and infant mortality rates can be reduced and life expectancy can be increased. In the education sector, this commitment and consistency can increase the length of schooling expectancy and the average length of schooling of the community in Boalemo by providing access to educational facilities, tuition assistance, and scholarships.

REFERENCES

- [1] Alisjahbana, Armida, dkk.: Menyongsong SDGs Kesiapan Daerah-Daerah di Indonesia. Bandung: UNPAD Press (2018)
- [2] Arifiana, Yuli, dkk.: Indeks Pembangunan Manusia Provinsi Gorontalo 2018. Buku Katalog BPS4102002.75. Gorontalo (2018)
- [3] Baron, Angela dan Michael Armstrong. Buku Human Capital Manajement. Jakarta (2013).
- [4] Badan Pusat Statistik. Kabupaten Boalemo Dalam Angka 2020. Boalemo (2020)
- [5] Dinas Kesehatan Kabupaten Boalemo. : Buku Profil Kesehatan Kabupaten Boalemo Tahun 2019. Boalemo (2019)
- [6] Fauzan, Fikri. : Pengaruh Human Capital (Modal Manusia) Terhadap Pertumbuhan Ekonomi Provinsi Jawa Timur. Tesis, Universitas Brawijaya (2017)

-
- [7] Mărgineana, Ioan. : Public expenditure with education and healthcare in EU countries. *Procedia Economics and Finance* 8 (2014) 429 – 435 2212-5671 © (2014)
- [8] Mirza, Sulistio Denni. : Pengaruh Kemiskinan, Pertumbuhan Ekonomi, dan Belanja Modal . *JEJAK*, Volume 4 No. 2, hlm : 102 – 113 (2011)
- [9] Prasetyo, Danu Ahmad, dan Ubaidillah Zuhdia.c. The Government Expenditure Efficiency towards the Human Development. *Procedia Economics and Finance* 5, hlm. 615 – 622 (2013)
- [10] Sagala, Syaiful. *Buku Human Capital-Membangun Modal Sumber Daya Manusia Berkarakter Unggul Melalui Pendidikan Berkualitas*. Depok: Kencana (2017)
- [11] Syarif, Muh. & Abdul Azis Jakfar. Strategi Pengembangan Pendidikan untuk Meningkatkan Kualitas SDM di Madura Pasca Pembangunan Jembatan Suramadu. *Jurnal PAMATOR* Volume 12, No. 1, April 2019 Hlm. 17-22
<http://journal.trunojoyo.ac.id/pamator> ISSN: 1829-7935 DOI: <http://dx.doi.org/10.21107/pmt.v12i1.5175> (2019).
- [12] Ridwan, Rustiati Ita dan S. Hasiani, Freshka. Analisis Kualitas Sumber Daya Manusia dan Pengaruhnya Terhadap Pertumbuhan Ekonomi di Kabupaten Pelalawan. *Jom FEKON* Vol. 2 No. 2 Oktober (2015).

Investigating Factors Impelling the innovation performance: A perspective from Internal Corporate New Business Venturing on Manufacturing Industry.

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Abstract

Today's businesses must innovate to survive in record time to keep up with constant technology advancements and continual customer demand. And organization initially attempts to develop innovation from the inside by leveraging their employees. This study provides insight on effects that influence the entrepreneurial attitude toward the innovation performance in the context of searching for new business through internal corporate new business venturing programs. There are 71 participants of an internal business venture program in manufacturing company responded in regard to their intrapreneur attitude and Corporate Entrepreneurship Climate toward their innovation performance. This model analyzed using Structural Equation Model – Partial Least Square (SEM-PLS) with the result that only internal locus of control and market orientation are two attitudes that significantly relates to innovation performance, and these attitudes are compelled by management support and organization boundary.

Keywords: corporate entrepreneurship, intrapreneurship, entrepreneurship attitudes, Internal Corporate New Business Venturing, Innovation Performance, Corporate Entrepreneurship Climate

I. INTRODUCTION

Corporate Innovation is vital for the survivability of a company [1], [2]. Especially in recent years, the disruption due to technology shortens the longevity of companies. The research shows that the average tenure of companies in the S&P 500 in 1964 is 33-years. It is narrowed to 24 years by 2016 and forecast to shrink to just 12 years by 2027. [3]. The same research mentioned that 52% of the Fortune 500 companies have gone bankrupt, been acquired, or closed, and 75% of these companies will be replaced by 2027. Innovation is not easy and is not an instant process, it requires continuous reinforcement and integrates all organizational aspects like mission, goals, strategies, structure, processes, value of the organization, and especially the mindset not only of the manager but also employee [4].

Entrepreneurship is the foundation of innovation [5]. It is the way entrepreneurs explore and exploit new or endows existing resources to enhance potential wealth creation [4]. In the corporation, entrepreneurial activities are called corporate entrepreneurship interchangeable with intrapreneurship and the interest in these topics is trending up in recent years. Corporate entrepreneurship could increase company profits and performance. It influences the proactiveness and risk-taking propensity of companies in developing new products and services, new strategies, and business models that become their competitive advantage to win in the competition and survive [6].

The quality of corporate members and the environment are two aspects that will impede or impel the innovation. The quality of the manager and employees which includes knowledge, experience, commitment, and motivation are fundamental and crucial factors required for innovation [7]. These attributes are linked to the entrepreneurial orientation of the employee [8]. The organization environment is the knowledge embedded in organizational routines, structure, process and systems [7].

The internal innovation program is initiated to motivate employees, attract high-quality candidates, foster and stimulate change in organizational culture with the purpose not only to improve an existing product, services, and process but also to create a new portfolio and understand customer's market needs and engagement [2].

Despite the abundance development of theoretical research that studies the relationship of entrepreneurship with innovation, there is still a lack of research on how the

entrepreneurial orientation relates to the innovation performance as part of the Internal corporate innovation program, including as well factors that impede or impede these relationships.

II. LITERATURE REVIEW

2.1. Internal Corporate New Business Venturing

The technology advancement and the customer behavior and customer power change beyond consumption, forces many companies to change their paradigm from building profit maximization that does not sustain external disruption but also able to embraces innovation in a comprehensive and effective way [2]. Organization leverage their customer, employees, suppliers, academic partner, accelerators and incubators [9] with their internal and external innovation program [2] that manifested into corporate accelerator program, open innovation, internal R&D Labs, hackathons and Startup competitions, crowdsourcing and implementing rapid prototyping, spawning internal entrepreneurial ventures just to name a few [2], [10].

The corporate new business venturing is initiative by a company to creates products/services that are different from the products/services produced by the their parent company with purpose to support the current products/services by leveraging existing organization structure and resources.[6], [11]. The result of new business venturing is product/services re-definition, change of business model and new market development and said to be the most significant factor of intrapreneurship [6]. It uses creative processes by recognizing opportunities in the business environment and creating opportunities within the resources of organization[12]. Shaw, A. O'Loughlin, and McFadzean [13] elaborate further the process of corporate new business ventures to recognition of opportunity, appropriation, exploitation, marketing and implementation. This research will focus on the opportunity recognition and appropriation of the new business venture idea.

2.2. Intrapreneur Attitudes

Intrapreneurship is an individual entrepreneurship within an organization [14]. Various studies of intrapreneur relates to the characteristics of human resources in the organization [7], [14]. There are similarities and differences between entrepreneur and intrapreneur. Both are innovative people with determination to create value with risk taker behavior with different company culture versus market obstacles, difference in source of funding and risk objects [6].

The systematic literature review by Blanca [14] stated that there are at least 5 intrapreneurship research streams based on the analytical level: (1) individual level either

middle-level manager or non-managerial level that in essence discuss on employee demographics, personality, behavior, leadership, perception, human and social capital, and affiliation. (2) organization level studied research on the structure and processes, support and promoters, rewards and culture. (3) Contextual level that researched firm type, national and environmental characteristic, technology and academic (4) Outcomes that measures behavioral outcomes, intrapreneurial activity, performance. (5) Promoters that analyze the individual level outcomes, process and development support.

There are growing numbers of individual intrapreneurial behavior with focus on the attitudes, subjective norms and perceived behavioural control influence entrepreneurial intentions attitude in the organization [14]. Developing from Jain and Ali [15], this study will use six Entrepreneur Attitude to build and test its model: achievement orientation (AO), risk-taking propensity (RTP), internal locus of control (ILC), innovativeness (INNOV), proactiveness (PROACT) and market orientation (MO). Achievement orientation refers to one character taking responsibility for decision, goals setting and accomplishment, desires for feedback. is a psychological variable which reflects ability of an individual to take calculated risk and achievable challenges and is a characteristic that is very frequently used to describe entrepreneurial behaviour [15]. Internal locus of control is self control based on the personal belief that one has influence over outcome through self ability, effort or skills. Innovativeness refers to a tendency to engage in and support new ideas, novelty, experimentation and creative processes that may result new product services and technological processes [16]. Proactiveness refers to an opportunity-seeking, forward-looking perspective that involves introducing new products or services ahead of the competitors, and acting in anticipation of future demand to create change and shape the environment. Market orientation is the organization-wide generation of market intelligence pertaining to current and future needs of the customers, dissemination of intelligence horizontally and vertically within the organization and organization-wide action or responsiveness to it.

2.3. Innovation Performance

Defining the innovation performance in the corporate venture is difficult and many time leader misled with what to expect[17], There are four issues that leader faced: (i) type of innovation is being sought (ii) coordinating managerial roles (iii) using effectively operating controls and (iv) properly training and preparing individual [18]. To bring the idea to concept to execution requires positive feedback from relevant stakeholders by proof of concept feasibility, desirability and viability. The feasibility analysis comprises preliminary evaluation of an idea to determine whether or not to pursue the idea [19]. The proof feasibility will answer whether the

idea can be produced or functional in the future. The proof of desirability becomes an important aspect and questions whether the customer meets the customer expectation. And lastly the concept of viability will try to prove whether the product/services product is viable economically from a financial perspective [17]. After the idea meet the acceptable level of feasibility, development of business plan that comprises of the planning of people (management and personnel), opportunity (product and services), context (technological, market and industry, competition and government), risk and reward (financial projection on balance sheet, income statement, cash flow, break-even analysis, capital requirement and strategy)[19]. As part of the early internal innovation program, the feasibility and business plan result used as the proxy for measuring the innovation performance of the intrapreneur.

2.4. Corporate Entrepreneurship Climate

The corporate entrepreneurship climate is required to facilitate the support of the current corporate entrepreneurial activities. This study uses Corporate Entrepreneurship Climate Instrument (CECI) to measure the supporting factor of organization [20]. It comprises of several factors: (i) Management Support (MS) relates to support by top-level manager to facilitate and promote entrepreneurial behavior, (ii) Work Discretion (WD) allows commitment to tolerate failure and provide decision making latitude and freedom for excessive oversight and to delegate authority and responsibility to middle and lower level managers, (iii) Reward and Reinforcement (RR) is related to the rewarding and reinforcement systems that encourage pursuit of challenging work, Time Discretion (TD) relates to work load to support the entrepreneurial activity in the organization and Organization Boundaries (OB) is related to the expected from organization works and development of mechanism for innovation evaluation.

This study develops Research Theoretical Framework as depicted in Figure 1 and explore the impending moderating factor of Corporate Entrepreneurial Climate on the relationship between Intrapreneur Attitude toward the Innovation performance in the Internal Corporate New Business Venture.

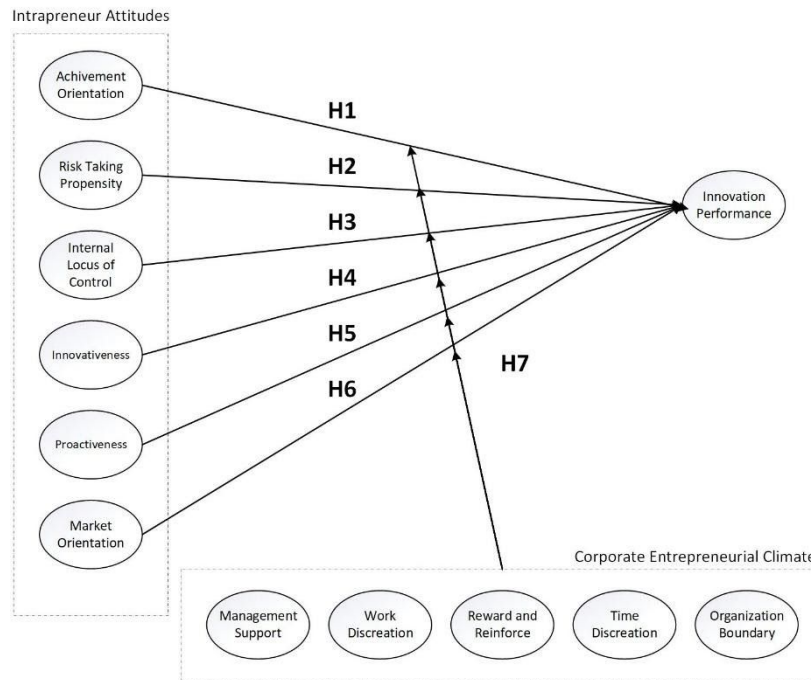


Figure 1. Research Theoretical Framework

H1: The Achievement Orientation has a significant relationship with the Innovation Performance.

H2: The Risk Taking Propensity has a significant relationship with the Innovation Performance.

H3: The Internal of Locus has significant relationship with the Innovation Performance

H4: The Innovativeness has significant relationship with the Innovation Performance

H5: The Proactiveness has significant relationship with the Innovation Performance

H6: The Market Orientation has significant relationship with the Innovation Performance

H7: The Corporate Entrepreneurship Climate (MS, WD, RR, TD, OB) will moderate the relationship between Intrapreneur Attitudes (AO,RTP,ILC, INNOV,PROACT,MO) with the Innovation Performance.

III. RESEARCH METHODS

The study has purpose to investigate the relationship between intrapreneur attitudes variable's relationship with the Innovation Performance, and to identify which Corporate Entrepreneurial climates that will mediate the those relationships between intrapreneur attitudes and Innovation Performance.

A. Data Collection

The online survey was carried out with purposive sampling targeting the participant of internal Internal Corporate New Business Venturing on one manufacturing company. The questionnaire with 30 questions were sent to 82 individual participants with only 71 responding to measure the perception of individual intrapreneur attitudes and the corporate entrepreneurship climates in the organization.

The judge evaluation result of the feasibility study and business plan of individual participants are used to reflect the Innovation performance of responding participants.

B. Measure in Questionnaire

As a quantitative research, the respondents were asked to answer close-ended questions with 1-5 Likert scale Strongly-Agree to Strongly-Disagree The first part of the questionnaires consists with the demographic questions and the second part of the questionnaires consist with the research questions

C. Method of Data Analysis

To evaluate the research model construct, Partial Least Square Structural Equation Model (PLS-SEM) method is used. The model needs to go through two stages: (i) measurement model evaluation where the latent variable indicator reliability and validity indicators are measured. (ii) structural model evaluation., the variance of relationship between latent variables are measured. This study measured the significant relationship between constructs of intrapreneur attitudes with innovation strategy, and continued with the moderating effect of corporate entrepreneurial climate on the significant relationship between entrepreneur attitude and innovation performance.

VI. RESULT AND DISCUSSION.

4.1. Measurement Model Evaluation

In evaluating the measurement model in this study, there are several rules of thumb used to ensure reliability and validity of the mode as depicted in Table 1.

Table 1 Measurement Model Rules of Thumb

Criteria	Parameter	Rule of Thumb
Indicator Reliability	Loading Factor	0.6-0.7 is still accepted for the exploratory research

Internal Consistency Reliability	Composite Reliability	0.6-0.7 is still accepted for exploratory research
Convergent Validity	Average Variance Extracted	>0.5 for confirmatory and exploratory research
Discriminant Validity	Square Root of AVE and Correlation between latent construct	Square Root AVE > Correlation of latent construct

Source: Ghazali and Latan [21]

There are 17 of 60 indicators are removed because below the value of loading factors below 0.6 after the evaluation. All of constructs' composite reliability are above 0.7, the Average Variance Extracted above 0.5 and Square Root AVE are larger than the correlation of latent construct.

4.2. Structural Model Evaluation

In the structural model evaluation, the relationship between hypothesis variables was built using resampling procedure. The significant value is using two-tail with P-value 0.05 (significant level 5%). The results are as depicted in Table 2.

Table 2 Structural Model Evaluation Direct Effect

Hypothesis	Path Coefisien (β)	P value ($P < 0.05$)	Accepted/ Rejected
H1:AO \square IP	0.07	0.26	Rejected
H2:RISK \square IP	0.11	0.16	Rejected
H3:INNOV \square IP	0.08	0.24	Rejected
H4:ILC \square IP	0.33	<0.01	Accepted
H5:PROACT \square IP	0.05	0.34	Rejected
H6:MO \square IP	0.049	<0.01	Accepted

Source: Author

The result of hypothesis testing shows that only H4 Internal Locus of Control and H6 Market Orientation are two constructs that have significant relationship with Innovation Performance.

Table 3 Structural Model Evaluation Moderating Effect

Moderating effect by	H4:ILC \square IP		H6:MO \square IP	
	Path Cooefisien (β)	P value (P<0.05)	Path Cooefisien (β)	P value (P<0.05)
Management Support (MS)	0.36	<0.01	0.39	<0.01
Work Discretion (WD)	0.08	0.24	0.02	0.42
RR (Reward Reinforcement)	0.27	<0.01	0.24	0.04
Time Discretion (TD)	0.13	0.13	0.69	<0.01
Org Boundary (OB)	0.25	0.01	0.45	<0.01

Source: Author

4.3. Discussion and Conclusion

The aim of this research is to investigate the intrapreneur attitude of internal corporate new business venturing participants in respect to their innovation performance. There are only two intrapreneur attitudes that have significant effect on innovation performance, which is internal locus of control and market orientation. The previous study on the internal locus of control and innovation performance shows that the “control believes” will have impact to the innovation performance of a company [22]. The majority of the participan is young people which have higher locus of control following the conventional argument drawn from the upper echelon theory, that as age increases, flexibility decreases, resistance to change rises and values such as security become more relevant. As a result, the intrapreneur will tend to adopt more conservative strategies, which will translate into lower innovation performance.

The market orientation also becomes an important aspect in increasing the innovation performance looking at the behavior of internal new business venturing. The previous study related to the culture of startups shows that the result oriented and pragmatic approach toward the customer are two practices done by startups which are rich with innovation [23], basically they need to be aware of where the market and customer will go. The risk propensity is not significantly related to innovation performance, this is very surprising but understandable since they are currently in the early stage of innovation program. Proactiveness is also considered insignificant to the innovation performance due to the portfolio of the idea generated and

measured as the innovation performance is more idea replication from the current market business idea without no significant difference. In regard to the moderating effect of Corporate Entrepreneurship Climate factors, there are only two factors that moderate the entrepreneur attitude in this study which is management support and organization boundaries. Management support will bring the confidence that driving increases the confidence of the participant and also provides initial insight in regard to the market orientation on which market to pursue and what product to develop.

REFERENCES

- [1] F. Bennett, S. Carden, A. Chandraker, A. Katz, H. M. Wong, and H. Raaijmakers, "Innovation Matters," London, 2019.
- [2] F. Rozalska, Monika; Fischer, "Corporate Innovation Report," Tel Aviv, Israel, 2020.
- [3] S. D. Anthony, S. P. Viguerie, E. I. Schwartz, and J. Van Landeghem, "2018 Corporate Longevity Forecast: Creative Destruction is Accelerating," Innosight, no. February, p. 11, 2018, [Online]. Available: www.innosight.com/insight/creative-destruction/.
- [4] D. F. Kuratko, M. G. Goldsby, and J. S. Hornsby, Corporate Innovation : Disruptive Thinking in Organizations. New York and London: Routledge, 2019.
- [5] E. McFadzean, A. O'Loughlin, and E. Shaw, "Corporate entrepreneurship and innovation part 1: The missing link," Eur. J. Innov. Manag., vol. 8, no. 3, pp. 350–372, 2005, doi: 10.1108/14601060510610207.
- [6] Q. Aina and I. Solikin, "Entrepreneurship and Intrapreneurship: How Supporting Corporate Performance," Rev. Integr. Busienss Econ. Res., vol. 9, no. 1, pp. 288–297, 2020.
- [7] K. Asiaei, O. Barani, N. Bontis, and M. Arabahmadi, "Unpacking the black box: How intrapreneurship intervenes in the intellectual capital-performance relationship?," J. Intellect. Cap., pp. 1469–1930, 2020, doi: 10.1108/JIC-06-2019-0147.
- [8] J. C. Gawke, M. J. Gorgievski, and A. B. Bakker, "Measuring intrapreneurship at the individual level: Development and validation of the Employee Intrapreneurship Scale (EIS)," Eur. Manag. J., vol. 37, no. 6, pp. 806–817, Mar. 2019, doi: 10.1016/j.emj.2019.03.001.
- [9] CBInsights, "State of Innovation - Survey of 677 Corporate Strategy Executives," New York, 2020.
- [10] G. P. Pisano, "You Need and Innovation Strategy," Harvard Business Review, no. June, 2015.

-
- [11]B. Antoncic and R. D. Hisrich, "Intrapreneurship: Construct refinement and cross-cultural validation," *J. Bus. Ventur.*, vol. 16, no. 5, pp. 495–527, 2001, doi: 10.1016/S0883-9026(99)00054-3.
- [12]B. Guven, "The Integration of Strategic Management and Intrapreneurship : Strategic Intrapreneurship from Theory to," *Bus. Econ. Res. J.*, vol. 11, no. 1, pp. 229–245, 2020, doi: 10.20409/berj.2020.247.
- [13]E. Shaw, A. O'Loughlin, and E. McFadzean, "Corporate entrepreneurship and innovation part 2: A role- and process-based approach," *Eur. J. Innov. Manag.*, vol. 8, no. 4, pp. 393–408, 2005, doi: 10.1108/14601060510627786.
- [14]C. Blanka, "An individual-level perspective on intrapreneurship: a review and ways forward," *Rev. Manag. Sci.*, pp. 1–43, Feb. 2018, doi: 10.1007/s11846-018-0277-0.
- [15]R. Jain, S. W. Ali, and S. Kamble, "Entrepreneurial and Intrapreneurial Attitudes: Conceptualization, Measure Development, Measure Test and Model Fit," *Manag. Labour Stud.*, vol. 40, no. 1–2, pp. 1–21, 2015, doi: 10.1177/0258042x15601529.
- [16]G. T. Lumpkin and G. G. Dess, "Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance," *Acad. Manag. Rev.*, vol. 21, no. 1, pp. 135–172, 1996.
- [17]D. F. Kuratko and E. Neubert, "Corporate Entrepreneurial Leadership: Addressing Critical Challenges in a Disruptive Age," *Adv. Study Entrep. Innov. Econ. Growth*, vol. 28, pp. 89–109, 2018, doi: 10.1108/S1048-473620180000028004.
- [18]D. F. Kuratko, J. G. Covin, and J. S. Hornsby, "Why implementing corporate innovation is so difficult," *Bus. Horiz.*, vol. 57, no. 5, pp. 647–655, 2014, doi: 10.1016/j.bushor.2014.05.007.
- [19]A. M. Pauceanu, "Business Feasibility Study," in *Entrepreneurship in the Gulf Cooperation Council*, 2016, pp. 49–78.
- [20]R. D. Ireland, D. F. Kuratko, and M. H. Morris, "A health audit for corporate entrepreneurship: Innovation at all levels: Part II," *J. Bus. Strategy*, vol. 27, no. 2, pp. 21–30, 2006, doi: 10.1108/02756660610650019.
- [21]I. Ghazali and H. Latan, *partial least square konsep teknik dan aplikasi menggunakan program smartPLS 3.0*. Badan Penerbit Universitas Diponegoro, 2015.
- [22]C. Camelo-Ordaz, M. Fernández-Alles, J. Ruiz-Navarro, and E. Sousa-Ginel, "The intrapreneur and innovation in creative firms," *Int. Small Bus. J.*, vol. 30, no. 5, pp. 513–535, 2012, doi: 10.1177/0266242610385396.
- [23]P. Utomo and D. Budiastuti, "Practiced culture toward firm competitiveness performance: Evidence from Indonesia," *Pertanika J. Soc. Sci. Humanit.*, vol. 27, no. 1, 2019.

Entrepreneurial Intention and the Moderating Role of Gender

Evidence From Ipmi International Business School In Jakarta

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Abstract

Despite having the highest contribution to Indonesia GDP, the ratio of an entrepreneur to total population is only 1,7% compared to our neighbor countries Women entrepreneurs make up the majority of the founders of medium-small and enterprises, and there is a clear gap between the younger (under 35) and older generations (over 35). The study aims to investigate the intention to become an entrepreneur in the young generation in higher education and to analyze the re of gender in the relationship between entrepreneurial intention and personal attitude, subjective norms, and perceived behavioral control. This study develops a framework cross-sectional time frame in IPMI International Business School. The result demonstrates that the mean value of entrepreneurial intention was high, and there is a positive and significant effect between perceived behavioral control, personal attitude, and entrepreneurial intention. Surprisingly the subjective norms did not have a positive significant impact on entrepreneurial intention. The result indicates that students' intention is high and gender moderated the relationships between entrepreneurial intention and persona attitude, and subjective norms, however, there is no significant effect between subjective norms and entrepreneurial intention This study fills a gap in the entrepreneurship body of knowledge by providing evidence gender moderates the relationship between personal attitude and entrepreneurial intention and between perceived behavioral control and entrepreneurial intention. This study is an empirical study that uses a SmartPLS3 with data taken from the

survey of 74 students in IPMI Business School in Jakarta. The study suggests that students in universities have high intention to become an entrepreneur, and the school can gain the highest entrepreneurial intention by introducing the innovative method in teaching entrepreneurship, especially to women.

Keywords: corporate entrepreneurship, intrapreneurship, entrepreneurship attitudes, Internal Corporate New Business Venturing, Innovation Performance, Corporate Entrepreneurship Climate

I. INTRODUCTION

Micro small and medium enterprises (MSMEs), are the drivers of economic growth and innovation in APEC economies, making up over 97% of total enterprises and employing over 50% of the workforce across the region (Asia Pacific Foundation of Canada, 2018). In Indonesia MSMEs account for over 99 percent of all firms in Indonesia, employing over 99 million people. According to the 2018 Survey of Entrepreneurs, indicating that MSMEs in Indonesia fall largely into the “micro” categorization, with 67.9% of annual revenues is less than IDR300M Despite having the highest contribution to Indonesia GDP, the ratio of an entrepreneur to total population is only 1,7% compare to our neighbor country like Singapore Malaysia and Thailand. Nearly three-quarters (73.6%) of entrepreneurs are in one of three industries: food processing, retail or wholesale; materials or manufacturing, restaurant or food, and beverage services. Although education level and international exposure of young people is not high, many of young people in Indonesia have highest intention to become an entrepreneur compare to its ASEAN countries (weforum.org 2019) One of the greatest challenges facing Indonesia is finding space for younger workers to enter the formal economy. Creating programs that provide formal training and encourage developing entrepreneurial skills at the high-school and university level has the opportunity to equip aspiring entrepreneurs with skills to succeed once they enter the labor market. The development of entrepreneurial skills, especially at the high-school and university level, will help young Indonesians thrive. This will not only benefit the youth of Indonesia but also allow for the development of an increased capacity to innovate and enter the micro small and medium enterprise sector straight out of high school and bachelor's degrees. While entrepreneurship offers an avenue toward formal economy employment, the ratio of an entrepreneur to total population in Indonesia is still low (1.7%) and often the motivation for “entrepreneurial” self-employment occurs as a result of a lack of job opportunities in the formal economy, not

because of the intrinsic motivation, or strong willingness of individuals to perform entrepreneurial behavior.

According to Rasli et al. (2013), the intention of entrepreneurship is a mind that encourages individuals to do something. In this study, it is to encourage a person to do business. It is a starter to strengthen the spirit of planning and conducting business more. Dose & Walter (2010) defined entrepreneurial intention as the willingness of individuals to perform entrepreneurial behavior, to engage in entrepreneurial action, to be self-employed, or to establish a new business. These are supported by Zain, Akram & Ghani (2010), which states that it usually involves inner guts, ambition, and the feeling to stand on one's feet. According to Ajzen (1991) entrepreneurial intention is the immediate antecedent of behavior towards entrepreneurialism. He claimed that entrepreneurial behavior is not performed mindlessly but follows reasonably and consistently from the behavior-relevant information and behavior reinforced towards rewarding events. Before actually performing entrepreneurial behavior, the intention might be affected by numerous factors, such as needs, wants, values, beliefs, and habits (Lihan and Chen, 2009; Bird, 1988; Lee and Wong, 2004). All of these things play an important role in influencing the intentions of becoming entrepreneurs.

During the past few years, there have been various studies in entrepreneurial behavior and intention which suggest raising the level of personal attitude, subjective norm, and perceived behavioral control to increase the number of entrepreneurs. According to the theory of planned behavior (TPB) (Ajzen, 2001) entrepreneurial intention is influenced by three-factor which are: 1) personal attitude, 2) subjective norm, and 3) perceived behavioral control. Ainin and Basbeth proposed a conceptual model of other support factors such as financial lending that also play an important role that affects entrepreneurial intention Krueger et al (2000) tested the attitude-intentions of students and found a significant influence of the attitude towards the behavior on intention. Yordanova and Tarrazon (2010) found that the more supportive subjective norm on entrepreneurial behavior, the stronger the individual's entrepreneurial intention. Ruhle, Muhlbauer, Ggrunhagen, and Rothenstein (2010) suggested that perceived behavioral control has a positive influence on a student's entrepreneurial intentions. However, Elfving et al (2009); Paco et al (2011) argued that self-efficacy does not have a significant direct effect on entrepreneurial intention. The inconsistency finding opens an opportunity that there is another factor that can affect the relationship between attitude and intention, such as gender. Cromie (1987) found that there are differences in motives for females and males to become entrepreneurs. Women become entrepreneurs less focused on earning money but become entrepreneurs because of job uncertainty. They look to become entrepreneurs as one way to fulfill their career satisfaction. Unlike men who focus on making

money for family living. As very limited research done especially on the factor affecting the intention to become an entrepreneur in business school students and the moderating role of gender. Addressing this need this study attempts to confirm the TPB framework and to test the moderating effect of gender in the relationship between personal attitude, subjective norm, and perceived behavioral control and intention. The location that will be used as a context is IPMI International Business School, which was established in 1984 in Jakarta. IPMI has been known as a leading business school and one of the pioneers in Master of Business Administration education in Indonesia.

II. LITERATURE REVIEW

2.1 Theory of Planned Behaviour (TPB)

Entrepreneurship is an attitude that reflects an individual's motivation and capacity to identify an opportunity and to pursue it, to produce new value or economic success (Ajzen 1991, Shapero 1982). Entrepreneurship has a passive and active component with a propensity to induce changes oneself, but also the ability to welcome and support innovation brought by external factors by welcoming change, taking responsibility for one's actions, positive or negative, to finish what we start, to know where we are going to set objective and meet them, and have the motivation to succeed. (Shapero-Sokol, 1982). Important aspects of entrepreneurship can be summarized as identifying one's strengths and weaknesses, displaying proactive behavior, being curious and creative, understanding risk, responding positively to changes, and the disposition to show initiative (Shapero-Sokol, 1982). Entrepreneurship requires time, involving both considerable planning and a high degree of cognitive processing. TPB is an extension of the Theory of Reasoned Action (TRA; Fishbein & Ajzen, 1975), which has been the dominant theoretical approach to guide research on health-related behavior for the past three decades. The theory is well recognized amongst researchers and is also familiar to many students, practitioners, and policy-makers (Sniehotta, Presseau, & Araújo-Soares, 2015). The most frequently used theoretical framework in major studies of entrepreneurial intention is the Theory of Planned Behavior (TPB) (van Gelderen et al. 2006). The roots of TPB can be found in the model of Bird (1988) about entrepreneurial intentionality; factors that determine intentions as presented by van Gelderen et al. (2006), which are: attitude subjective norms, perceived behavioral control, perceived control liability of behavior self-efficacy, and perceived desirability and feasibility. Though criticized as a model with a limited predictive validity in recent years by some scholars, (e.g. Sinohuetta et al., 2015), TPB still stands as a validated solution to the construction of research in

entrepreneurial intent. Entrepreneurship is considered as a type of planned behavior for which the intention models are ideally convenient in understanding the business venture formation intentions (Krueger et al., 2000).

2.2. Relationship between Personal Attitude and Entrepreneurial Intention

Personal attitude (PA) is the degree to which the person holds a positive or negative individual attitude around being a business person (Liñán, 2004). Personal attitude moreover alludes to an individual's recognition of the allure to perform an entrepreneurial movement (Tshikovhi & Shambare, 2015) The more positive the conclusion result is the way better and more discerning recognitions to carry out certain practices. While to Fayolle, Liñán, and Moriano (2014) personal attitude could be a degree of commitment towards beginning entrepreneurship and the will to cost towards entrepreneurial activities. (Liñán, Rodríguez-Cohard, & Rueda-Cantuche, 2011) state that personal attitude is impacted by the entirety of all the feelings and sentiments of the fulfillment of a person experienced amid the learning stage of the examined subject. Walter and Dohse (2009) found that the individual state of mind toward the conduct has a coordinated and positive impact on entrepreneurial intention. Agreeing to it, Wales et al. (2013) outlined the result of a solid impact on the eagerly in which the behavior is a variable closely related to a variety of attitudes that leads to entrepreneurial intention. Other than that, (Krueger Jr et al., 2000) tested the link of personal attitude to intentions and found a positive impact on personal attitude to entrepreneurial intention. Based on the above explanation, the below hypothesis is shaped;

H1: Personal attitude positively influence entrepreneurial intention

2.3 Relationship between Subjective Norm and Entrepreneurial Intention

Subjective norms according to Sniehotta et al. (2015), is the view of a person affected by others. According to (Wedayanti & Giantari, 2016), subjective norms are the perceives that are considered imperative by people who encourage the person to perform or not perform certain practices and inspiration by a readiness to do or not do something that was considered imperative. Ajzen (1991) characterizes that subjective norms have alluded to the discernment that "reference people" would favor the choice to be an entrepreneur. Whereas according to Sousa, Cruz, and Wilks (2018), the subjective norm is the individual's conviction in complying with the information or recommendations of individuals around them to take an interest in different exercises. Based on these three definitions, in this study, we use the definition of subjective standards developed by (Ajzen, 2001) subjective norm is the recognition of

reference individuals that would favor the choice in a business career. According to Ajzen (1991), pressure from family, companions, and society impacts one's conduct to be a business person. Ajzen (1991) moreover, portrays these subjective norms that may come from individuals or environments that are near to us or ordinary things that we frequently do. This coincides with Kolvereid and Bullvag (1996) statement that family influencing entrepreneurial intention. Kolvereid and Isaksen (2006) found that subjective norms are related to entrepreneurial intention. However, Liñán and Chen (2009) found that there was no critical relationship between subjective norm and entrepreneurial intention. Yordanova and Tarrazon (2010) found that the stronger the subjective norm on entrepreneurial conduct, the more grounded the individual's entrepreneurial intention. Based on the accumulated evidence showing on the effect of subjective norms on entrepreneurial intention, this study seeks to test the following hypothesize:

H2: Subjective norm positively influences firm performance

2.4 Relationship between Perceived Behavioural Control and Entrepreneurial Intention

Ajzen (2002) characterizes perceived behavioral control (PBC) as a calculation on reviving to the affluence or trouble performing the conduct seen by individuals and it is reflecting past involvement as well as expected hindrance and obstacles. This definition suggests that perceived behavioral control reflects a level of confidence to perform an activity (Ajzen, 2002) moreover considers that perceived behavioral control could be a concept to some degree more extensive than self-efficacy. It is incorporated to a degree of controllability (the degree to which effectively performing the conduct is up to the individual). Perceived behavioral control is specified within the shape of self-efficacy is a condition where individuals accept that conduct is simple or troublesome to do (Díaz-García, Sáez-Martínez, & Jiménez-Moreno, 2015). Perceived behavioral control is the recognition of a person of the ease or trouble in carrying out the assignment in opening a new company (Díaz-García et al., 2015). Based on Samuel, Ernest, and Awuah (2013) definition, perceived behavioral control is described as a control that alludes to the degree to which the person feels able of performing the conduct. The more prominent the feeling of behavioral control, the more grounded will be deliberate to perform the conduct. Pihie and Akmaliah (2009); Ruhle, Mühlbauer, Grünhagen, and Rothenstein (2010) recommended that perceived behavioral control has a positive impact on a student's entrepreneurial intention. In any case, Elfving, Brännback, and Carsrud (2009) and Raposo and Do Paço (2011) contended that the more prominent the person accepts that he can be a fruitful business person with a tall likelihood of succeeding; the more grounded in

the entrepreneurial intention. Based on the accumulated evidence showing the effect of perceived behavioral control on entrepreneurial intention, this study seeks to test the following hypothesize:

H3: Subjective norm positively influences firm performance

2.5 The Moderating Effect of Gender

Cromie (1987) found that there are contrasts in thought processes for ladies and men to get to be business visionaries. Ladies ended up business people less centered on gaining cash but ended up business visionaries since of work instability. They seem to be business people as one way to satisfy their career fulfillment. Not at all like men who center on making cash for family living. This coincides with Carter (2003) who sees that men assess monetary variables and get to be more inventive as the objective of getting to be a business visionary. In expansion, agreeing to Claim (2002) ladies put the next esteem on non-wage angles of self-employment than men and this is often in line with what Georgellis and Wall (2005) state that ladies make enterprise part-time instead of men who make business as the most specialist in winning pay. Men are more genuine to be a business person and center as it were on getting to be a business person than a lady admirably makes it a side work fair to fill time. Whereas Kirk and Belovics (2006) conclude that ladies ended up business visionaries to adjust their employments and families, whereas men look for riches' creation or financial advancement. Based on the accumulated evidence showing the effect of gender on entrepreneurial intention, and entrepreneurial intention affected by personal attitude, subjective norms, and perceived behavioral control hence we draw a research framework (Figure 1)

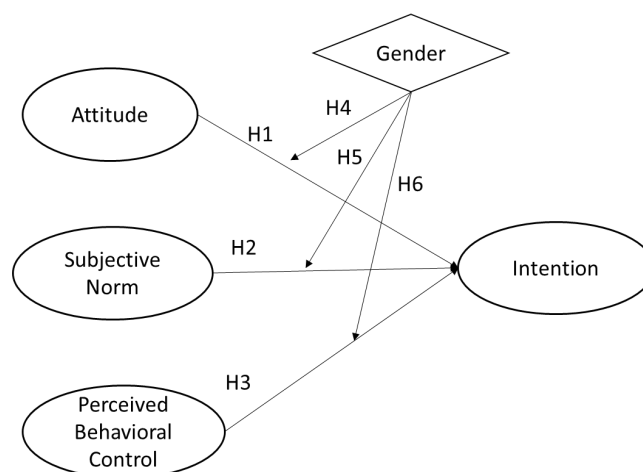


Figure 1 Theoretical framework

The research framework as can be seen in Figure 1 seeks outlined to test the following hypothesize:

- H4: Gender positively moderating the relationship between personal attitude and entrepreneurship intention
- H5: Gender positive moderating the relationships between Subjective Norms and entrepreneurship intention
- H6: Gender positive moderating the relationships between perceived behavioral control and entrepreneurship intention

III. RESEARCH METHOD

The research was conducted by exploring concepts and theories relevant to research activities to support efforts to prove the model that was built and to predict the results to be obtained so that the goal was prediction oriented. Data were collected using a survey questionnaire to IPMI students in undergraduate and graduate programs in IPMI business school. The sampling method used is probability sampling using proportionate stratified random sampling among bachelor and a master's degree student in IPMI business school. Based on (Creswell, 2009), probability sampling is that each person within the population has the same chance of being picked. According to Sekaran and Bougie (2009), probability sampling is used when representativeness is of importance in the interests of wider generalizability. Besides, proportionate random sampling is considered most efficient and is a good choice when differentiated information is desired about various strata within the population from data provided by different genders in the two-study program included in the study.

The present study employs a questionnaire survey approach to collect data, and all independent and dependent variables require five-point Likert-style responses ranging from 1 = "strongly disagree", through 3 = "neutral" to 5 = "strongly agree". Survey Questionnaires are designed in light of the theoretical background of TPB (Ajzen, 1991). The definitions and operational variables in this study are as follows: Variables personal attitude, subjective norm, perceived behavioral control was measured as multi-dimensional variables, and the entrepreneurial intention was measured in terms of unidimensional, reflected by the number of items in questionnaires (Sniehotta et al.). The moderation by gender is in terms of categorical (female or male), which modifies the original relationship between the independent and dependent variables, (Bougie & Sekaran, 2017). The result is measured by using a Likert

scale which sets on a five-point scale (with 1= strongly disagree, 2= disagree, 3= neutral which neither agree nor disagree, 4 = agree, 5= strongly agree). To test the model, PLS-SEM will be employed using SmartPLS3 software. This tool is particularly suitable for small samples with complex models; a prediction-oriented method that does not require strong theory (Henseler et al., 2014).

VI. RESULT

Respondents of this study consisted of males (50%) and females (50%). The majority of the respondents were students in the master of business administration program (71%), while 29% were in the undergraduate program. The mean value of entrepreneurial intention (EI) is high (3.82), with the score for males (3.88) is higher than the value perceived by the female (3.76). The means value of personal attitude (4.18) with the score for male (4.01) and female (3.88), Subjective norms mean value (4.29) with the score for male was higher than a mate. After evaluating the variables, the model as shown in Figure 2 was evaluated using criteria of measurement and structural model

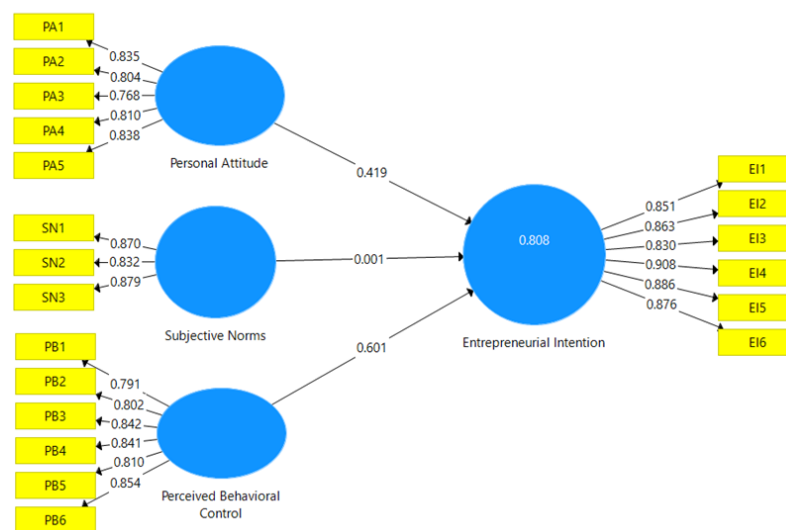


Figure 2. Research model

Source: author, 2020

Evaluation of the measurement model has been accomplished through three criteria for reflective measurement models 1) internal consistency 2) convergent validity 3) discriminant validity (Hair Jr, Hult, Ringle, & Sarstedt, 2014). Firstly, internal consistency

reliability can be accomplished by composite reliability and/or Cronbach's alpha coefficient tests. Composite reliability is considered more suitable for PLS because it does not assume equal indicator loadings (Becker, Klein, & Wetzels, 2012; Hair et al., 2014; Wilden et al., 2013). While Cronbach's alpha assumes equal indicator loadings, should exceed 0.70. The measurement model test shows that all outer loading is above 0.7, internal consistency and reliability, shown by Cronbach's Alpha and composite reliability are above 0.7. For convergent validity, the outer loadings are greater than 0.7, and yield an AVE higher than 0.5 indicates the convergent validity criterion is fulfilled Hair et al. (2014). To establish discriminant validity, we evaluate the cross-loading and Fornell-Larcker, HTMT, and observe that all criterion was fulfilled. Further, we tested the HTMT values are significantly different from 1, therefore discriminant validity is established.

The structural model next was evaluated in PLS-SEM using some criteria collinearity (VIF), path coefficient, the level of (R^2), the (f^2) effect size (Hair Jr et al., 2014). The result of the evaluation was shown in Table 1.

Table 1 Result of hypothesis for both female and male

Relationship	Path coefficient	R^2	VIF	f^2	T value	p value	Remarks
Personal Attitude <input type="checkbox"/> Entrepreneurial Intention	0.419	0.808	1.432	0.725	5.965	0.00	H1 Supported
Subjective Norm <input type="checkbox"/> Entrepreneurial Intention	0.001		1.528	0.061	0.022	0.982	H2 not Supported
Perceived Behavioral Control <input type="checkbox"/> Entrepreneurial Intention	0.601		1.178	1.368	8.747	0.00	H3 Supported

Note: *Significant at 0.05(1-tailed)

Table 1 can be seen that the R^2 of EI is 0.808 (substantial). which indicates high variance accounted for variable endogenous. The inner VIF values reported for all numbers are below 5, indicating that all construct free from the collinearity problem. The result in the relationship between PA to EI showed that PA has a positive effect on EI with a high value of

path coefficient 0.419 with t-value, and p-value (5.965 and 0.000), means Hypothesis 1 is supported. The relationship between SN to EI, shown by a low value of path coefficient (0.001), with t-stats and p-value (0.022 and 0.982) indicates that Hypothesis 2 is not supported. Finally, PBC has a positive effect and is significantly related to the entrepreneurial intention with path coefficient 0.423, and t-stats and p-value (2.368, and 0.018), therefore Hypothesis 3 is supported.

To test the moderating role of gender in the relationship between personal attitude, subjective norm, perceived behavioral control, and EI, we test the measurement model and structural model separately for females and males. These hypotheses were tested utilizing the SmartPLS3 bootstrapping technique with 5000 subsamples to assess path coefficients' significance and t values to test the predictive and moderating potential of gender. The result was summarized in Table 2.

Table 2. Result of hypothesis testing separately female and male

Relationship	Male Student			Female Student			Remarks
	Path coefficient	T Statistics	P Values	Path coefficient	T Statistics	P Values	
Personal Attitude <input type="checkbox"/> Entrepreneurial Intention	0.443	4.133	0.000	0.464	4.237	0.000	H4 Supported
Subjective Norm <input type="checkbox"/> Entrepreneurial Intention	0.033	0.366	0.714	0.1	1.246	0.213	H5 not Supported
Perceived Behavioral Control <input type="checkbox"/> Entrepreneurial Intention	0.565	5.468	0.000	0.619	7.577	0.000	H6 Supported

Note: *Significant at 0.05(1-tailed)

The result shows that the relationship between PA and EI, the path coefficient for the female student is (0.464) while for the male is (0.443), indicates that the relationship is

stronger for females. The result also has shown that gender moderated the relationship between PB and EI. In the relationship between PBC and EI, the path coefficient for the female is (0.691), and for male (0.565) significant at t value (7.577) and p-value (0.000), indicate that gender moderated the relationship between PBC and EI. Even though gender moderated the relationship between PA and EI, and PB and EI, it was found that gender did not moderate the relationship between SN and EI. Both relationships were not significant at t value (0.366) and p-value (0.714) for male and t value (0.1) and p-value (1.246).

V. DISCUSSION AND RESEARCH IMPLICATION

This study analyses the level of entrepreneurial intention, the result showed the mean value of entrepreneurial intention is high (3.82), which will be a point of reference for entrepreneurial development in the future. The highest mean (4.07) given for question no 6 “I have the firm intention to start a firm someday”. This could be interpreted that the student has the intention that someday they will start a firm. The mean value of EI for males (3.88) is higher than the value perceived by the female (3.76). This could be interpreted male have more intention to be an entrepreneur. Personal attitude has the highest mean score (4.18) it can be interpreted that most students agree if they had the opportunity and resources, they would like to start a firm. The mean value for male (4.01) is higher than females (3.88), and can be interpreted that male hold strong individual perspectives around being a business person. Subjective norms mean value (4.29) show that friends have the biggest influence on a decision on becoming an entrepreneur and male was more influenced by friends than female.

The relationship between PA and EI was significant and consistent with several previous studies regarding the relationship between personal attitude and entrepreneurial intention, for example by Dohse and Walter (2009); Rodrigues and Dinis (2001) found understanding PA significantly related to EI. A reason for the positive correlation between PA with EI in the current study's context of the students in IPMI is that students are able to perceive their attitude in opening a new firm before they can behave like an entrepreneur. The result as shown that gender moderated the relationship between PA and EI, which consistent with previous research of previous research has shown that gender influences entrepreneurial intention the path coefficient for the female student is (0.464) while for the male is (0.443), indicate that the relationship is stronger for female. This can be explained from the view of culture which believes that a female was not meant to be a breadwinner therefore becoming an entrepreneur is a choice for women. Women entrepreneurs to be more autonomous, more

positive, have better common sense, think more critically, and have a greater resolve to be successful than men (Indarti et al., 2010, Reynolds, 2000).

Perceived behavioral control positively affects entrepreneurial intention in a significant way. This can be interpreted as the more students believe that they can be a successful business person the stronger the entrepreneurial intention. Perceiving attitude accurately increases the ability to lead to entrepreneurial behavior. This finding supported the previous study of Basu and Virick (2008); Zaidatol Akmaliah, Lope Pihie (2009); Ruhle, Muhlbauer, Ggrunhagen, and Rothenstein (2010). The result also has shown that gender moderated the relationship between PB and EI, which is consistent with previous research (Kwong et al., 2009, Neelakantan, 2010, Wagner, 2007). The effect of perceived behavioral control on entrepreneurial intention for the female is stronger with the path coefficient (0.691) than for males (0.565). This finding can be explained that female students are capable of overcoming a certain degree of fear of failure which can affect entrepreneurial aspirations (Arano et al., 2010, Langowitz and Minniti, 2007, Minniti, 2009).

The relationship between a male student's Subjective Norm on entrepreneurial intention has not supported the hypothesis. This can be interpreted that since the respondent is in higher education, the approval or opinion from friends, colleagues, and family was not affecting the decision to become an entrepreneur. The finding is consistent with Linan and Chen (2009) who found no critical relationship between subjective norm and entrepreneurial intention. Surprisingly that gender has not moderated the relationship between SN and EI. This possibly because both female and male was influenced at the same level by family, friends, or colleagues. Another possible reason could be due to culture, to start a new ventures female and male student will ask the opinion of family or friends before making a decision (Arenius and Minniti, 2005, Koellinger et al., 2007).

VI. CONCLUSION

The current study found high entrepreneurial intention levels among students in IPMI International business school, this answer the research's first objective. The second main objective was to evaluate the relationship between personal attitude and entrepreneurial intention. A positive significant predictive relationship was found between personal attitude and entrepreneurial intention. The third objective was to evaluate the relationship between subjective norm and entrepreneurial intention. A non-significant relationship was found between subjective norm and entrepreneurial intention. The fourth objective was to evaluate

the relationship between perceived behavioral control and entrepreneurial intention. A positive and significant relationship was found between perceived behavioral form and entrepreneurial intention.

The fifth, sixth and seventh objectives were to determine the role of gender as a moderator in the relationship between personal attitude, subjective norm, and perceived behavioral control and entrepreneurial leadership. There was a moderating effect of gender significant on the relationship between personal attitude and entrepreneurial intention, and between perceived behavioral control to entrepreneurial intention, while gender has no moderation effect on the relationship between subjective norm and entrepreneurial intention.

This particular research had many practical suggestions for student entrepreneurial intention. For both male and female, personal attitude is reflected the most by the expression that they would rather be an entrepreneur and their perception that if they tried to start a firm, they would have a high probability of succeeding, therefore the school IPMI should motivate more students to become entrepreneurs. more effort should be given to improving these factors using more cooperation with industry, venture capital, and government.

The limitation of the study is difficult to get 76 respondents involved with IPMI undergraduate student years 1, 2, 3, and 4, and IPMI graduate student years 1 and 2. Although this research, 76 respondents are used as a sample where the data collected using the sampling table provided by (Cohen, 1992) in arrange to get the accuracy on entrepreneurial intention among Business students in IPMI as the research subject conducted in this research. The researchers have restricted time, it becomes harder for the researchers in processing the data collection and leading to the dismissal of quality data. On the other hand, the lack of efficiency in creating this research is additionally a challenge for researchers to complete this research. This study was the researchers' second research proposal and it appears that researchers also have a lack of experience. Because of that, researchers were not masters in searching and finding journals as references and it will make the scope of analysis limited. Besides, few obstacles were faced by the researchers when distributing the questionnaires to 76 respondents. There are few respondents that refuse to answer the questionnaire and other people are answering the questionnaires but fail to understand and leading them to answer it in inappropriate ways.

There are some suggestions for future research based on findings from the current study. Subjective norm was not found to have a significant positive relationship with entrepreneurial intention. Also, gender did not moderate the relationship between subjective norm and entrepreneurial intention. A change in the variable measurement would give a

different path coefficient. An interesting future study could examine a variable such as innovativeness of curriculum as a moderator future research, and examine entrepreneurial intention levels among different generational groups from generation X, Y, and Z. That is because these age groups have been known to display different values, work ethics, and technological inclinations due to varying societal exposure to extremely different and changing circumstances in the past twenty years. As suggested by Hair et al. (2007), longitudinal studies are a better way to seek cause and effect relationships among variables at different periods. This could involve studying the outcomes of EI training programs and gauging their effectiveness A study can be done to compare the entrepreneurial intention towards other undergraduate and graduate students from other Universities.

REFERENCES

- [1] Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211.
- [2] Ajzen, I. (2001). Nature and operation of attitudes. *Annual review of psychology*, 52(1), 27-58.
- [3] Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior 1. *Journal of applied social psychology*, 32(4), 665-683.
- [4] Ajzen, I. (2015). The theory of planned behaviour is alive and well, and not ready to retire: a commentary on Sniehotta, Pesseau, and Araújo-Soares. *Health Psychology Review*, 9(2), 131-137.
- [5] Bird, B. (1988). Implementing entrepreneurial ideas: The case for intention. *Academy of management Review*, 13(3), 442-453.
- [6] Boyles, T. (2012). 21st century knowledge, skills, and abilities and entrepreneurial competencies: A model for undergraduate entrepreneurship education. *Journal of Entrepreneurship Education*, 15, 41.
- [7] Brush, C. G., Kolvareid, L., Widding, L. O., & Sorheim, R. (2010). *The life cycle of new ventures: Emergence, newness and growth*: Edward Elgar Publishing.
- [8] Camilleri, J. (2015). *Youth attitudes towards the fun theory: how to implement and promote pro-environmental behaviour*. University of Malta,
- [9] Díaz-García, C., Sáez-Martínez, F., & Jiménez-Moreno, J. (2015). Assessing the impact of the "Entrepreneurs" education programme on participants' entrepreneurial intentions. *International Journal of Educational Technology in Higher Education*, 12(3), 17-31.

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- [10] Elfving, J., Brännback, M., & Carsrud, A. (2009). Toward a contextual model of entrepreneurial intentions. In *Understanding the entrepreneurial mind* (pp. 23-33): Springer.
- [11] Fayolle, A., Liñán, F., & Moriano, J. A. (2014). Beyond entrepreneurial intentions: values and motivations in entrepreneurship. *International Entrepreneurship and Management Journal*, 10(4), 679-689.
- [12] Gelderen, M. v. (2016). Entrepreneurial autonomy and its dynamics. *Applied Psychology*, 65(3), 541-567.
- [13] Gibb, A. (2002). In pursuit of a new 'enterprise' and 'entrepreneurship' paradigm for learning: creative destruction, new values, new ways of doing things and new combinations of knowledge. *International journal of management reviews*, 4(3), 233-269.
- [14] Hair Jr, Hult, Ringle, & Sarstedt. (2014). *A primer on partial least squares structural equation modeling (PLS-SEM)*: Sage Publications.
- [15] Henseler, J., Dijkstra, T. K., Sarstedt, M., Ringle, C. M., Diamantopoulos, A., Straub, D. W., . . . Calantone, R. J. (2014). Common beliefs and reality about PLS: Comments on Rönkkö and Evermann (2013). *Organizational Research Methods*, 17(2), 182-209.
- [16] Hyder, A., Azhar, A., Javaid, A., & Rehman, M. (2011). Entrepreneurial intentions among business students in Pakistan. *Journal of Business Systems, Governance and Ethics*, 5(2).
- [17] Kolvereid, L., & Bullvag, E. (1996). Growth intentions and actual growth: The impact of entrepreneurial choice. *Journal of enterprising Culture*, 4(01), 1-17.
- [18] Kolvereid, L., & Isaksen, E. (2006). New business start-up and subsequent entry into self-employment. *Journal of business venturing*, 21(6), 866-885.
- [19] Köykkä, K., Absetz, P., Araújo-Soares, V., Knittle, K., Sniehotta, F. F., & Hankonen, N. (2019). Combining the reasoned action approach and habit formation to reduce sitting time in classrooms: Outcome and process evaluation of the Let's Move It teacher intervention. *Journal of Experimental Social Psychology*, 81, 27-38.
- [20] Krueger Jr, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of business venturing*, 15(5-6), 411-432.

Marketing Budgeting, Marketing Activities, and Distributor Loyalty: the Mediating Effect of Brand Equity

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Abstract

In reaching their customers, the producer of fast-moving consumer goods (Keller, 1993) use distributors' channels to reach their end-user. Despite having a strong brand globally, with 9.04 bio USD of brand value (2020), the company experienced steady growth with higher marketing budget spending from 2017 to 2019. The trend of operating incomes has not improved. The effect of brand equity on loyalty in the B2B segment has not been conclusive. The study aims to find out the level of distributor loyalty, the effect of marketing activity, marketing budgeting, and brand equity on distributor loyalty. The research strategy was a survey, conducted with a quantitative method, with 65 distributors as respondents. The data was analyzed with a descriptive statistic and hypotheses were tested using SmartPLS3. The result has shown that the level of distributor loyalty was good, there was a positive significant effect of marketing activity on loyalty, a positive significant effect of marketing activity on brand equity, and a positive significant effect of brand equity to distributor loyalty. However, there was no effect of marketing budgeting to brand equity. The study gave a contribution to the industrial market segment or B2B marketer, for them to be able to invest marketing activity spending into the right marketing activity mix, suited to the market condition to achieve a

better return of investment. Building brand equity in the industrial market segment is as important as consumer market. However, marketers shall be able to differentiate the approach, since the brand equity measures for the industrial market segment are different as compared to the consumer market.

Keywords: Brand Equity, Distributor Loyalty, B2B FMCG Industrial Market, Marketing Budget.

I. INTRODUCTION

The industrial business market segment or B2B is the set of all individuals and organizations that acquire goods and services that enter into the production of other products or services that are sold, rented, or supplied to others. The industrial market is different as compared to the consumer market since it will involve organizational buying which is more functional, and rational in decision making (Kotler et al, 2006). 3M has a strong brand globally, with 9.04 bio USD of brand value (2020), and ranked number 15 by Global Rep Track (2020), and number 64 on Best Global Brand (2019) by Interbrand. The businesses use distributors as chains to supply their product to the customer. The company experienced higher budget spending from 2017 to 2019, however, the trend of operating incomes was not reduced, many did not result in business growth & performance. COGS were high due to mainly inventory costs instead. Business growth during the year 2017 – 2019 was from trade promotion which resulted in more transactional buying instead of long-term distributor loyalty. Distributor loyalty is one of the important factors for B2B company business performance since the trend of utilizing a distributor is still around and going to thrive (Mudambi et al., 2001).

In the past decades, there is still a huge debate, mainly in the industrial segment, on the importance of brand equity and the relationships with loyalty for their business. Most of the research relates brand equity to customer loyalty only, while refers to Eggert (2012), this is only part of the customer retention factor since the loyalty to brand and channel or distributor are evenly split. Customers are willing to pay a premium from a company with a good reputation (Vyravene et al., 2016). Brand attributes are matters on the rational buying decision-making process and customer loyalty (Gomes et al., 2016). According to (Tjan, 2015) and (Vyravene, 2016), customer loyalty, was influenced by brand equity (Chandra, 2015) and marketing activity (Hutagalung et al., 2017; Erdogmus et al., 2012; Rumman et al., 2012, Laksamana, 2018). Related to marketing activities, budget allocation to support the program would affect the number and quality of marketing activities. However, there is little research available in evaluating the relationship between marketing budgeting on brand equity.

Perceived advertising budget allocation has a positive impact on brand awareness (Buil et al., 2010), Therefore, this study aims to evaluate the level of distributor loyalty, the effect of brand equity to loyalty, the effect of marketing activities on distributor loyalty, and the marketing budget on brand equity for the B2B market.

II.LITERATURE REVIEW

A. Relationship between Marketing Activities and Distributor Loyalty

Relationship marketing was found to have a positive impact on customer loyalty in the banking sector (Ruswanti, 2016). While Tjan (2015) found that marketing activity in a form of promotion has a positive impact on customer loyalty in the shopping center business. Based on the explanation above we posit that

H1: Marketing activities has a positive effect on distributor loyalty

B. Relationship between Marketing Activities and Brand Equity

As noted, brand equity has been defined in a variety of ways, depending on the particular purpose, for instance from the perspective of the consumer. The advantage of conceptualizing brand equity from this perspective is that it enables managers to consider specifically how their marketing program improves the value of their brands. Customer-based brand equity is defined as the differential effect of brand knowledge on consumer response to the marketing of the brand (Keller, 1993). Thus, according to Keller (1993), a brand is said to have positive or negative brand equity if consumers react more or less favorably to the product, price, promotion, or distribution of the brand. During the decade, there is a lot of research that explores marketing activity, mainly in a form of social media and online activity impacting brand equity. It was found that marketing activity such as social media campaign will have a positive impact to brand equity in the entrepreneurship sector (Hutagalung et al, 2017), banking sector (Laksamana, 2018), mobile services sector (Rumman et al. 2014), and general consumer market (Erdogmus et al., 2012). Marketing activity intensity has a positive relationship with brand equity (Chandra, 2015).H2: Subjective norm positively influences firm performance. Based on

H2: Marketing activities has a positive effect on brand equity

C. Relationship between Marketing Budget and Brand Equity

The higher the advertising spending of a company, the higher the brand awareness will be, even if it will not give a significant impact on perceived quality and brand associations (Buil et. al, 2010). Even it did not support the whole element of brand equity, but there is somehow a perception of one of the elements of brand equity which is awareness. However, the marketing spending will not necessarily build brand equity positively, for instance, monetary promotions will not give a significant impact on brand associations (Buil et al., 2010).

H3: Marketing budget has a positive effect on brand equity.

D. Relationship between Brand Equity and Distributor Loyalty

According to Gomes et al. (2016), brand attributes are relevant in the B2B decision-making process, and there is a positive impact of brand relevance to customer purchase and loyalty. Ramaseshan et al. (2013) found different results, wherein the research it was found that there is no significant impact between brand equity and customer loyalty on the B2B context. Therefore, debate among researchers is going on, mainly for the B2B context. Based on the above explanation, the below hypothesis is shaped

H4: Brand equity has a positive effect on distributor loyalty.

E. The Mediating Effect of Brand Equity

El Naggari and Bendary (2017) stated that there is a mediating effect between brand equity in the relationship between experience and brand trust, and Hu (2012) found that there is a mediating effect of brand equity in the relationship between service quality and loyalty. Shabbir, Khan, and Khan (2017) scholars have found that brand awareness mediates the relationship between loyalty to equity. A very few study in the B2B market evaluate brand equity as a moderating factor in the relationship between marketing activities and loyalty. From the previous research that marketing activities has a positive effect to brand equity and brand equity has a positive effect on loyalty, therefore we hypothesized the following

H5: Brand equity has a mediating effect on the relationship between marketing activities and distributor loyalty.

III. RESEARCH METHOD

The study used a quantitative survey using a questionnaire, proportionate random sampling with data collection started from July to September 2020. The target respondent was distributors which held more than one brand in their portfolio. Respondents head office are mostly located in the province of Jabodetabek area (80.49%), Central Java and DIY (4.88%), East Java (4.88%), Sumatera (4.88%) Kalimantan (2.44%), and Sulawesi (2.44%). The target respondent was the distributor's manager, according to Cohen (1992), the recommended sample size for data to be analyzed in SmartPLS3 with a significant level of 5%, expected R2 of 0,5, minimum recommended samples was 42. SmartPLS3 is particularly suitable for small samples with complex models; a prediction-oriented method that does not require strong theory (Henseler et al., 2014). The questionnaire utilized a 7 Likert scale from strongly disagree (1).to strongly agree (7). Survey questionnaires were used in light of the theoretical background of brand equity (Ajzen, 1991).

Measurement of marketing activities was based on Kotler (2016), measuring the multi-dimension of advertising activity, sales promotion, and trade spending activity, event & experiences activity, public relations and publicity activity, online & social media activity, direct database marketing, and personal selling activity. Measurement of the brand equity variable was using questionnaires from Keller (2003) and Kuhn Et al. (2006). Marketing budgeting measurement is according to Kotler (2016), which are categorized as an affordable method, percentage of sales method, competitive parity, method, and objectives & task method, and lastly, distributor or channel loyalty was measured using a multidimensional questionnaire by Narayandas (2015): purchases or their business performance and growth, efforts to grow the business, satisfaction in doing the business, endorsing the principal product to sell, willingness to grow the relationship, resist competitor blandishment, willingness to pay a premium, seeks to collaborate on new product development, may invest on principal business growth. The validity and reliability of the questionnaire were tested against the criterion used Pearson's correlation and Cronbach's Alpha and resulted in correlation value more than 0.3 to indicate that the questions are valid, and Cronbach's alpha was all above 0.7 indicating reliability was fulfilled.

IV. RESULT

Distributor loyalty has high mean value (5.77) shown that distributor has loyalty to brand, although they deal with another segment in their portfolio, such as automotive business (22 distributors), oil and gas (16 distributors), manufacturing, construction and logistics (5 distributors). Evaluation of the measurement model (Figure 1) has accomplished through

three criteria for reflective measurement models 1) internal consistency 2) convergent validity 3) discriminant validity (Hair Jr, Hult, Ringle, & Sarstedt, 2014). Firstly, internal consistency reliability can be accomplished by composite reliability and/or Cronbach's alpha coefficient tests. Composite reliability is considered more suitable for PLS because it does not assume equal indicator loadings (Becker, Klein, & Wetzels, 2012; Hair et al., 2014; Wilden et al., 2013). While Cronbach's alpha assumes equal indicator loadings, should exceed 0.70. The measurement model test shows that all outer loading is above 0.7, internal consistency and reliability, shown by Cronbach's Alpha and composite reliability are above 0.7. For convergent validity, the outer loadings are greater than 0.7, and yield an AVE higher than 0.5 indicates the convergent validity criterion is fulfilled Hair et al. (2014). To establish discriminant validity, we evaluate the cross-loading and Fornell-Larcker, HTMT, and observe that all criterion was fulfilled. Further, we tested the HTMT values are significantly different from 1, therefore discriminant validity is established.

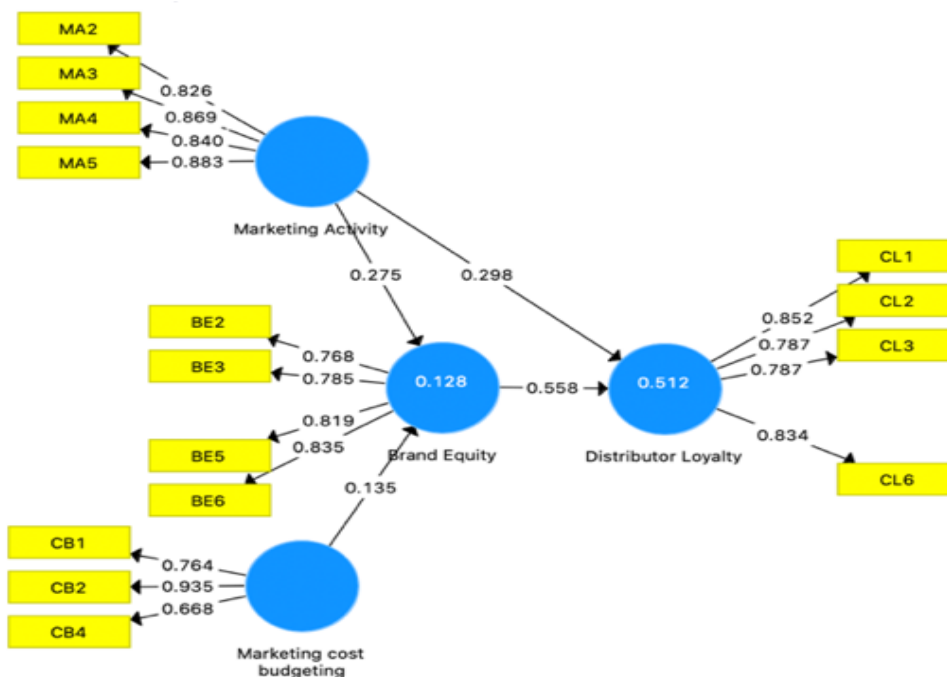


Figure 1. Research model.

Source: author, 2020

The structural model next was evaluated in PLS-SEM using some criteria collinearity (VIF), path coefficient, the level of (R²), the (f²)effect size (Hair Jr et al., 2014). The result of the evaluation was shown in Table 1.

Table 1 Result of structural model and hypothesis

Relationship	Path coefficient	R ²	VIF	f ²	T value	p value	Remarks
Marketing Activity → Distributor Loyalty	0.297	0.512	1.128	0.161	1.829	0.034	H1 supported
Marketing Activity → Brand Equity	0.275	0.128	1.268	0.068	1.614	0.053	H2 supported
Marketing budgeting → Brand Equity	0.135	0.128	1.268	0.016	0.646	0.259	H3 not supported
Brand Equity → Distributor Loyalty	0.558	0.512	1.128	0.564	4.578	0.000	H4 supported

Note: *Significant at 0.05(1-tailed)

As can be seen from Table 1 R² of distributor loyalty is 0.564 (large), which indicates high variance accounted for variable endogenous. The inner VIF values reported for all numbers are below 5, indicating that all construct free from the collinearity problem. The effect of marketing activities on distributor loyalty was medium (0.297) and significant (1.829 and 0.0349) hence, hypothesis 1 is supported. The effect of marketing activity on brand equity showed by a low value of path coefficient (0.275), with t-stats and p-value (1.6142 and 0.053) indicates that Hypothesis 2 is supported. The effect of marketing budgeting on brand equity has a low positive effect (0.135) and not significantly with t-stats and p-value (0.646, and 0.259), therefore Hypothesis 3 is not supported. Finally, the effect of brand equity to distributor loyalty showed a high value of path coefficient (0.558) with t-value, and p-value (4.5783 and 0.000), giving an indication hypothesis 4 is supported.

To test the moderating role of gender in the relationship between personal attitude, subjective norm, perceived behavioral control, and EI, we test the measurement model and structural model separately for females and males. These hypotheses were tested utilizing the SmartPLS3 bootstrapping technique with 5000 subsamples to assess path coefficients' significance and t values to test the predictive and moderating potential of gender. The result was summarized in Table 2.

Table 2. Mediating effect of brand equity

Indirect effect	Path coefficient	T Statistics	P Values	Confidence Interval Bias corrected		Remarks
				5.0%	95.0%	
Marketing Activity → Brand Equity → Distributor Loyalty	0.153	1.240	0.107	-0.003	0.394	H5 not Supported

Note: *Significant at 0.05(1-tailed)

The result shows that the indirect effect from marketing activity \square brand equity \square distributor loyalty is (0.153), t value (1.240), and p-value (0.107), and confidence interval bias corrected at 5% and 95% does include zero, indicate non-significant effect, and brand equity does not mediate the relationship between marketing activity and distributor loyalty.

V. DISCUSSION AND RESEARCH IMPLICATION

In the relationship between marketing activities and distributor loyalty, it was found that there is a significant positive impact between marketing activity conducted by the principal with distributor loyalty, this supports the hypothesis. This confirms the findings from Tjan (2015), Ruswanti (2016), Vyaravene (2016) which explored the banking industry, and consumer market segment. This research result supports the hypothesis that marketing activity is having a positive relationship with distributor loyalty in the B2B or industrial market segment. To increase distributor loyalty, marketers might invest the marketing activity on the activity of trade promotion, event and experience, social media, and publication. The marketing activity supported was the one suited to the served segment characteristic, such as trade promotions, events and exhibitions, publications, and social media. This is because of purchasers of automotive, manufacturing, and construction which dominates this research respondents mostly seeking their purchase information at the above-mentioned platform since their decision-making is more rational and functional. As has been mentioned, there is no mediation effect of brand equity (El Naggat & Bendary) for marketing activity (MA), and distributor loyalty (CL).

In the relationship between marketing activities and brand equity, the research found that there is a significant positive effect between marketing activities conducted by the principal and principal brand equity. These findings are consistent with the findings from Erdogmus et al (2012), Rumman et al., (2014), Laksamana (2018), Chandra (2015), Hutagalung (2017). Refers to the result, marketing activity will have a positive effect on brand equity, but the type of marketing activities and parameters on brand equity will be specific to the B2B segment, since most of the respondent are serving automotive (53%), manufacturing (49%), and construction industry (46%), therefore some types of marketing activity will affect their brand perceptions. Brand equity for the B2B segment is more functional, therefore the perception of brand equity will not merely be driven by marketing activities, but the services and experiences provided by the company as well.

In the relationship between Marketing Budget and Brand Equity, it was found that there is no significant impact and relationship between marketing cost budgeting to brand

equity, therefore the hypothesis is rejected. This is not consistent with Buil et al (2010) finding, wherein in this case there is a perception that advertising spending allocation has a positive impact on brand awareness. But in this case, it will not enhance brand perception and brand association. However, Buil et al. (2010) findings also were not supporting the whole brand equity parameters. Therefore, further research can be conducted to verify these findings. This is mainly because most respondents are serving automotive (53%), manufacturing (49%), and construction (46%) business and most of them already know 3M as a strong global brand, therefore distributors perceive that spending on marketing will not increase or have a positive impact to the brand equity.

In the relationship between brand equity and distributor loyalty, according to the research, it was found that there is a significant positive impact between principal brand equity and distributor loyalty, therefore the hypothesis is supported. It is consistent with the result from Gomes et al. (2016) where it was found that the brand is a matter in the rational B2B decision-making process and has a positive impact on customer purchase loyalty. This confirms Vyravene et al. (2016) as well, where it was found that customers are willing to pay more as part of loyalty behavior to a company with a good reputation as part of the brand equity measures element. This research finding is not consistent with Ramaseshan et al (2013) findings where the finding was that there is no significant impact of brand equity on customer loyalty on the B2B market segment. The probable reason was that most of the respondents are serving automotive (53%), and manufacturing (49%), where at the served segment, the 3M brand has been well known, and strong globally, therefore the distributor is loyal to the brand. To increase distributor loyalty, a manager might focus on the activity of building a salesforce relationship and building a partnership relationship with the distributor. Another thing was that brand equity for the B2B segment is more functional, therefore the perception of brand equity did not merely drive-by marketing budget allocation, but the services and experiences provided by the company. From the analysis, it was found that there is a significant difference in distributor loyalty to the test value. Therefore, it is found that the distributor loyalty is high, and the possible root cause of a decrease in business growth and gross margin, even if marketing activity and investment were conducted is not on distributor loyalty.

Lastly, we tested whether brand equity mediates the relationship between marketing activity and distributor loyalty, it was found that brand equity does not mediate the relationship between marketing activities and distributor loyalty. It implies that brand equity does not have an elevation power to multiply the effect of marketing activities to distributor loyalty. Marketing activities only give a positive impact directly to distributor loyalty. To increase distributor

activities to improve the principal bottom line, the company should not rely only on brand equity.

VI. CONCLUSION AND RECOMMENDATION FOR FUTURE RESEARCH

The level of distributor loyalty is found as high, it is significant above the test point of 4. This answer research question number 1 on understanding the loyalty level of 3M Indonesia distributor. Marketing activity has a positive effect on distributor loyalty and marketing activity has a positive effect on brand equity. The marketing budget does not have a positive effect on brand equity and brand equity does not have a mediating effect on the relationship between marketing activity and distributor loyalty.

This research provided a new perspective on marketing activity, marketing activity budgeting, brand equity, and the correlation of those factors to distributor loyalty. The point of view of the distributor is something that not much researchers explored as well. Therefore, this research provides a different point of view. The study gave a contribution to the industrial market segment or B2B marketer, for them to be able to invest marketing activity spending into the right marketing activity mix, suited to the market condition to achieve a better return of investment. The industrial market segment marketer will also understand that building brand equity is similarly important for the industrial market segment as compared to the consumer market. However, marketers shall be able to differentiate the approach, since the brand equity measures for the industrial market segment are different as compared to the consumer market.

The research was conducted at small sampling and general industrial market segments. It will be better if future research was conducted at a bigger sampling distribution and specific industrial market segment industry. Since the characteristic will be different from one to another. Other limitations were that the study variable dimension was too general, such as for marketing activity it covers all mixes of marketing activities and does not specifically touch one mix. The limitations were also applied for brand equity, which covers general and all levels of brand equity measures. Therefore, future research can be conducted at larger but specific industrial business market segment industry respondents. This is to cover different characteristics of each different industry. On marketing activity, it will be good to have detailed research for each marketing activity mix, since the current study on the marketing activity of the industrial market segment is still limited. Research points of view on marketing activity and budgeting shall be perceived from the principal point of view as well, to have more objective results. Brand equity could be detailed down since there might be a component inside brand

equity measures that are strongly impacted by marketing activities. This research is one-time research, to elaborate more on the effect of marketing activity, marketing budget, brand equity, to distributor loyalty, for future research it is suggested to use the longitudinal study to understand the effect of before and after marketing activities increase or decrease.

REFERENCES

- [1] Aaker, D. A. (1986). Measuring Brand Equity Across Products and Markets. *California Management Review*, 38(No. 3).
- [2] Aaker, D. A. (1991). *Managing Brand Equity*. New York: The Free Press.
- [3] Akman, G., and Yörür, B. (2012). Effects of Business to Business Relations on Customer Satisfaction and Loyalty in the Context of a Developing Country. *American Journal of Industrial and Business Management*, 2.
- [4] As'ad, H. A.-R., and Alhadid, A. Y. (2014). The Impact of Social Media Marketing on Brand Equity: An Empirical Study on Mobile Service Providers in Jordan. *Rev. Integr. Bus. Econ. Res*, 3.
- [5] Baalbaki, S., and Guzman, F. (2016). Consumer-based brand equity.
- [6] Basbeth, F., and Ibrahim, M. A. H. (2018). *Four Hours Basic PLS-SEM: A Step by Step Guide With Video Clips*. Selangor, Malaysia: iPRO Publication.
- [7] Bendixen, M., Abratt, R., and Bukasa, K. A. (2004). Brand equity in the business-to-business market. *Industrial Marketing Management*, 33.
- [8] Beverland, M., Napoli, J., and Yakimova, R. (2007). Branding the business marketing offer: exploring brand attributes in business markets. *Journal of Business and Industrial Marketing*, 22.
- [9] Blasko, V. J., and Patti, C. H. (1984). The Advertising Budgeting Practise of Industrial Marketer. *Journal of Marketing*, 48.
- [10] Brennan, R., and Croft, o. (2012). The use of social media in B2B marketing and branding: An exploratory study. *Journal of Customer Behaviour*, 11.
- [11] Bricci, L., Fragata, A., and Antunes, J. (2016). The Effects of Trust, Commitment and Satisfaction on Customer Loyalty in the Distribution Sector *Journal of Economics, Business and Management*, 4.
- [12] Buil, I., Chernatony, L. d., and Martínez, E. (2011). Examining the role of advertising and sales promotions in brand equity creation. *Journal of Business Research*, 66(2013).

-
- [13] Cassia, F. (2010). Assessing the impact of business-to-business brand reputation on comparative brand preference and buyer's satisfaction. Proceeding of the 6th International Conference Thought Leaders in Brand Management.
- [14] Chandra, I. R. (2015). The Impact of Marketing Mix Elements toward Brand Equity through Brand Awareness and Brand Image as Mediators in Bakery Industry in Indonesia. *iBuss Management* 3.
- [15] Chung, W. (2009). The Roles of Distributor in the Supply Chain – Push-pull Boundary. *International Journal of Business and Management*
- [16] Cooke, E. F. (1986). What is Business and Industrial Marketing. *The Journal of Industrial Marketing*.
- [17] Ćorić, D. S., and Jelić, D. (2015). Applicability of Keller's brand equity model in the B2B chemical market. *Economic Research*, 28.
- [18] Devila, R., Ma'mun, S., and Ansar. (2017). Marketing mix: effects of service quality and consumer behavior on loyalty. The mediating role of customer satisfaction. *Quest Journal*.
- [19] Eggert, A., Henseller, J., and Hollmann, S. (2012). WHO OWNS THE CUSTOMER? DISENTANGLING CUSTOMER LOYALTY IN INDIRECT DISTRIBUTION. *Journal of Supply Chain Management*, April 2012.
- [20] Erdogmus, I. E., and Cicek, M. (2012). The impact of social media marketing on brand loyalty. *International Strategic Management*.
- [21] Frazier, G. L. (1999). Organizing and managing Channel of Distribution. *Journal of The Academy Marketing Science*, Vol. 27(No.2).
- [22] Gaissmaier, T., Heckenbach, B., and Lucht, N. (2012). Paying for Performance : Trade Spending for Profitable Growth. Retrieved from
- [23] Garside, M. (2020). 3M's global brand value 2010-2019. Retrieved from <https://www.statista.com/statistics/1103289/brand-value-of-3m/>
- [24] Glynn, M., Motion, J., and Brodie, R. (2007). Sources of brand benefits in manufacturer-reseller B2B relationships. *Journal of Business and Industrial Marketing*, 22.
- [25] Gomes, M., Fernandes, T., and Brandão, A. (2016). Determinants of brand relevance in a B2B service purchasing context. *Journal of Business and Industrial Marketing*, 31.
- [26] Haghkhah, A., Hamid, A. B. B. A., Ebrahimpour, A., Roghanian, P., and Gheysari, H. (2013). Commitment and Customer Loyalty in Business-To-Business Context. *European Journal of Business Management*, 5.
- [27] Hair, J. F., Black, W. C., Babin, B. J., and Anderson, R. E. (2010). *Multivariate Data Analysis (7th Edition ed.)*: Pearson.

-
- [28] Hallikainen, H., Savimäki, E., and Laukkanen, T. (2020). Fostering B2B sales with customer big data analytics. *Industrial Marketing Management*, 86.
- [29] Hassan, S., Hamid, A. A., Muhammad, N. M. N., and Rahman, N. M. N. N. (2010). Factors Affecting Industrial Goods Buying Decision Making in a Manufacturing Company. *Journal of marketing Management*.
- [30] Hlavacek, J. D., and Cusistion, T. J. M. (1983). *Industrial Distributors: When, Who, How?* Retrieved from <https://hbr.org/1983/03/industrial-distributors-when-who-and-how>
- [31] Homburg, C., Klarmann, M., and Schmitt, J. (2010). Brand awareness in business markets: When is it related to firm performance? *International Journal of Research in Marketing*, 27(2010).
- [32] Hutagalung, B., Situmorang, S. H., and Alfifto. (2017). The Effect Of Social Media Marketing On Value Equity, Brand Equity And Relationship Equity On Young Entrepreneurs In Medan City. *Advances in Economics, Business and Management Research (AEBMR)*, 46.
- [33] Jr., J. F. H., Matthews, L. M., Matthews, R. L., and Sarstedt, M. (2017). PLS-SEM or CB-SEM: updated guidelines on which to use. *Int. J. Multivariate Data Analysis*, 1.
- [34] Keller, K. L. (2003). Understanding brands, branding and brand equity. *Interactive Marketing*, Vol 5.
- [35] Keller, K. L., and Jr, F. E. W. (2004). A Roadmap for Branding Industrial Markets. *Journal of Brand Management*, 11.
- [36] Kirov, M. (2017). Direct Sales VS Channel Sales: Pro's , Con's, Balance. Retrieved from <https://www.saleshacker.com/channel-sales-direct-sales-strategy/>
- [37] Kock, N., and Hadaya, P. (2018). Minimum sample size estimation in PLS-SEM: The inverse square root and gamma-exponential methods. *Information Systems Journal*, 28.
- [38] Kotler, P., and Keller, K. L. (2016). *Marketing Management (Vol. Vol. 15)*. England: Pearson Education.
- [39] Kotler, P., and Pfoertsch, W. (2006). *B2B Brand Management*. Berlin, New York: Springer.
- [40] Kozlenkova, I. V., Hult, G. T. M., Lund, D. J., Mena, J. A., and Kecec, P. (2015). The Role of Marketing Channels in Supply Chain Management. *Journal of Retailing*, Vol. 91`.
- [41] Kuhn, K.-A. L., Alpert, F., and Pope, N. K. L. (2008). An application of Keller's brand equity model in a B2B context. *Qualitative Market Research: An International Journal*, 11.
- [42] Kurshakova, N. B., Kurshakova, N. S., and Levkin, G. (2015). Method and Instrument of Distribution Channel Member Loyalty Formation. *The Caucasus*.

-
- [43] Laksamana, P. (2018). Impact of Social Media Marketing on Purchase Intention and Brand Loyalty: Evidence from Indonesia's Banking Industry. *International Review of Management and Marketing*, 13-18.
- [44] Leone, R. P., Rao, V. R., Keller, K. L., Luo, A. M., McAlister, L., and Srivastava, R. (2006). Linking Brand Equity to Customer Equity
- [45]. *Journal of Service Research*, 09(November 2006).
- [46] Memon, A. H., and Rahman, I. A. (2014). SEM-PLS Analysis of Inhibiting Factors of Cost Performance for Large Construction Projects in Malaysia: Perspective of Clients and Consultants. *The Scientific World Journal*, 2014.
- [47] Mero, J., Karjaluoto, H., Aarne, T., and Jayawardhena, C. (2012). Digital and social media marketing usage in B2B industrial section. *Marketing Management Journal*.
- [48] Moisescu, O. (2005). THE CONCEPT OF BRAND EQUITY - A COMPARATIVE APPROACH. Babeş-Bolyai University(October 2005).
- [49] Moorman, C., and Finch, T. A. (2008). Marketing Budget Vary by Industry. Retrieved from <https://deloitte.wsj.com/cmo/2017/01/24/who-has-the-biggest-marketing-budgets/>
- [50] Mudambi, S. (1997). An Exploration of Branding in Industrial Markets. *Industrial Marketing Management*, 26.
- [51] Mudambi, S. (2002). Branding importance in business-to-business markets Three buyer clusters. *Industrial Marketing Management*, 31.
- [52] Mudambi, S., and Aggarwal, R. (2001). Industrial distributors Can they survive in the new economy? *Industrial Marketing Management*, 32(2003).
- [53] Mujtaba, B. G., and Byrnes, T. J. (2011). The Value Of B2B Face-To-Face Sales Interaction In The United States, Canada And Latin America. *International Business and Economic Research Journal*, 7.
- [54] Narayandas, D. (2005). Building Loyalty in Business Markets
- [55]. *Harvard Business Review*.
- [56] Nikabadi, M. S., Safui, M. A., and Agheshlouei, H. (2015). Role of Advertising and Promotion in Brand Equity Creation. *Journal of Promotion Management*, 21.
- [57] Pallant, J. (2010). *SPSS Survival Manual*. Australia: Allen and Unwin Book Publishers.
- [58] Prendergast, G. P., and West, D. (2009). Advertising and Promotions Budgeting and the Role of Risk. *European Journal of Marketing*.
- [59] Qadri, B. (2018). Understanding Marketing Efficiency, Marketing Cost, Margin, and The Price Spread.

-
- [60] Ramaseshan, B., Rabbanee, F. K., and Hui, L. T. H. (2013). Effects of customer equity drivers on customer loyalty in B2B context. *Journal of Business and Industrial Marketing*, 28.
- [61] Riel, A. v., Streukens, S., and Mortanges, C. P. d. (2005). Marketing Antecedents of Industrial Brand Equity: An Empirical Investigation in Specialty Chemicals. *Industrial Marketing Management*, 34.
- [62] Ruswanti, E., and Lestari, W. P. (2016). THE EFFECT OF RELATIONSHIP MARKETING TOWARDS CUSTOMER'S LOYALTY MEDIATED BY RELATIONSHIP QUALITY (CASE STUDY IN PRIORITY BANK IN NIAGA). *DeReMa Jurnal Manajemen* 11.
- [63] Samudro, A., Sumarwan, U., Yusuf, E. Z., and Simanjuntak, M. (2018). Perceived Value, Social Bond, and Switching Cost as Antecedents and Predictors of Customer Loyalty in the B2B Chemical Industry Context: A Literature Review. *International Journal of Marketing Studies*, 10.
- [64] Sarstedt, M., Ringle, C. M., and Hair, J. (2017). *Partial Least Square Structural Equation Modelling*. Springer.
- [65] Saura, I. G., Frasset, M., and Cervera, A. (2009). The Value of B2B Relationship. *Industrial management Data and System*, 109.
- [66] Sekaran, U., and Bougie, R. (2016). *Research Method For Business (Vol. 7)*. United Kingdom: John Wiley and Sons.
- [67] Siemieniako, D., and Gębarowski, M. (2017). B2B trade fairs and promise management as a relationship marketing concept. *Journal of Customer Behaviour*, 16(3).
- [68] Sigindi, T. (2018). Satisfaction and dimension of loyalty in B2B markets: A study among the users of electronic security services. *Institute of International Business*,.
- [69] Sokolov, A. (2017). *Business to Business advertising in social media. (Degree Programme in International Business)*. Lapland University, Finlan.
- [70] Spotts, H., and Winberg, M. G. (2014). *Publicity and Advertising: What Matters Most for Sales?* Emerald.
- [71] syncforce. (2020). 3M Brand Ranking. Retrieved from <https://www.rankingthebrands.com/Brand-detail.aspx?brandID=1418>
- [72] Team, M. T. (2020). Kellers Brand Equity Model. Retrieved from <https://www.mindtools.com/pages/article/keller-brand-equity-model.htm>
- [73] Tjan, S. (2015). The Impact of Marketing Mix On Customer Loyalty Towards Plaza Indonesia Shopping Center. *iBuss Management* 3.
- [74] Urbonavičius, S., and Dikėjus, V. (2008). IMPORTANCE OF MARKETING ACTIVITIES IN A COMPANY: THE MANAGEMENT PERSPECTIVE. *Ekonomika*.

-
- [75] Vyrvavene, R., and Rabbanee, F. K. (2016). Corporate Negative Publicity – The Role of Cause Related Marketing. *Australasian MArketing Journal*, 24(4).
- [76] Wong, K. W. K. (2013). Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS. *Marketing Bulletin*, 24.
- [77] Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211.
- [78] El Naggar, R. A. A., & Bendary, N. (2017). The Impact of Experience and Brand trust on Brand loyalty, while considering the mediating effect of brand Equity dimensions, an empirical study on mobile operator subscribers in Egypt. *The Business & Management Review*, 9(2), 16-25.
- [79] Hair Jr, Hult, Ringle, & Sarstedt. (2014). *A primer on partial least squares structural equation modeling (PLS-SEM)*: Sage Publications.
- [80] Henseler, J., Dijkstra, T. K., Sarstedt, M., Ringle, C. M., Diamantopoulos, A., Straub, D. W., . . . Calantone, R. J. (2014). Common beliefs and reality about PLS: Comments on Rönkkö and Evermann (2013). *Organizational Research Methods*, 17(2), 182-209.
- [81] Hu, Y.-J. (2012). The moderating effect of brand equity and the mediating effect of marketing mix strategy on the relationship between service quality and customer loyalty: The case of retail chain stores in Taiwan. *International Journal of Organizational Innovation*, 5(1), 155-162.
- [82] Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of marketing*, 57(1), 1-22.
- [83] Shabbir, M. Q., Khan, A. A., & Khan, S. R. (2017). Brand loyalty brand image and brand equity: the mediating role of brand awareness. *International journal of innovation and applied studies*, 19(2), 416.

The Effect of Millennial Transformational Leadership on IT Capability, Organizational Agility and Organizational Performance in the Pandemic Era: an Empirical Evidence of Fishery Startups in Indonesia

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Abstract

This study aims to understand: Does millennial transformational leadership influence organizational performance, organizational agility and IT capability? Does IT capability influence organizational agility? Does organizational agility influence organizational performance? The population of this study included selected fishery startups in Indonesia based on the data released by the Ministry of Marine Affairs and Fisheries of Republic of Indonesia and Digital Fishery Network. This study used the statistical method of PLS-SEM to analyze the data. The findings show that there is a positive relationship between millennial transformational leadership and organizational agility, millennial transformational leadership and IT capability, IT capability and organizational agility, and organizational agility and organizational performance. Future researches are suggested to examine the effects of several mediating variables in the proposed model.

Keywords: Brand Equity, Distributor Loyalty, B2B FMCG Industrial Market, Marketing Budget.

I. INTRODUCTION AND RESEARCH PROBLEM

The COVID-19 pandemic has forced unimaginable changes in economic activity and lifestyles around the globe, including Indonesia. Apart from protecting public health, it can also make access to income and food more precarious. Impacts of the pandemic on agriculture and fisheries sectors - as the primary sources of nutrition and employment - are now the focus of the government. One way to resolve these problems is to increase the participation of fishery startups to contribute to the community by increasing their standardized fishery products, processes with the right technology and access to the market. Interestingly, founders of the fishery startups are mostly led by young entrepreneurs under 40 years old (89.5% of all respondents). Most previous studies and papers discuss transgenerational leadership including baby boomers and generation X as leaders, and millennials as their employees. Only few studies focus on millennials as leaders [1]. Transformational leadership potentially causes performance beyond expectations [2]. However, many scholars studied by Jing and Avery [3] argue that leadership and performance relationship is not conclusive and need further research.

II. LITERATURE REVIEW AND HYPOTHESES

Millennials are nurtured in the digital era, considered as a technology savvy generation, easy to connect with other individuals, and able to access information quickly. They have e-mail and cell phones which are easy to access, and they use social media anytime and anywhere regardless of where they are. They can reduce the time wasted by doing face-to-face interactions occurring in a more typical workplace scenery. Recent studies [4] found that Millennial Transformational Leadership refers to a type of leadership which provides an understanding of the performance target of organization to their teams, opportunities for teams which are inconsistent with the decision taken for open dialogue, gives reasoning for the disagreement. This kind of leadership also strongly tolerates conflicts in a working relationship.

The organizations consider developing their IT capability as a critical in building strategic value to attain sustainable competitive advantages [5]. Mao, Liu and Zhang [6] explained the impact of IT capability in increasing organizational agility. The IT capability is defined as the ability of a company to accumulate, organize, combine, and reconfigure IT resources to upkeep and boost business strategies and work processes. Lu and Ramamurthy [7] had given a combination of frameworks by categorizing IT capability as its infrastructure capability, IT business spanning capability, and IT proactive stance.

Chen et al. [8] said that characteristics needed in agile organizations include the ease and speed of sensing and responding to changes. The organizational agility refers to the capability of organizations to understand changes in the environment and react rapidly, resourcefully, and efficiently to increase competitive advantages. The agility widens the idea of flexibility with sensing and reacting to prospects and dangers in the business setting. It can be both offensive and defensive [9], and considered as the capability of organizations to thrive in a constantly shifting and uncertain corporate context.

According to the resource-based view of the firm, organizational performance is greatly influenced by business ability to organize their ways to bundle resources effectively and efficiently [10]. It reflects almost all activities of a company including the adaptability of firms' activities in various business settings [11]. Businesses attempt to deal with customers, hasten cash flows, and accept innovative technologies to increase the firm competitiveness and outperform the competitors. Similar to the enactment of startup businesses, it can be defined as how well they raise performance of marketing and sales actions and accomplish the financial objectives [12].

Relationship Between Millennial Transformational Leadership (Mtl) and Organizational Performance

Studies on Millennial Transformational Leadership are limited. The positive impacts of transformational leadership on different outcomes are confirmed by Abouraia and Othman [13] and Malik, Javed, and Hassan [14]. Further, studies on transformational leadership have examined the effects on company performance effects, but not in the millennial context. For example, there is an empirical work studying various meta-analyses which links transformational leadership and performance [2]. Theory of transformational leadership suggests in what way and why leaders may impact their businesses' performance. The MTL may help forming their organization's performance over individualized consideration by considering individual aspiration, inspiring individual development, and contributing to organizational performance. This approach proposes that leaders greatly influence organizational results, and some researchers have suggested that it is their idealized influence that is most likely to alter the firm results, including performance outcomes.

Meanwhile, transformational leadership suggests the outcomes, such as innovative behavior, creativity, product development and organizational performance [15]. Jensen and Chaudhry [16] explained that leaders are likely to figure their companies' performance by giving sense of the company mission and becoming the role model. The leaders influence the company's performance through inspirational and stimulating expectations, and giving commitment to organizational objectives [17]. Based on previous research on the

transformational leadership and organizational performance, this study investigates the relationship between millennial transformational leadership and organizational performance in an Indonesian context, especially in fishery startups. Thus, the first hypothesis of this study that can be proposed is as follows:

H1: Millennial transformational leadership has a direct positive relationship with organizational performance.

Relationship Between Millennial Transformational Leadership (Mtl) and Organizational Agility

Today, significant changes and globalization require a new type of leadership that helps organizations achieve their goals and improve their ability. The leaders who nurture development, generate new ideas, and inspire their teams are considered accountable. They take benefits of the sustainability and accomplishment of factors driving their businesses. These leaders are prepared and eager to react once confronted, particularly in a vibrant and exciting situation, identifying, seizing, and shaping opportunities. Those plan and design the task for their subordinates to handle, take responsibility, and be a part of organizational agility by using their imaginations and suggestions can be considered to have a contemporary leadership which comprehends many practices of management and change. Meanwhile, the MTL is also included in the contemporary world. The leaders are advised through the development of a collaborative environment, inspiration, trust and cooperation with their teams to create organizational agility [18].

The organizational agility helps in corresponding transformational leadership to the altering business situation, and organizational readiness to inverse unsuccessful strategic decisions [19]. They alter the market and force businesses to make flexible plans to implement a new strategy, expecting increasing and competitive alterations to the business setting. The leaders may overcome them by meeting the expectations and needs of consumers. In a vibrant and volatile environment, businesses need transformational leadership to boost teams to maximizing their potential and change them to innovate [4]. This study tries to investigate the relationship between millennial transformational leadership and organizational agility in fishery startups in Indonesia. Therefore, the second hypothesis of this study that can be proposed is as follows:

H2: Millennial transformational leadership has a direct positive relationship with organizational agility.

Relationship Between Millennial Transformational Leadership (Mtl) and it Capability

The millennial transformational leadership (MTL) focuses on setting expectations and inspiring their team to seize any organization opportunities. Information technology (IT) is used to facilitate company communication and to improve the seek for knowledge developed by

transformational leaders to reinforce their effectiveness. Idealized influence dimensions of transformational leadership are often considered as a crucial facilitator of IT, strengthening the organizational team interactions. Additionally, a millennial transformational leader is a role model who is admired and respected by their subordinates [20].

Similarly, Yee [20] and Seyal [22] said that the leadership was such a giving example by highlighting the importance of the effective use of IT. In contrast, some scholars conducted an empirical research to discover a significant correlation between transformational leadership and the perceived quality of IT [23]. Noseworthy [24] and Chandna and Krishnan [25] also supported that there was a strategic role of transformational leadership within the success of information technology implementation in organizations. This study tries to examine the influence of Millennial Transformational Leadership on IT Capability, the following is the third hypothesis proposed:

H3: Millennial transformational leadership has a direct positive relationship with its capability.

Relationship Between it Capability and Organizational Agility

IT capability will produce competitive benefits to attain operational and strategic advantages. The correct, concurrent, and inclusive information is beneficial for creating choices expeditiously and rising organizations agility [26]. Establishing virtual communities and services increase the organization's capability to attain quickly and accurately to take advantage of unconventional prospects [27]. The IT infrastructure capability delivers a capable platform to organize knowledge in organization. The IT applications speed up communication, facilitate the observance of changes, and provide tailored products or services. The IT capability for target business processes will create organization agility.

Further, the IT capability allows the organizations to reply quickly and expeditiously to promote and to change by fine-tuning the internal business processes [8], [9]. A complete understanding of IT and business value will considerably cut back the organization's resistance to alter within the competitive surroundings. In such cases, organizational agility is reinforced and thus, the IT innovation can give several options for organizations to reply to promote changes. Thus, the fourth hypothesis of this study that can be proposed is as follows:

H4: IT capability has a direct positive relationship with organizational agility.

Relationship Between Organizational Agility and Organizational Performance

Organizational agility increases financial and non-financial results of fishery firms [28]. However, the result of organizational agility should not only focus on the financial perspective, but in modifying the internal process in the shifting market setting. In the end, it

will bring an impact to financial gain. On the other hand, Li et al. [28] claimed that the organizational agility is likely to have more potent impacts than other capabilities on the firms' performance gains. Therefore, the researchers believe that the organizational agility will affect the performance improvements, and thus, businesses can make collaboration concerning technologies, business purposes, and market needs.

It has been confirmed that the organizational agility is able to improve the firms' enactment by rapidly observing and responding to the customers' necessities. It can help businesses quickly alter operations (e.g., how to order products, in supply chain, and portion of dynamic aspects) to fulfill the buyers' needs for fishery products which also simultaneously increase the businesses' result [29]. It helps the fishery businesses to toughen their competitive performance and raise their chances of success in a competitive setting [30]. Therefore, the fifth hypothesis of this study that can be proposed is as follows:

H5: Organizational agility has a direct positive relationship with organizational performance.

Based on the previous explanation and hypotheses in the earlier sections, the following Figure 1. presents the research model proposed in this study.

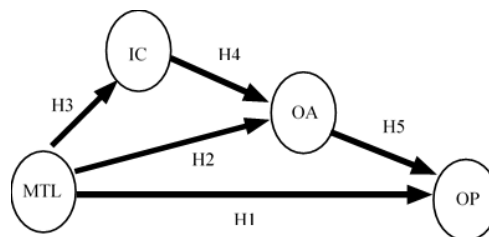


Figure 1. Research Model.

Note: MTL: Millennial Transformational Leadership; IC: IT Capability; OA: Organizational Agility; and OP: Organizational Performance.

III. METHODOLOGY

The hypotheses of this study are examined using Smart-PLS. The respondents included the founders, owners, and management of the startups in fishery businesses born in 1980-2000. The unit of analysis is the business. This study involved 23 startups in fishery business based on the data by the Ministry of Marine Affairs and Fisheries of the Republic of Indonesia and Digital Fishery Network. The data were collected through an online questionnaire with a total of 34 respondents. A 6-point Likert scale was applied, where 1=strongly disagree and 6=strongly agree. This research uses measurement based on previous studies, with some modifications to suit the current research.

The census conducted in this study is cross-sectional, where the questionnaire covers items on the relationship between: (1) millennial transformational leadership and organizational performance, (2) millennial transformational leadership and organizational agility, (3) millennial transformational leadership and IT capability (4) IT capability and organizational agility, (5) organizational agility and organizational performance of fishery startups in Indonesia.

A. Outer Model

In this stage, validity and reliability testing are done before evaluating the structural model. The validity test considers the average variance extracted (AVE) and factor loadings or outer loadings. The minimum values that must be met for AVE and outer loadings are 0.5 and 0.7 respectively [31]. Similarly, in the validity test phase, the measurement used is discriminant analysis. Hair et al. [31] stated that the requirement that must be considered is by referring to the Fornell-Larcker criterion where the AVE root value must be greater than the correlation value between constructs.

The results of data processing (Table 1.) indicate that the instrument measurements are valid. The result shows that the AVE value ranges from 0.661 to 0.736. Likewise, the value of factor loadings or outer loadings ranges from 0.725 to 0.921. Meanwhile, the outer loadings values between 0.4 to 0.7 can be considered to be maintained as long as they increase the AVE value [31]. Furthermore, the reliability test is carried out by considering to compute the composite reliability. The results show that the composite reliability value is between 0.869 to 0.946 and has met the minimum requirements of 0.7 [31].

Table 1. Reliability and Validity Test

Construct and item		Outer loading
Millennial Transformational Leadership/MTL (AVE=0.736; CR=0.917)		
MTL7	I talk enthusiastically about what needs to be accomplished.	0.871
MTL8	I express confidence that goals will be achieved.	0.773
MTL9	I get others to look at problems from many different perspectives.	0.860
MTL10	I seek different perspectives when solving problems.	0.921
Organizational Agility/OA (AVE=0.688; CR=0.869)		

OA1	My organization can make rapid responses to fulfill demands.	0.780
OA3	My organization can quickly create and implement appropriate decisions in the face of demand changes.	0.867
OA5	My organization considers market-related changes and apparent chaos as opportunities to capitalize quickly.	0.839
IT Capability/IC (AVE=0.661; CR=0.946)		
IC3	The quality of IT application and services can meet organization needs.	0.747
IC4	IT management services can coordinate the physical infrastructure and manage the relationship with business units effectively and efficiently.	0.730
IC5	My organization has a clear understanding on how IT contributes to the competitive advantages.	0.804
IC6	My organization integrates business strategic planning with IT planning.	0.820
IC7	My organization enables functional area and general management ability to understand the value of IT investment.	0.822
IC8	My organization has an effective and flexible IT planning process.	0.888
IC9	My organization constantly keeps up with new IT innovations.	0.725
IC10	My organization supports new ways of using IT.	0.903
IC11	My organization constantly seeks new ways to enhance the effectiveness of IT use.	0.854
Organizational Performance/OP (AVE=0.710; CR=0.907)		
OP4	The revenue (sales) of our company continues to grow.	0.809
OP7	Customers make repeated transactions in our company.	0.806
OP8	Complaints from our customers continue to decline.	0.877
OP9	There is an increase in old customers providing references to new customers.	0.875
Note: AVE=average variance extracted; CR=composite reliability		

Source: Result of data processing

Furthermore, Table 2. reveals that the discriminant validity test has been met where the AVE root value is greater than the correlation value between variables.

Table 2. Fornell-Larcker Criterion

	IC	MTL	OA	OP
IC	0.813			
MTL	0.517	0.858		
OA	0.669	0.658	0.830	
OP	0.386	0.451	0.657	0.842
Note: IC=IT Capability; MTL=Millennial Transformational Leadership; OA=Organizational Agility; OP=Organizational Performance				

Source: Result of data processing

B. Structural Model

In the structural model, the phase is to compute R^2 collinearity test, and hypothesis testing. The greater the value of R^2 , the better the estimation of exogenous on endogenous constructs. Table 3. describes that the constructs of IT capability, organizational agility, and organizational performance has R^2 of 26.7%, 58.1%, and 43.2% respectively. The constructs of organizational agility can be explained by the constructs of millennial transformational leadership and IT capability at 58.1%; while the rest 41.9% are explained by other constructs. In addition, the organizational agility and millennial transformational leadership describe the organizational performance constructs at 43.2%, and the other constructs define the remaining 56.8%. Finally, the construct of IT capability is explained by the millennial transformational leadership by 26.7%; and the remaining 73.3% is described by other constructs not included in the research model.

Table 3. Value of R^2

Endogenous Construct	R^2
IT Capability	0.267
Organizational Agility	0.581
Organizational Performance	0.432

Source: Result of data processing

Further, the collinearity test aims to determine whether the research model has a collinearity tendency or not. The limit of VIF value signaling a tendency for collinearity is a maximum of 5.0. If the VIF value is more than 5.0, there is a tendency for collinearity [31].

Below, Table 4. shows that the VIF value in the model is lower than 5.0. Therefore, it can be concluded that there is no collinearity.

Table 4. Collinearity Test

As Predictor of OA		As Predictor of OP	
Construct	VIF	Construct	VIF
IC	1.364	MTL	1.765
MTL	1.364	OA	1.765

Source: Result of data processing

Next, the hypothesis testing is conducted to determine whether the relationship between constructs is empirically supported or not. The statistics test results show that all hypotheses are supported except H1, indicated by the p-value < α -value (=5%). The following Table 5. shows that H1 - which states that millennial transformational leadership has a direct relationship with organizational performance – has a p-value of 43.7%. All path coefficient values have a positive sign. From the table, it can be concluded that the most influential variable on the organizational performance is organizational agility where it has the highest standardized value of 0.636. Then, it is followed by millennial transformational leadership with IT capability with a path coefficient value of 0.517. Furthermore, the influential variable on organizational agility is millennial transformational leadership and IT capability, shown by a path coefficient value of 0.426 and 0.449.

Table 5. Hypothesis test

Hypothesis	Path Coefficient	p-value	Conclusion
H ₁ : Millennial transformational leadership has a direct positive relationship with organizational performance.	0.032	0.437	Not Supported
H ₂ : Millennial transformational leadership has a direct positive relationship	0.426	0.001	Supported

with organizational agility.			
H ₃ : Millennial transformational leadership has a direct positive relationship with its capability.	0.517	0.000	Supported
H ₄ : IT capability has a direct positive relationship with organizational agility.	0.449	0.002	Supported
H ₅ : Organizational agility has a direct positive relationship with organizational performance.	0.636	0.000	Supported

Source: Result of data processing

IV. RESULT AND DISCUSSION

The results of testing the first hypothesis (H1), which states that millennial transformational leadership has a direct positive relationship with organizational performance, is not supported empirically. Although the millennial transformational leadership improved, it did not necessarily bring any impact on the organizational performance. This result is not in line with previous studies by Breevaart and Bakker [2] and Gashema and Mokuu [15]. However, the management of fishery startups must maintain their leadership, such as by having in-depth discussion about what should be achieved and express confidence that their goals would be completed. The leaders who looked for different perspectives when solving problems would lead to organizational agility. This happened because the results of testing the second hypothesis (H2), which states that millennial transformational leadership has a direct positive relationship with organizational agility, is supported empirically. The better the millennial transformational leadership, the more positive the impact in increasing the organizational agility. This result is in line with

previous studies by Ahammad, Glaister and Gomes [19] and [18] which stated that the millennial transformational leadership tended to make the organization change quickly to meet the demands. Thus, the second hypothesis is also supported where the millennial transformational leadership in terms of the leaders who looked for different perspectives when solving problems, had brought a positive relationship on organizational agility. Based on the explanation above, it can be concluded that this study has successfully revealed that the leadership that acquired others to see the problems from many different viewpoints would affect the organizational agility.

In addition, the results of testing the third hypothesis (H3), which states that millennial transformational leadership has a direct positive relationship with IT capability, is supported empirically. The better the leadership, the higher the IT Capability. This hypothesis is in line with the research results by Sayyadi [20], Yee [21], Seyal [22], Schepers, Wetzels, and de Ruyter [23], Noseworthy [24], and Chandna and Krishnan [25], which confirmed that the strategic role of transformational leadership affected the success of IT capability in organizations. The millennial transformational leadership characteristics supported in this study were the enthusiastic and confidence in finding a solution with a different approach. This leadership significantly influenced the IT capability which made the organization integrated a strategic business planning with the IT planning, supported new methods of using IT, had a strong thoughtful of how the IT gave to the competitive advantages, and continually possessed up with new IT improvements.

Meanwhile, the results of testing the fourth hypothesis (H4), which states that IT capability has a direct positive relationship with organizational agility, is supported empirically. The better the IT capability, the higher the organizational agility. This hypothesis is in line with the research conducted by Chen et al. [8] and Tallon et al. [9] which found that the IT capability helped making the organization's quick response and adjusting internal business processes. These capabilities allowed the organization to have an actual and malleable IT planning procedure and ensure that the IT applications and services could meet the organization needs. Then, the IT capability helped the organization to create a quick response.

Finally, testing the fifth hypothesis (H5), which states that organizational agility has a direct positive relationship with organizational performance, is supported empirically. The increase in organizational agility brought a positive impact on the organizational performance. This result is consistent with the study of Li et al. [28] which confirmed that

the organizational agility increased the firms' performance gains. Studies by Zhou et al. [29] and Chan et al. [30] also supported that the organizational agility could help businesses to rapidly alter operations to meet the consumers' requirements for the fishery products. The organizational agility could help firms with the ability to customize the fishery products and make the revenue of the company keep growing.

V. CONCLUSION

This study has introduced a new model in transformational leadership examined the millennials as the leaders (not as the employee), and involved almost all the population or players in the fishery startups in Indonesia as the respondents. The results of hypothesis testing show that the millennial transformational leadership has no direct positive relationship with organizational performance; millennial transformational leadership has a direct positive relationship with organizational agility; millennial transformational leadership has a direct positive relationship with IT capability; IT capability has a direct positive relationship with organizational agility; organizational agility has a direct positive relationship with organizational performance in fishery startups in Indonesia during this pandemic era.

Despite the newness and robust underlying theories in the model, there are several limitations to the model proposed in this study. For example, the model does not examine mediating effects on the relationships among the main variables. Another limitation is that the statistical examination used in this study is SEM in the SmartPLS program, which is not able to test the model's feasibility. Future researches are suggested to use covariance-based-structural equation modeling which is able to test the research model's feasibility. Roles of mediating variables in addition to the main variables—for example, organizational agility as a mediating variable on the relationship between millennial transformational leadership and organizational performance – are also suggested to be examined. Despite the limitations, the model developed is still interesting to investigate and expected to enrich the literature on transformational leadership.

REFERENCES

- [1] Rony, Z. T. Millennial challenges in becoming innovative leaders at organization in the 21st century. *International Journal of Recent Technology and Engineering (IJRTE)*, 8(Issue-), 789-794 (2019)
- [2] Breevaart, K., & Bakker, A. B. Daily job demands and employee work engagement: The role of daily transformational leadership behavior. *Journal of occupational health psychology*, 23(3), 338 (2018)
- [3] Jing, F. F., & Avery, G. C. Missing Links In Understanding The Relationship Between Leadership And Organizational Performance. *International Business & Economics Research Journal (IBER)*, 15(3), 107-118 (2016)
- [4] Akmalaputri, A. G., Yuniawan, A., & Djastuti, I. Gen Y leader: Qualitative phenomenology leadership studies in PLN APD JATENG & DIY. *Jurnal Bisnis Strategi*, 26(1), 62-75 (2018)
- [5] Wade, M., & Hulland, J. The resource-based view and information systems research: Review, extension, and suggestions for future research. *MIS quarterly*, 28(1), 107-142 (2004)
- [6] Mao, H., Liu, S., & Zhang, J. How the effects of IT and knowledge capability on organizational agility are contingent on environmental uncertainty and information intensity. *Information Development*, 31(4), 358-382 (2015)
- [7] Lu, Y., & K.(Ram) Ramamurthy. Understanding the link between information technology capability and organizational agility: An empirical examination. *MIS quarterly*, 931-954 (2011)
- [8] Chen, Y., Wang, Y., Nevo, S., Jin, J., Wang, L., & Chow, W. S. IT capability and organizational performance: the roles of business process agility and environmental factors. *European Journal of Information Systems*, 23(3), 326-342 (2014)
- [9] Tallon, P. P., Queiroz, M., Coltman, T., & Sharma, R. Information technology and the search for organizational agility: A systematic review with future research possibilities. *The Journal of Strategic Information Systems*, 28(2), 218-237 (2019)
- [10] Barney, J. Firm resources and sustained competitive advantage. *Journal of management*, 17(1), 99-120 (1991)
- [11] Rekart, E., & Doktoralina, C. M. Improving business performance: A proposed model for SMEs (2017)
- [12] Rompho, N. Operational performance measures for startups. *Measuring Business Excellence* (2018)
- [13] Abouraia, M. K., & Othman, S. M. Transformational leadership, job satisfaction, organizational commitment, and turnover intentions: the direct effects among bank

-
- representatives. *American Journal of Industrial and Business Management*, 7(4), 404-423 (2017)
- [14] Malik, W. U., Javed, M., & Hassan, S. T. Influence of transformational leadership components on job satisfaction and organizational commitment. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, 11(1), 147-166 (2017)
- [15] Gashema, B., & Mooka, J. K. Trickle-down effect of CEO transformational leadership on employee's innovative work behaviors. *International Journal of Business Ecosystem & Strategy (2687-2293)*, 1(2), 01-14 (2019)
- [16] Jensen, M., Potočnik, K., & Chaudhry, S. A mixed-methods study of CEO transformational leadership and firm performance. *European Management Journal* (2020)
- [17] Alrowwad, A. A., Obeidat, B. Y., Tarhini, A., & Aqqad, N. The impact of transformational leadership on organizational performance via the mediating role of corporate social responsibility: A structural equation modeling approach. *International Business Research*, 10(1), 199-221 (2017)
- [18] Akkaya, B., & Tabak, A. The link between organizational agility and leadership: A research in science parks. *Academy of Strategic Management Journal*, 19(1), 1-17 (2020)
- [19] Ahammad, M. F., Glaister, K. W., & Gomes, E. Strategic agility and human resource management. *Human Resource Management Review*, 30(1), 100700 (2020)
- [20] Sayyadi Ghasabeh, M. Transformational Leadership, Information Technology, Knowledge Management, Firm Performance: How Are They Linked? *The Journal of Values-Based Leadership*, 13(2), 17 (2020)
- [21] Yee, D. L. Images of school principals' information and communications technology leadership. *Journal of Information Technology for Teacher Education*, 9(3), 287-302 (2000)
- [22] Seyal, A. H. Examining the Role of Transformational Leadership in Technology Adoption: Evidence from Bruneian Technical & Vocational Establishments (TVE). *Journal of Education and Practice*, 6(8), 32-43 (2015)
- [23] Schepers, J., Wetzels, M., & de Ruyter, K. Leadership styles in technology acceptance: do followers practice what leaders preach? *Managing Service Quality*, 15(6), 496-508 (2005)
- [24] Noseworthy, S. Transformational leadership and information technology: implications for secondary school leaders (Doctoral dissertation, Memorial University of Newfoundland) (1998)
- [25] Chandna, P., & Krishnan, V. R. Organizational commitment of information technology professionals: Role of transformational leadership and work-related beliefs. *Tecnia Journal of Management Studies*, 4(1), 1-13 (2009)
- [26] Weill, P., Subramani, M., & Broadbent, M. IT infrastructure for strategic agility (2002)

-
- [27] Sambamurthy, V., Bharadwaj, A., & Grover, V. Shaping agility through digital options: Reconceptualizing the role of information technology in contemporary firms. *MIS quarterly*, 237-263 (2003)
- [28] Li, L., Lin, J., Turel, O., Liu, P., & Luo, X. R. The impact of e-commerce capabilities on agricultural firms' performance gains: the mediating role of organizational agility. *Industrial Management & Data Systems* (2020)
- [29] Zhou, J., Mavondo, F. T., & Saunders, S. G. The relationship between marketing agility and financial performance under different levels of market turbulence. *Industrial Marketing Management*, 83, 31-41 (2019)
- [30] Chan, A. T., Ngai, E. W., & Moon, K. K. The effects of strategic and manufacturing flexibilities and supply chain agility on firm performance in the fashion industry. *European Journal of Operational Research*, 259(2), 486-499 (2017)
- [31] Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. Partial least squares structural equation modeling (PLS-SEM). *European business review* (2014)

Crafting Strategic Maneuverability to Boost Business Performance

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Abstract

Few studies regarding strategic maneuverability are found in strategic management literature, and there were merely theoretical concepts with no empirical evidence to support the concepts. This study is an attempt to explore the concept and relationship between strategic maneuverability and company performance. The study uses a quantitative research method with respondents of 53 service companies in the oil and gas industry in Indonesia. The study's result supports that strategic maneuverability, with dimensions of organizational agility, flexibility, and responsiveness, has positive and significant effects on the company's performance in terms of financial, customer, internal process, and learning & growth. This study contributes to the literature in strategic management in general and the Theory of Maneuvers, particularly in two respects. First, it aims to operationalize and develop measures of strategic maneuverability. Second, to examine the relationship between strategic maneuverability and firm performance and providing empirical evidence.

Keywords: strategic maneuverability, business performance, organizational flexibility, organizational agility, organizational responsiveness.

I. INTRODUCTION

D'Aveni and Gunther call the current business condition as hypercompetition, marked by the fast-changing environments and fierce competition, where companies compete aggressively against competitors to dominate the market and achieve a sustainable competitive advantage [1]. However, the company's efforts to achieve and maintain a sustainable competitive advantage consume enormous resources. On the other hand, competitors are trying to imitate, neutralize, and defeat its competitive advantage. This focuses on achieving and protecting the company's long-term competitive advantage to be shifted in achieving a series of short-term competitive advantages to disrupt the status quo. Thus, the company needs to have the ability to maneuver strategically to create added value continuously in the face of short-term competitive advantage and try to hold as long as possible before the actions of competitors erode these advantages. Like in war, [2] states that the company needed a strategy to defeat competitors, conquer the markets, and protect the strategic resources to penetrate and expand the markets continuously. Many scholars examine military conflicts that date back thousands of years and gain insights that provide an additional dimension to business studies, particularly regarding the firm's competitive advantage. The military viewpoint also provides fundamental principles that can foster an understanding of strategy, which can be applied to a multinational company aiming to strengthen its position globally or a small business struggling every day for survival. Besides, there are many references that associate military strategy with the business, such as using strategic resources to exploit markets, developing business intelligence to anticipate competitors' actions, avoiding direct confrontation with strong competitors, bypassing high entry barriers, restructuring marketing activities to strengthen market position, and using new technology to create innovative products. Various studies regarding warfare strategies for applications in the business world, mostly related to business maneuvers, have been carried out by [1]–[5].

The studies state that military-like maneuverability is required to navigate the turbulent environments, anticipate market dynamics, increase profitability, business growth, and company survival. Business maneuvers are directed to target competitors' weaknesses, with the support of organizational flexibility, movement speed, and tactical agility to maximize the element of surprise and beat competitors. However, existing studies are limited to theoretical declarations that have not been substantially supported by empirical evidence. Therefore, many researchers doubt the concept and application of strategic maneuvers in the competitive business environment. This research's main objective is to examine the

relationship between strategic maneuverability and company performance, using the case of service companies in the oil and gas industry in Indonesia.

A literature study was carried out to explore this concept theoretically, then proceed with the effort to define the concept's operationalization and finally develop the dimensions and measures of its construct. This study contributes to the literature in strategic management in general and the Theory of Maneuvers, particularly in two respects. First, it aims to operationalize and develop measures for strategic maneuverability, thus clarifying the concept. Second, to examine the relationship between strategic maneuverability and firm performance and providing empirical evidence.

II. LITERATURE REVIEW

1. Strategic Maneuverability

In a hypercompetitive and rapidly changing business environment, strategic planning aims to create business disruption by following the three main principles of dynamic interactions. First, all activities the company takes are interactions of actions and reactions against competitors. Second, all company actions are seen relative to competitors, such as value creation, operational effectiveness, and efficiency, or the risk of such actions. Third, companies need to understand long-term trends and the development of a maneuver to predict future results [1]. Furthermore, D'Aveni and Gunther argue that companies need to focus on developing critical capabilities in creating business disruptions and status quo, namely speed and surprises so that companies can react quickly in capturing business opportunities and actively maneuver to beat competitors. Speed is also needed to improve its ability to serve customer desires and determine the right time to enter the market, both as a first mover and as a fast follower. To maneuver agile in new directions and pursue new business opportunities faster than competitors, companies need to increase the company's operational flexibility, lean production process, and a flatter organizational structure. Companies are also encouraged to invest in common resources that can be used across the organization to increase its flexibility. The surprise element is essential for the success of the pioneer company in preventing or delaying competitors from following so that it has the time to strengthen its market position and gain a competitive advantage as long as possible. The main elements of surprise are flexibility and creativity, which support the company's commitment to innovating, developing technology, and creating new products that can disrupt the markets.

Pech and Durden [3] illustrate the uncertain and unpredictable market conditions as a war zone, which can lead to a company's life and death situation. Strategic maneuverability,

supported by elements of speed, surprise, and flexibility, is required to navigate the business environment, anticipate market dynamics, and increase profitability, growth, and survival. The strategic maneuverability is directed at targeting competitors' weaknesses, supporting the flexibility of the organizational structure, speed of movement, and tactical agility, to maximize the element of surprise for competitors. The maneuver's success depends on the competence of human resources, organizational culture, and knowledge management, which are relatively superior to competitors. Furthermore, Pech and Slade [4], [5] adopt the theory of maneuver in warfare and apply it into the business context and highlight four main maneuverability elements. First, the mission analysis process analyzes the company's capabilities against competitors' intentions and determines the strategic intent. Second, command, control, communication, and intelligence, including leadership and control of organizational flexibility, facilitate responses based on accurate and reliable data in real-time. Third, corporate action in building and maintaining efforts to weaken competitors. Fourth, take initiatives proactively in facing the opportunities and challenges that arise.

Paley [2] suggests that to beat competitors focusing on the weaknesses of the opponent, a company can use an indirect strategy maneuver consisting of five main elements. First, focus the company's strengths to fight the weaknesses of competitors. Second, serving customer needs by solving their problems in a way that is better than competitors. Third, achieve psychological benefits by influencing the imbalance of the leaders of competing companies' minds so that they make wrong decisions and steps. Fourth, convince competitors that too aggressive competitive action will exhaust their human, financial, and material resources. Fifth, competition's main objective is to get a key position in market competition to gain competitive advantage and advantage. Thus, indirect maneuvers require extensive resources in the form of 1) market intelligence, to find out the latest market conditions, 2) flexible organization, to respond quickly to opportunities and challenges that arise, and 3) competent leaders, to manage human, financial, and resources that support the achievement of a strategic position in the market. Thus, indirect maneuvers' ultimate goal is to win customers, win market share, and achieve its strategic goals without going through direct confrontation that would consume company resources.

The studies above show that the main elements of successful strategic maneuverability are organizational flexibility, organizational agility, and organizational responsiveness. Flexibility refers to an organization's ability to meet various types of customer demands without sacrificing time, effort, cost, and quality. Agility relates to the speed with which a company realigns its strategies and reconfigures its resources to deal with upcoming

opportunities and threats. Responsiveness relates to the organization's ability to adjust company systems to anticipate a changing business environment proactively.

Zhang, Vonderembse and Lim [6] define organizational flexibility as the company's ability to efficiently meet increasing customer demand levels without experiencing disruption or loss. Rudd, Greenley, Beatson and Lings [7] stated that organizational flexibility could be achieved by considering four factors: organizational flexibility, financial flexibility, structural flexibility, and technological flexibility. Organizational flexibility is the company's ability to quickly adapt to market conditions, including market position, goods and services offered, processes, and production capacity. Financial flexibility is the company's ability to acquire and use financial resources quickly. Structural flexibility is the company's ability to restructure the organization, reduce bureaucracy, and effective communication skills between departments. Technological flexibility is the company's ability to keep an update of technological developments following customer demands. Organizational agility is the company's ability to change the direction and goals to maintain a competitive advantage, which consists of identifying opportunities and challenges and responding accordingly to market demands. Weber and Tarba [8] define organizational agility as the ability to continuously observe and respond to changes in the business environment and adjust the organizational structure to ensure the successful implementation of the chosen strategy. Morton, Stacey and Mohn [9] state organizational agility is a continuous effort to adjust the direction of company goals as a function of time and a function of strategic choices in response to environmental changes. The three main elements of organizational agility are strategic sensitivity, resource fluidity, and leadership unity. Strategic sensitivity is the sensitivity of the company's perceptions, concerns, and awareness of environmental changes, resource fluidity is the company's ability to rearrange and use existing resources differently, and leadership unity is the ability to make decisions quickly and precisely without complicated bureaucracy [9], [10]. Customer responsiveness is closely related to customer relationships and customer satisfaction, which can be achieved by fulfilling customer needs, adapting customer demands, and focusing on customer solutions [11]–[13].

2. Business Performance

In a hypercompetitive and rapidly change business environment, strategic planning aims to create business disruption by following the three main principles of dynamic interactions. First, all activities the company takes are interactions of actions and reactions against competitors. Second, all company actions are seen relative to competitors, such as value creation, operational effectiveness, and efficiency, or the risk of such actions. Third, companies need to understand long-term trends and the development of a maneuver to

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Pech and Durden [3] illustrate the uncertain and unpredictable market conditions as a war zone, which can lead to a company's life and death situation. Strategic maneuverability, supported by elements of speed, surprise, and flexibility, is required to navigate the business environment, anticipate market dynamics, and increase profitability, growth, and survival. The strategic maneuverability is directed at targeting competitors' weaknesses, supporting the flexibility of the organizational structure, speed of movement, and tactical agility, to maximize the element of surprise for competitors. The maneuver's success depends on the competence of human resources, organizational culture, and knowledge management, which are relatively superior to competitors. Furthermore, Pech and Slade [4], [5] adopt the theory of maneuver in warfare and apply it into the business context and highlight four main maneuverability elements. First, the mission analysis process analyzes the company's capabilities against competitors' intentions and determines the strategic intent. Second, command, control, communication, and intelligence, including leadership and control of organizational flexibility, facilitate responses based on accurate and reliable data in real-time. Third, corporate action in building and maintaining efforts to weaken competitors. Fourth, take initiatives proactively in facing the opportunities and challenges that arise.

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3. Strategic Maneuverability and Business Performance

Strategic maneuverability represented by organizational agility and organizational flexibility will help firms to make fast decisions and accurate response with the support of information about competitors' strategies, technological developments, customer needs, and the current situation of the market, which will increase the successful implementation of corporate strategies which in turn will improve the business performances [23]. The studies of [24] and [25] found that organizations with high flexibility can anticipate changes in customer preferences, competitor movements, technological development, and economic changes and can reposition themselves by reconfiguring their resources, capabilities, and competencies. Organizational flexibility will increase the company's capability to adjust marketing offerings, product and service mixtures, and production capacity, thereby increasing the potential for implementing the chosen strategy.

The research conducted by [26] shows organizational agility is the ability to produce a competitive advantage in a changing and unpredictable environment by detecting and reacting quickly to changes that come, both by competing companies and changes in customer requirements. Asil and Farahmand [27] state that organizational agility, which has customer-oriented characteristics, organizational commitments, and resource fluidity, is a dynamic feature with high value, rare, difficult to imitate, and difficult to replace so that it can help companies maintain a competitive advantage. A study conducted by [28] shows that

organizational agility, which is reflected by speed, quality, flexibility, and leadership unity, directly influences business performance.

Supported by organizational flexibility and agility, the company can respond quickly and precisely to changes in market demand so that it will produce a competitive advantage gained from knowledge of changing customer requirements, and in turn will help build the company's reputation and improve company performance [12], [13]. The company's ability to respond quickly to customer needs, either by launching new products or modifying existing products, can improve customer satisfaction, revenue growth, profit, and market share performance [29]. Hence:

H1: Strategic maneuverability has a positive effect on the business performance.

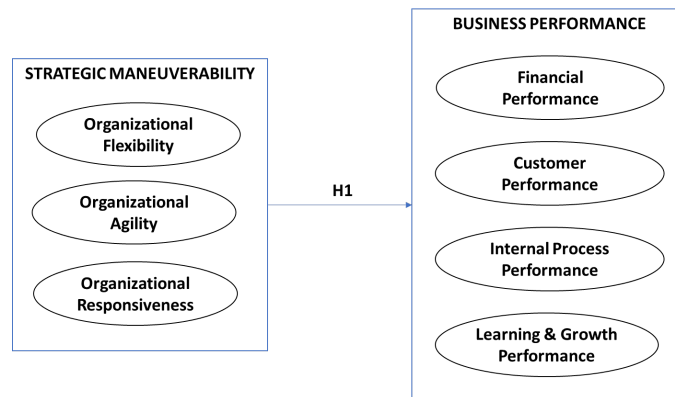


Figure. 1. Research Model

III. METHODOLOGY

1. Data collection

The data were collected from the oil and gas service firms in Indonesia using random sampling. A questionnaire is sent by email to 337 companies randomly drawn from the vendor list in the oil and gas operators database in Indonesia. Data were gathered using questionnaires from respondents consisting of C-level executives, directors, VPs, senior managers, and managers. Respondents were informed of the goals of the survey and assured of the confidentiality of their answers. We received responses from 53 company executives, giving a response rate of 15.7%.

2. Measurement and Analysis

This study uses multidimensional measures adopted from studies in the literature review and modifying them slightly to fit the context. Business performance is measured using multidimensional scales adopted from [30] and [31], consisting of financial performance,

customer performance, internal process performance, and learning & growth performance. To measure the strategic maneuverability, we are using the measurements of organizational flexibility adopted from studies of [7] and [32], organizational agility from studies of [9], [10], [33], and organizational responsiveness from studies of [34] and [11]. All responses to the multi-item measures were captured using five-point Likert-type scales.

Partial Least Square - Structural Equation Modeling (PLS-SEM) method is used for the data analysis using SmartPLS version 3 software [35]. The latent variables of strategic maneuverability and business performance are operationalized at a higher level of abstraction as higher-order hierarchical models that contain two layers of constructs. The data analysis performed included descriptive statistics, evaluation of measurement model, evaluation of structural model, and hypotheses testing.

IV. RESULT AND DISCUSSION

1. Evaluation of Measurements Model

The reflective measurement model's evaluation focuses on the validity and reliability of constructs, which consist of indicator reliability, composite reliability, convergent validity, and discriminant validity [36], [37]. Table 1 shows the analysis results of construct reliability and convergent validity.

Table 1. Reliability and Convergent Validity

Description	Cronbach α	C. Reliability	AVE	Loadings
Strategic Maneuverability	0.900	0.938	0.834	
Organizational Agility				0.927
Organizational Flexibility				0.887
Organizational Responsiveness				0.925
Business Performance	0.893	0.927	0.761	
Customer Performance				0.928
Financial Performance				0.836
IntProcess Performance				0.927

Learning Growth Performance				0.789
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As presented in the table above, all variables used in this study have good validity as measured by convergent validity (AVE), all of which are above the threshold value of 0.5. Likewise, in the measurement reliability test, the results showed that all Cronbach α , composite reliability, and loadings had a value above 0.7. Thus, all measurement instruments used in this study have an adequate level of validity and reliability.

Tabel 2. Discriminant Validity

	Strategic Maneuverability	Business Performance
Strategic Maneuverability	0.913	
Business Performance	0.805	0.872

Discriminant validity requires AVE's square root value (bold) shall be greater than the correlation value between variables. Table 2 shows that all discriminant validity meets the Fornell-Larcker criteria.

2. Evaluation of Structural Model

The structural model evaluation consists of the coefficients of determination (R^2) value and model fit (SRMR). The coefficient of determination (R^2) shows the size of the endogenous variable's variance caused by all the exogenous variables connected to it, which values is expected to be higher than 0.70 for most of the research. While the SRMR value between 0.03 to 0.08 is considered to have a good fit of model [36]. The analysis results tabulated in Table 3 shows the values of R^2 are regarded as moderate levels of predictive accuracy and SRMR gives a good model fit.

Table 3. Coefficients of R^2 , Adj R^2 and SRMR

	R^2	Adj R^2	SRMR
Business Performance	0.648	0.641	0.071

3. Hypothesis Testing

The analysis results support the hypothesis that strategic maneuverability has a positive effect on business performance. The regression coefficient is 0.805, with a t-value of 17.005 indicates the H1 hypothesis is supported with a 95% confidence level.

Table 4. Results of Hypotheses testing

Hypotheses	Coefficien t	t-statistic s	p-values
Strategic Maneuverability □ Business Performance	0.805	17.005	0.000 *
Note: * significant at 95% confidence level			

4. Discussions

According to the sample data of 53 service companies in Indonesia's oil and gas industry, this study attempts to explore the relationship between strategic maneuverability with firm performance. The results show there is a positive relationship between strategic maneuverability with firm performance. The influence of the strategic maneuverability elements on company business performance can be ordered as organizational agility (loading = 0.927), followed by organizational responsiveness (0.925), and organizational flexibility (0.887), respectively. The most significant influence of strategic maneuverability on company performance is found in the customer (0.928), followed by internal process (0.927), financial (0.836), and learning and growth (0.789), respectively. Therefore, firms should focus on developing organizational agility, organizational flexibility, and organizational responsiveness to increase its strategic maneuverability in the era of hypercompetition to achieve competitive advantage and improve firm performance. This result was in agreement with studies that showed a positive impact of organizational agility, organizational flexibility, and organizational responsiveness that constitute the strategic maneuverability of the firm performance, namely finance, customer, internal process, and learning and growth [23]–[28].

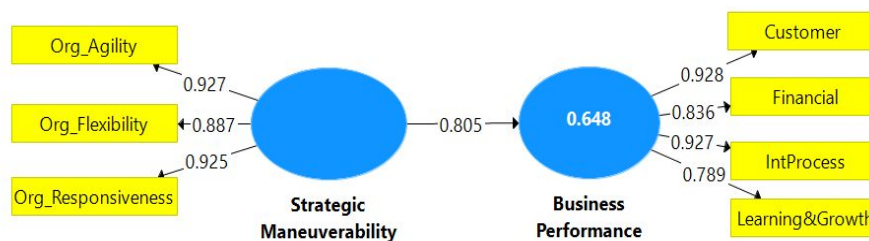


Figure.2. PLS-SEM Results.

Finally, testing the fifth hypothesis (H5), which states that organizational agility has a direct positive relationship with organizational performance, is supported empirically. The increase in organizational agility brought a positive impact on the organizational performance. This result is consistent with the study of Li et al. [28] which confirmed that the organizational agility increased the firms' performance gains. Studies by Zhou et al. [29] and Chan et al. [30] also supported that the organizational agility could help businesses to rapidly alter operations to meet the consumers' requirements for the fishery products. The organizational agility could help firms with the ability to customize the fishery products and make the revenue of the company keep growing.

V. CONCLUSION

This study contributes to a better understanding of how strategic maneuverability can help to boost business performance. This study found that strategic maneuverability positively affects firm performance, such as financial, customer, internal process, and learning and growth performance through empirical evidence from Indonesia's oil and gas service companies. The essential elements that constitute the strategic maneuverability are organizational flexibility, organizational agility, and organizational responsiveness. Lastly, this study explains how firms use strategic maneuverability to cope with the dynamic of business environments and create a competitive advantage to boost firm performance.

VI. ACKNOWLEDGMENTS.

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REFERENCES

- [1] R. A. D'Aveni and R. Gunther, *Hypercompetition: Managing the Dynamics of Strategic Maneuvering*. The Free Press, 1994.
- [2] N. Paley, *How to Outthink, Outmaneuver, and Outperform Your Competitors*. CRC press, 2013.
- [3] R. J. Pech and G. Durden, "Manoeuvre warfare: a new military paradigm for business decision making," *Manag. Decis.*, vol. 41, no. 2, pp. 168–179, 2003.
- [4] R. J. Pech and B. W. Slade, "Business maneuver: exploiting speed and surprise as key elements," *Handb. Bus. Strateg.*, vol. 6, no. 1, pp. 35–42, 2005.
- [5] R. J. Pech and B. W. Slade, "Manoeuvre theory Business mission analysis process for high intensity conflict," *Manag. Decis.*, vol. 42, no. 8, pp. 987–1000, 2004.
- [6] Q. Zhang, M. A. Vonderembse, and J. S. Lim, "Manufacturing flexibility: Defining and analyzing relationships among competence, capability, and customer satisfaction," *J. Oper. Manag.* 21, vol. 21, pp. 173–191, 2003.
- [7] J. M. Rudd, G. E. Greenley, A. T. Beatson, and I. N. Lings, "Strategic planning and performance: Extending the debate," *J. Bus. Res.*, vol. 61, no. 2, pp. 99–108, 2008.
- [8] Y. Weber and S. Y. Tarba, "Strategic Agility: A State of the Art," *Calif. Manage. Rev.*, vol. 56, no. 3, pp. 5–12, 2014.
- [9] J. Morton, P. Stacey, and M. Mohn, "Building and maintaining strategic agility: An agenda and framework for executive IT leaders," *Calif. Manage. Rev.*, vol. 61, no. 1, pp. 94–113, 2018.
- [10] Y. L. Doz and M. Kosonen, "Embedding strategic agility: A leadership agenda for accelerating business model renewal," *Long Range Plann.*, vol. 43, pp. 370–382, 2010.
- [11] C. M. P. Sousa, E. Ruzo, and F. Losada, "The Key Role of Managers' Values in Exporting: Influence on Customer Responsiveness and Export Performance," *J. Int. Mark.*, vol. 18, no. 2, pp. 1–19, 2010.
- [12] A. Pehrsson, "Firms' customer responsiveness: relationships with competition, market growth, and performance," *J. Strateg. Manag.*, vol. 4, no. 4, pp. 347–364, 2011.
- [13] A. Pehrsson, "Firms' customer responsiveness and performance: the moderating roles of dyadic competition and firm's age," *J. Bus. Ind. Mark.*, vol. 29, no. 1, pp. 34–44, 2014.
- [14] R. S. Kaplan and D. P. Norton, "The Balanced Scorecard - Measures that Drive Performance," *Harv. Bus. Rev.*, vol. 70, no. 1, pp. 71–79, 1992.
- [15] R. S. Kaplan and D. P. Norton, "Putting the Balanced Scorecard to Work," *Harv. Bus. Rev.*, vol. 71, no. 5, pp. 134–147, 1993.

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- [16] R. S. Kaplan and D. P. Norton, *Strategy Maps: Converting Intangible Assets into Tangible Outcomes*. Harvard Business School Publishing, 2004.
- [17] N. Olve, C. Petri, J. Roy, and S. Roy, *Making Scorecards Actionable: Balancing Strategy and Control*. John Wiley & Sons, 2003.
- [18] A. Adhiprasangga, A. P. Sari, T. W. Putra, and D. Wibisono, "Develop Balanced Scocard from KPI in Construction Companies (Case Study: Stated-Owned Enterprise)," *Asia Pacific J. Adv. Bus. Soc. Stud.*, vol. 2, no. 2, pp. 156–166, 2016.
- [19] [19] W. Sewell, R. B. Mason, and P. Venter, "Socio-economic developmental strategies as retail performance indicators : A balanced scorecard approach," *Dev. South. Afr.*, vol. 3637, 2017.
- [20] J. Taylor and C. Baines, "Performance management in UK universities : implementing the Balanced Scorecard," *J. High. Educ. Policy Manag.*, vol. 34, no. 2, pp. 111–124, 2012.
- [21] A. Zohrabi and N. Manteghi, "A Proposed model for strategic planning in educational organizations," *Procedia - Soc. Behav. Sci.*, vol. 28, pp. 205–210, 2011.
- [22] A. Pasaribu, M. G. D. Andika, R. Rachmanda, and D. Wibisono, "A review of performance management using the balanced scorecard in public sector," *Asia Pacific Inst. Adv. Res.*, vol. 2, no. 2, pp. 91–102, 2016.
- [23] S. Meredith and D. Francis, "Innovation and strategy Journey towards agility : the agile wheel explored," *TQM Mag.*, vol. 12, no. 2, pp. 137–143, 2000.
- [24] M. L. Santos-Vijande, J. Á. López-Sánchez, and J. A. Trespalacios, "How organizational learning affects a firm's flexibility, competitive strategy, and performance," *J. Bus. Res.*, vol. 65, no. 8, pp. 1079–1089, 2012.
- [25] R. Dubey et al., "Empirical investigation of data analytics capability and organizational flexibility as complements to supply chain resilience," *Int. J. Prod. Res.*, vol. 0, no. 0, pp. 1–19, 2019.
- [26] H. N. Nzewi and P. Moneme, "Business Agility and Competitive Advantage of Selected Commercial Banks in Anambra State, Nigeria," *JPyrex ournal Bus. Financ. Manag. Res.*, vol. 2, no. 8, pp. 81–88, 2016.
- [27] A. Asil and N. F. Farahmand, "Design and Implementation of Strategic Agility Evaluation Model with Structural Equation Modelling Approach," *Acad. Strateg. Manag. J.*, vol. 18, no. 1, 2019.
- [28] A. A. Salih and L. Alnaji, "Impact of Strategic Thinking and Strategic Agility on Strategic Performance: A Case Study of Jordanian Insurance Industry Companies," *Int. Rev. Manag. Bus. Res.*, vol. 3, no. 4, 2014.

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- [29] R. P. Lee, "Extending the Environment – Strategy – Performance Framework : The Roles Product Innovation," *J. Int. Mark.*, vol. 18, no. 4, pp. 58–73, 2010.
- [30] C. Dibrell, J. B. Craig, and D. O. Neubaum, "Linking the formal strategic planning process, planning flexibility, and innovativeness to firm performance," *J. Bus. Res.*, vol. 67, no. 9, pp. 2000–2007, 2014.
- [31] A. N. Abuzaid, "Scenario Planning as Approach to Improve the Strategic Performance of Multinational Corporations (MNCS)," *Bus. Theory Pract.*, vol. 19, pp. 195–207, 2018.
- [32] M. Gabrielsson, T. Seppälä, and P. Gabrielsson, "Realizing a hybrid competitive strategy and achieving superior financial performance while internationalizing in the high-technology market," *Ind. Mark. Manag.*, vol. 54, pp. 141–153, 2016.
- [33] Y. Doz and M. Kosonen, "The Dynamics of Strategic Agility : Nokia ' s Rollercoaster," *Calif. Manage. Rev.*, vol. Vol. 50, no. Isu 3, p. hal. 95-118, 2016.
- [34] S. Meehan and C. Dawson, "Customer responsiveness: Getting it fast and right through impatience and intolerance," *Bus. Strateg. Rev.*, vol. 13, no. 4, pp. 26–37, 2002.
- [35] "Smart PLS." [Online]. Available: <https://www.smartpls.com/>. [Accessed: 26-Sep-2020].
- [36] J. F. Hair, G. T. M. Hult, C. M. Ringle, and M. Sarstedt, *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, 2nd editio. Sage Publications, 2017.
- [37] G. D. Garson, *Partial Least Squares: Regression & Structural Equation Models*. 2016.

How to Improve The Quality of Accounting Information Systems from Organizational Perspective (Empirical Evidence from Banking Sector in Bandung – Indonesia)

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Abstract

Organizational structure and organizational commitment are the elements in the organization as well as the factors that support success in the application of AIS. Indonesian company phenomenon reveals that the Quality of AIS hasn't been properly applied in Indonesian banks. The aim of the research is to (1) study the impact of organizational structure and organizational commitment on the Quality of Accounting Information System (2) to look at the impact of the Quality of AIS on the quality of accounting information. This examination makes use of a survey methodology. Information gathering on this exam used questionnaires on 62 banking staff in Indonesia. The info that has been collected is processed utilizing SEM PLS. The outcomes of this examination is organizational structure and organizational commitment have an impact on the quality of accounting information and the quality of the AIS has a positive effect on the quality of accounting information.

Keywords: Organizational structure, organizational commitment, quality of AIS, quality of accounting information

I. INTRODUCTION

In every business activity, information is essential in any decision-making process. In the decision-making process, every user of information needs information with good quality, so that the decisions taken are legitimate [1]. For example, as is the case in the banking sector, customers need accurate information about their balances to be able to make decisions whether their balances are sufficient or not to make a transaction. Appropriate information is generated from a quality accounting information system [2]. However, in practice, there are still many problems in accounting information systems (AIS). As happened to PT Bank Tabungan Pensiunan Negara (BTPN) where customers complained about their failed transactions but the balance in their accounts continued to be charged [3]. This failure was caused because BTPN was carrying out system maintenance. With this incident, customers' trust in BTPN bank will decrease. Subsequently, the AIS utilized in producing accounting info should be of top quality. The quality of the accounting info system is influenced by many elements. Rapina and Hadianto's Research shows [4], quality of accounting information is influenced by enterprise processes. In the meantime, within the analysis of Nurliyani et al. [5], the issue that may have an effect on the quality of the AIS is organizational structure. In distinction to the analysis of Rapina and Hardianto [4] and Nurliyani et al [5], this examination measures the quality of information system by organizational and particular person elements, akin to organizational structure and organizational commitment which can have an effect on the Quality of accounting information. The goals of this study was to examine three things, (1) the effect of organizational structure on the quality of the AIS; (2) the influence of organizational commitment on the quality of the AIS; (3) the influence of the quality of the AIS on the quality of accounting information.

II. LITERATURE REVIEW

1. Organization Structure

The organizational structure has a fairly significant role in a company or organization, where the organizational structure describes the division of tasks or jobs and it also helps an organization to organize the activities of its resources to achieve a goal [6]. Organizational structures are designed to coordinate separate groups or divisions as well as to facilitate effective responses to coordination and motivation issues [7]. The organizational structure has four main components, corresponding to delegation of authority, span of control, formalization, and departmentalization [8]. On this exam, the organizational structure is measured by 4 dimensions, that are: (1) Formalization. Rules and policies that are made [8]; (2) Delegation of

authority. Centralization and decentralization [8]; (3) Departmentalization. Grouping activities and tasks [8]; (4) Span of control. Relationships and ratios of supervisor and employees [8].

2. Organizational commitment

Organizational commitment which means the extent to which an worker adapts themselves to the objectives of the group and has a want to stay within the group [9]. Meanwhile, according to Khusk [10], organizational commitment is an important concept in the work aspect that can influence employee performance to achieve organizational goals. The dimensions of this research refer to the three main components of organizational commitment, which are: (1) Affective commitment: refers to the participation and involvement of employees in an organization [11]; (2) Continuous commitment: there is a substantial cost if employees leave the organization, thus making them choose to stay in the organization [11]; (3) Normative commitment: relates to an obligation to be in the organization [11].

3. Quality of AIS

An AIS is a tool designed in such a way as to provide useful information for decision-makers [12]. According to Hurt [13], AIS carry out processes starting from data collection to producing output in the form of accounting information. An AIS is claimed to have distinctive high quality if it may meet the factors of effectivity and effectiveness as a result of effectivity and effectiveness can see the extent to which the system can obtain the organizational objectives [14]. In the meantime, in response to Nurliyani et al [5], an accounting info system is claimed to have high quality if the accounting info programs are dependable and built-in. As well as, the quality of the accounting information system should have the ability to meet reliability, and effectiveness, integration, flexibility, factors [15]. Measurement of the quality of the accounting information system in Wisna[16] examine makes use of dimensions of reliability, timeliness, flexibility, usability, and sophistication. The accounting information systems in this study is measured through four dimensions, which are: (1) Integration. Combining various functions in the organization into one unit [17]; (2) Flexible. The system can adapt to changes [17]; (3) Reliable. The system is able to process data completely and accurately [17]; (4) Efficient. Efficiency in data storage and backup [15].

4. Quality of Accounting Information

The important key for management to make decisions is accounting information [18]. Information provided to users must describe the real situation [19]. Within the analysis of Al-Dalabih [20], suitability, reliability, consistency, symmetry, comprehensibility, and comparability can be utilized for quality of accounting Information measurement. As well as, in analysis [16], the quality of accounting Information indicated by related, correct, and full dimensions measurement. Accounting Information Quality measurement on this examine refers back to the opinion put ahead by Corridor [21], that are: (1) Relevant. Implies that data should be offered in accordance with organizational objectives [21]; (2) Accurate. There aren't any errors within the data offered [21]; (3) Complete. The information must be able to meet all user needs [21]; (4) Timeliness. The information is available when needed by its users [21].

III. THEORETICAL FRAMEWORK

1. The Effect of Organizational Structure on the Quality of AIS

The quality of the AIS will not be created if work specialization, span of control, chain of command, formalization, and delegation are not at the ideal level that has been expected [22],[23]. The organizational structure becomes a reference for determining the information that must be generated by the accounting information systems [24]. Subsequently, the organizational structure has an influence on the quality of AIS [24]. The identical factor was additionally said by Sari and Purwangera [25] that the organizational structure influences the quality of the AIS.

Hypothesis 1: Organizational structure affects the quality of the AIS

2. The Effect of Organizational Commitment on the Quality of AIS

The employee's commitment to organization is the supporting issues for the profitable implementation of AIS in corporations [26]. With excessive commitment, staff have an excessive sense of care in regards to the group and the potential for a lower in efficiency will be prevented [27]. Thus, organizational commitment influences the quality accounting information systems methods [26]. Related with Ladewi et al [28], organizational commitment impacts the Quality of AIS.

Hypothesis 2: Organizational commitment affects the quality of the AIS

3. Effect of the Quality of AIS on the Quality of Accounting Information

Information that is relevant and has good quality will result in the right decisions. To have the ability to get good high quality accounting information, a very good high quality data system can be wanted [1]. Wherever the Quality of Accounting Information Systems was applied

correctly, the Quality of Accounting Information produced will be better[29]. Thus, the Quality of AIS also impacts Quality of Accounting Information [30]. That is additionally comparable with the analysis outcomes by Mkonya et al [31] that the quality of the AIS has a positive and significant effect on the quality of accounting information.

Hypothesis 3: The quality of AIS affects the quality of accounting information

IV. METHODOLOGY

This study used a survey research design. Collecting data in this study using a questionnaire. Questionnaires were distributed by post, online surveys, and in-person surveys. The population in this study are private banks in Indonesia. With a target audience of 83 bank employees. The observation unit/respondent are employees who use accounting information systems applications. The sampling technique used was simple random sampling with the help of Microsoft Excel. The minimum sample that must be fulfilled is 30 respondents [32]. This study uses a type of data analysis, structural equation modelling - partial least square.

V. RESULTS & FINDING

The influence of independent variable on the dependent variable and to the hypothesis is tested by Structural Equation Modelling (SEM). SEM used is SmartPLS 3. The stages in data processing are divided into 2, which are testing the outer model and testing the inner model. Outer Model Testing (Measurement Model Testing) At this stage, there are two things to be analysed, namely convergent validity, discriminant validity, and Cronbach's alpha, and composite reliability [33]. The results of data processing are presented as follows :

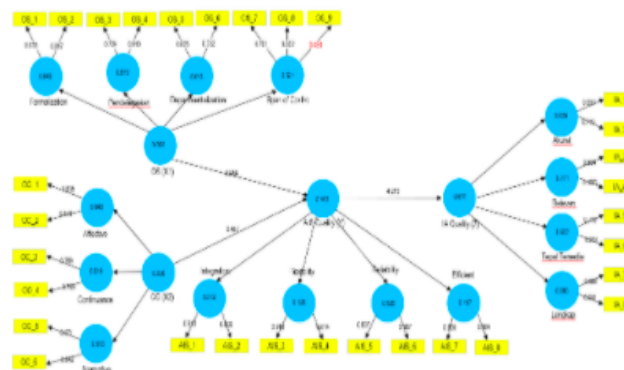


Fig 1. Measurement Model.

Convergent Validity

The loading factor value is used as a benchmark in conducting validity testing. The Loading Factor value is seen for each dimension and each indicator. Each dimension and indicator is valid if its loading factor is above 0.7 value [33]. However, in the early stages of research, the development of a *loading* value measurement scale of 0.5 to 0.6 is still acceptable [34]. From the above processing, the OS9 indicator is declared invalid and excluded from further processing.

The table below presents the test results for the *loading factor* and *convergent validity*.

Table 1. Outer Loading

Measurement Instruments	Outer Loading	Status (>0,5)
OS_1	0,678	Valid
OS_2	0,897	Valid
OS_3	0.724	Valid
OS_4	0.910	Valid
OS_5	0.876	Valid
OS_6	0.732	Valid
OS_7	0.701	Valid
OS_8	0.832	Valid
OS_9	0.438	Tidak Valid
OC_1	0.635	Valid
OC_2	0.578	Valid
OC_3	0.789	Valid
OC_4	0.769	Valid
OC_5	0.871	Valid
OC_6	0.942	Valid
AIS_1	0,913	Valid
AIS_2	0,802	Valid
AIS_3	0,743	Valid
AIS_4	0,814	Valid
AIS_5	0,887	Valid
AIS_6	0,587	Valid
AIS_7	0,809	Valid
AIS_8	0,984	Valid
IA_1	0,991	Valid
IA_2	0,719	Valid
IA_3	0,504	Valid
IA_4	0,905	Valid
IA_5	0,713	Valid
IA_6	0,997	Valid
IA_7	0,868	Valid
IA_8	0,841	Valid

The *loading factor* value in the table above shows the magnitude of the relationship between latent variables on each of the indicators. The *loading factor* value can be seen

directly in the *output outer setting* in the SmartPLS algorithm results. The results show that all indicators used in this study are valid.

Discriminant Validity

Indicator variables can be measured by evaluating the outcomes of cross-loading, which reveals that the correlation worth of indicators in the identical variable is healthier than the symptoms for different variables. For all constructs it is symbolize as follows:

Table 2. Cross Loading

	X1	X2	Y	Z
OS_1	0.678	0.484	0.122	0.217
OS_2	0.897	0.482	0.137	0.185
OS_3	0.724	0.494	0.190	0.350
OS_4	0.910	0.479	0.191	0.336
OS_5	0.876	0.464	0.460	0.464
OS_6	0.732	0.482	0.520	0.482
OS_7	0.701	0.453	0.491	0.453
OS_8	0.832	0.464	0.211	0,054
OS_9	0.438	0.482	0,369	0,226
OC_1	0.377	0.635	0,346	0,301
OC_2	0.345	0.578	0,266	0,003
OC_3	0.372	0.789	0,356	0,137
OC_4	0.310	0.769	0,392	0,230
OC_5	0.362	0.871	0,799	0,219
OC_6	0.277	0.942	0,871	0,335
AIS_1	0.298	0,228	0.913	0.141
AIS_2	0.360	0,181	0.802	0.260
AIS_3	0,209	0,186	0.743	0.288
AIS_4	0,398	0,349	0.814	0.276
AIS_5	0,389	0,226	0.887	0.274
AIS_6	0,156	0,088	0.587	0.258
AIS_7	0,264	0,055	0.809	0.191
AIS_8	0,276	0,133	0.984	0.280
IA_1	0.077	0.151	0.193	0.991
IA_2	0.078	0.194	0.241	0.719
IA_3	0.105	0.232	0.278	0.504
IA_4	0.140	0.154	0.246	0.905
IA_5	0.124	0.145	0.244	0.713
IA_6	0.073	0.104	0.202	0.997
IA_7	0.147	0.165	0.256	0.868
IA_8	0.185	0.214	0.264	0.841

As the value of cross-loading test above shoes, it complies to the standard, that all indicators are valid because they have the highest correlation value with each of its dimensions, compared to the other dimensions.

Table 3. Average Variance Extracted (Convergent Validity) test results

	AVE	Status (>0,5)
Struktur Organisasi	0.768	Valid
Komitmen Organisasi	0.891	Valid
Kualitas Sistem Informasi Akuntansi	0.773	Valid
Kualitas Informasi Akuntansi	0.675	Valid
Formalization	0.613	Valid
Delegation	0.698	Valid
Departmentalization	0.568	Valid
Span of Control	0.732	Valid
Affective	0.590	Valid
Continuance	0.609	Valid
Normative	0.761	Valid
Integration	0.815	Valid
Flexibility	0.830	Valid
Reliability	0.601	Valid
Efficient	0.583	Valid
Akurat	0.671	Valid
Relevan	0.588	Valid
Tepat Tersedia	0.609	Valid
Lengkap	0.712	Valid

The convergent validity measure in average variance extracted (AVE) values. AVE value more than 0.5 is required for the variable is declared valid [33]. Based on the AVE value above, it can be concluded that the 11 latent variable constructs have good validity (AVE> 0.5). This means that the information contained in each latent variable can be reflected in the manifest variable.

Cronbach's Alpha and Composite Reliability

Model reliability measurement is tested with Cronbach's Alpha and Composite Reliability. This can be seen from the output overview on the results of the SmartPLS algorithm. The criteria for the recommended value is above 0.700 [33]. The following are the results of Cronbach's alpha test, and also composite reliability for each research variable:

Table 4. Reliability Testing

	<i>cronbach's alpha</i>	<i>composite reliability</i>	Status (>0,7)
Struktur Organisasi	0.966	0.972	Reliable
Komitmen Organisasi	0.986	0.988	Reliable
Kualitas Sistem Informasi Akuntansi	0.983	0.985	Reliable
Kualitas Informasi Akuntansi	0.966	0.972	Reliable
Formalization	0.876	0.713	Reliable
Delegation	0.887	0.815	Reliable
Departmentalization	0.765	0.897	Reliable
Span of Control	0.804	0.926	Reliable
Affective	0.839	0.985	Reliable
Continuance	0.867	0.977	Reliable
Normative	0.912	0.890	Reliable
Integration	0.776	0.882	Reliable
Flexibility	0.882	0.761	Reliable
Reliability	0.876	0.803	Reliable
Efficient	0.812	0.820	Reliable
Akurat	0.797	0.777	Reliable
Relevan	0.901	0.841	Reliable
Tepat Tersedia	0.888	0.916	Reliable
Lengkap	0.872	0.822	Reliable

The results of the Cronbach's Alpha test and Composite Reliability are declared reliable because each variable has a value that exceeds the recommended value. This shows that the measurement model has good reliability. Thus, it can be stated that the measurement model is valid and reliable so that it can meet the requirements for further analysis.

Inner Model Testing (Structural Model)

In this analysis phase, two things become the test tools, the R Square (R^2), Q Square (Q^2) [33] analysis, and the t-statistical test to test the partial hypothesis obtained by using Bootstrapping calculations in the SmartPLS application [34].

R Square Analysis (R^2)

The R Square (R^2) analysis was performed on each endogenous latent variable which shows the degree of influence received by the endogenous latent variable from each exogenous variable that contributed to it. The greater the R^2 value, the greater the effect received by the endogenous variables [33].

Table 5. R Square (R^2) on Endogenous Variables Analysis

Based on the table above, we can learn that variable Quality of AIS (Y) is influenced by Organizational Structure (X1) and Organizational Commitment (X2) of $R^2 = 44.3\%$, and

variable Quality of Accounting Information (Z) is influenced by Quality of AIS (Y) of $R^2 = 61.1\%$.

Q Square Analysis (Q²)

The value of Q Square is used to see the greatness in the structural model where *predictive relevance* predicted if $Q^2 > 0$, and the model does not have *predictive relevance*. if Q^2 model < 0

Table 6. Q Square Analysis (Q²)

	<i>cronbach's alpha</i>
Struktur Organisasi	-
Komitmen Organisasi	-
Kualitas Sistem Informasi Akuntansi	0.443
Kualitas Informasi Akuntansi	0.611
Formalization	0.643
Delegation	0.519
Departmentalization	0.618
Span of Control	0.521
Affective	0.643
Continuance	0.519
Normative	0.513
Integration	0.312
Flexibility	0.129
Reliability	0.523
Efficient	0.117
Akurat	0.639
Relevan	0.711
Tepat Tersedia	0.602
Lengkap	0.590

Variabel Laten	Q Square (Q ²)
Y (Kualitas Sistem Informasi Akuntansi)	0.269
Z (Kualitas Informasi Akuntansi)	0.057

Based on the table 6, the Organizational Structure (X1) and Organizational Commitment (X2) model on the Quality of AIS has a Q² value of 0.269 where the value > 0 means that the model has good *predictive relevance*. The AIS Quality Model (Y) on the Quality of Accounting Information (Z) has a Q² value of 0.057 where the value > 0 means the *predictive relevance* was considered good.

Hypothesis Testing

Hypothesis testing is already used to check the influence of the latent variables. In SmartPLS to check the importance of the trail coefficient utilizing bootstrap with a significance stage of 5%. The outcomes of the calculations to check the speculation are appeared within the following table.

Table 7. Hypothesis Testing

Hipotesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T-Statistics (IO/STERRI)	p-value	Kesimpulan
X ₁ (OS) -> Y (AISQuality)	0.315	0.322	0.120	0.120	2.624	0.009	Signifikan, H1 diterima
X ₂ (OC) -> Y (AISQuality)	0.335	0.323	0.149	0.149	2.245	0.025	Signifikan, H2 diterima
Y (AISQuality) -> Z (IA Quality)	0.260	0.270	0.083	0.083	3.127	0.002	Signifikan, H3 diterima

The interpretation of the process and results of testing the hypothesis above is presented as follows:

The Effect of Organizational Structure on the Quality of AIS

Using SmartPLS 3 the results which are presented in the table above with a significance level of 5% can be seen from the original sample value of 0.315 which indicates a positive value. The resulting T-statistic is 2,624 > T-table (1,960) and the p-value is 0.009 < 0.05. Thus H1 in the study is accepted, meaning that the organizational structure has a positive effect on the quality of the AIS.

The Effect of Organizational Commitment on the Quality of AIS

Using SmartPLS 3 the results which are presented in the table above with a significance level of 5% can be seen from the original sample value of 0.335 which indicates a positive value. The resulting T-statistic value is 2,245 > T table (1,960) and the p-value is 0.025 < 0.05. Thus, H2 in the study is accepted, meaning that organizational commitment has a positive effect on the quality of the AIS.

Effect of the Quality of AIS on the Quality of Accounting Information

Using SmartPLS 3 the results are presented in the table above with a significance level of 5%. It can be seen from the original sample value of 0.260 which indicates a positive value. The resulting T-statistic value is 3.127 > T table (1.960) and the p-value is 0.002 < 0.05. Thus H3 in the study is accepted, meaning that the quality of the accounting information systems have a positive effect on the quality of accounting information.

VI. CONCLUSIONS & RECOMMENDATIONS

This study can boost, deepen, and expand knowledge, as the result of the hypothesis testing. The general truth is obtained through hypothesis answers to justify the influence of organizational structure and organizational commitment on the Quality of AIS and its impact on the Quality of Accounting Information. In improving the Quality of AIS, banks must improve more intensive coordination with organizational members and coordination between divisions also needs to be considered to make sure AIS works as it should. Due to this fact, the data analysis used on this data examine to see how organizational structure and organizational commitment can have an effect on the Quality of AIS that influence on the Quality of Accounting Information has been answered by way of a number of exams which were carried out. Based mostly on this hypothesis testing, it may be concluded that organizational structure and particular person components could make the quality of accounting information higher. Thus it can be concluded that organizational factors and individual factors can improve the quality of the accounting information system further. Therefore, the authors suggest that organizational factors and individual factors must be considered so that the quality of AIS can be managed and enriched, especially in banking business as a focus.

REFERENCES

- [1] Bachmid, F. S.: The Effect Of Accounting Information System Qua1ity On Accounting Information Qua1ity. *Research Journal Of Finance And Accounting*, 7(20), 26–31 (2016)
- [2] Rosa, D., & Purfini, A. P.: Analysis Effect Qua1ity Of Accounting Information Systems To Support Company Performance. *Iop Conference Series: Materia1s Science And Engineering*, 662(3) (2019)
- [3] Fauzia, M.: Soal Transaksi “Error” Jenius, Ini Penje1asan Btpn. *Kompas.Com*, 1. <https://Money.Kompas.Com/Read/2019/03/01/170239026/Soal-Transaksi-Error-Jenius-Ini-Penjelasan-Btpn> (2019)
- [4] Rapina, R., & Hadianto, B.: The Effect of Business Process on Accounting Information Qua1ity Through Accounting Information System Quality. *Pertanika Journal of Social Sciences and Humanities*, 26(February), 209–218 (2019)
- [5] Nurliyani, N., Darma, J., & Ikhsan, A.: The Effect Of Organizationa1 Culture On The Qua1ity Of Accounting Information Systems. *Budapest International Research And Critics*

-
- Institute (Birci-Journal): Humanities And Social Sciences, 3(1), 198–205.
<https://doi.org/10.33258/Birci.V3i1.735> (2020)
- [6] Tripambudi, A.N & Adityawarman.: Pengaruh Budaya Organisasi dan Struktur Organisasi pada Sistem Informasi Akuntansi dan Dampaknya Terhadap Kualitas Informasi (2014)
- [7] Aquinas, P. G.: Organization Structure And Design. Anurag Jain (2008)
- [8] Mcshane&Vonglinow.: Organizationa1 Behavior (4th Ed.). Mcgraw-Hill (2008)
- [9] Kondalkar, V. G.: Organizational Behaviour. New Delhi: New Age International (P) Ltd., (2007)
- [10] Khushk, A. A.: Impact Of Locus Of Control (Loc) And Organizational Commitment On Employee Performance- Study Of Service Sector , Pakistan. International Journal Of Law And Peace Works, 6(05), 01–06. <https://doi.org/10.5281/zenodo.2660275> (2019)
- [11] Mayer, J.P., & Allen, N. J. A.: Three-Component Conceptualization of Organizational Commitment. Human Resource Management Review. (1991)
- [12] Bodnar, G. H., & Hopwood, W. S.: Accounting Information Systems (7th Ed.) (2013)
- [13] Hurt, R. L.: Accounting Information Systems: Basic Concepts And Current Issues (2nd Ed.). Mcgraw-Hill/Irwin Publisher (2010)
- [14] Stair, R. M., & Reynolds, G. W. Principles Of Information Systems (10th Ed.) (2012)
- [15] Napitupulu, I. H., Mahyuni, S., & Sibarani, J. L.: The Impact Of Internal Control Effectiveness To The Quality Of Management Accounting Information System: The Survey On State-Owned Enterprises (Soes). Journal Of Theoretical And Applied Information Technology, 88(2), 358–366 (2016)
- [16] Wisna, N.: The Effect Of Information Technology On The Quality Of Accounting Information System And Its Impact On The Quality Of Accounting Information. Research Journal Of Finance And Accounting, 4(15), 2222–2847 (2013)
- [17] Romney, B. M., & Steinbart, J. P.: Accounting Information Systems : Thirteen Edition (2015)
- [18] Leitner, S.: Information Quality And Management Accounting. Lecture Notes In Economics And Mathematical Systems, 664 (2012)
- [19] Mbekomize, C. J., & Popo, S.: Value Relevance Of Accounting Information In The Botswana Listed Companies. International Business Research, 13(5), 46 (2020)
- [20] Al-Dalabih, F. A. N.: The Impact Of The Use Of Accounting Information Systems On The Quality Of Financial Data. International Business Research, 11(5), 143 (2018)
- [21] Hall, J. A.: Accounting Information System [James Hall, 7th Edition (2011)
- [22] Kuraesin, A. D.: Influence Organizational Structure on the Quality of Accounting Information Systems. Research Journal of Finance and Accounting, 7(2), 226–234 (2016)
-

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- [23] Nusa, I.: Influence Of Organizational Culture And Structure On Quality Of Accounting Information System. *International Journal Of Scientific & Technology Research*, 4(5), 257–267 (2015)
- [24] Susanto, A.: The Influence Of Organizational Commitment On The Quality Accounting Information System. *International Journal Of Scientific & Technology Research*, 06(09), 162–168 (2017)
- [25] Sari, N., & Purwanegara, H.: The Effect Of Quality Accounting Information System In Indonesian Government (Bumd At Bandung Area). *Decision-Making*, 7(2), 301–302 (2016)
- [26] Fery, I.: The Influence of Organizational Commitment to Implementation Accounting Information Systems and its Impact against the Company's Financial Performance (Survey on BUMN in Indonesia). *Account And Financial Management Journal*, 3(01), 1290–1300 (2018)
- [27] Djuwita, R., Soemantri, R., & Prima, G. K.: The Influence Of Organizational Commitment, Implementation Of Accounting Information System And Workplace Environment To The Performance Of Work Unit. *Journal Of Accounting Auditing And Business*, 1(1), 86 (2018)
- [28] Ladewi, Y., Susanto, A., Mulyani, S., & Suharman, H.: Effect of Organization Commitment on the Quality of Accounting Information System and their Impact on the Quality of accounting Information (p. 7) (2017)
- [29] Fitriati, A., Mulyani, S., & Street, D.: The Influence of Leadership Style on Accounting Information System Success and Its Impact on Accounting Information Quality. *International Journal of Accounting Information System*, 6(11), 167–174 (2015)
- [30] Fitriani, R.: Factors That Influence Accounting Information System Implementation And Accounting Information Quality. *International Journal Of Scientific & Technology Research*, 5(4), 192–198 (2016)
- [31] Mkonya, V. L., Jintian, Y., Nanthuru, S. B., & Jinyevu, S. A. (2018). Analysis of Top Management Support and Individual Factors Influence on Accounting Information System and its Impact on the Accounting Information Quality for Projects. *International Journal of Management Science and Business Administration*, 4(3), 19–29.
- [32] Cohen, L., Manion, L., & Morrison, K.: *Research Methods In Education* (6th Ed.). Routledge. (2007)
- [33] Hair, J. F., Ringle, C. M., and Sarstedt, M.: *A Primer on Partial Least Squares Structural Equation Modelling (PLS-SEM)*. Thousand Oaks, CA: Sage (2014)
- [34] Ghozali, I., dan Latan, H.: *Partial Least Square Konsep Teknik dan Aplikasi Menggunakan Program SmartPLS 3.0* (2nd Edition). Semarang: Badan Penerbit Universitas Diponegoro (2015)

The Analysis of Construction Supply Chain Management Failure

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Abstract

A multisite construction project is a construction project characterized by the number of construction sites that are managed simultaneously in regional, national and even global coverage. In its implementation and completion, a multisite construction project has field problems with high complexity. This problem is generally caused by the distribution of work locations, relatively short execution times, weather, and access. One of the failure factors in multisite construction is suspected to be the result of the improper and unplanned implementation of SCM (supply chain management). This study aims to provide input to parties involved in multisite CSCM (supply chain management) construction regarding the importance of compiling a correct, precise and effective SCM in multisite construction. Data collection was carried out into three stages, namely literature study, interview and observation. Data from interviews and field observations are interpreted and processed in the NVivo12 application. Based on data processing, it is known that the factors that cause poor multisite CSCM from internal companies are corporate culture, availability of human resources, construction management, while external factors are factors of service users, the involvement of subcontractors, availability of reliable suppliers and work environment. These findings provide a reference for practitioners who use SCM in construction. Based on these findings, practitioners can pay attention to various factors that cause failure in implementing CSCM.

Keywords: supply chain management, construction, multisite.

I. BACKGROUND

Ministry of Public Works and Public Housing (PUPR) through the Center for Educational Facilities and Infrastructure Development, Sports and Markets (PSPPOP) The Directorate General of Human Settlements (Cipta Karya) received the mandate to carry out technical guidance and accelerate the rehabilitation and construction of madrasas and schools throughout Indonesia [1]. From this program, there were 1,679 schools (SD, SMP and SMU) and 179 madrasas (Ibtidaiyah, Tsanawiyah and Aliyah) that had been handled in the 2019 fiscal year. [2].

The Regional Settlement Infrastructure Center (BPPW) of Banten Province also took part in these activities to support the Government's focus on developing superior human resources (HR). [2]. According to the Secretary of the Banten Provincial Education Office, Of the 4,105 school units that were severely damaged and needed repair in 2015, many were in the southern region of Banten, namely in Pandeglang and Lebak districts. [3]. However, improvements to these schools have not been implemented optimally, this is because currently Banten Province is still struggling with disparities in growth and development. The North Banten area is much better in infrastructure development than the South Banten area. [4].

Tabel 1.1 Package of School Facilities and Infrastructure Rehabilitation of Banten PSPPOP

No	Package name	Number of Schools	
		List	Verificati on
1	Rehabilitation of Basic and Secondary Education Facilities and Infrastructure in Lebak Regency 1	51	41
2	Rehabilitation of Basic and Secondary Education Facilities and Infrastructure in Lebak Regency 2	51	46
3	Rehabilitation of Basic and Secondary Education Facilities and Infrastructure in Lebak Regency 3	51	43
4	Rehabilitation of Basic and Secondary Education Facilities and Infrastructure in Pandeglang Regency 1	41	38
5	Rehabilitation of Basic and Secondary Education	28	22

	Facilities and Infrastructure in Pandeglang Regency		
	2		
6	Rehabilitation of Basic and Secondary Education Facilities and Infrastructure in Tangerang Regency, Serang Regency and Serang City	15	15
7	Rehabilitation of Facilities and Infrastructure for Madrasah Aliyah and Madrasah Tsanawiyah	11	11
	total	284	216

Source: Banten Infrastructure and Settlement Center (BPPW) 2019

Looking at the distribution of locations (Table 1.1), The school rehabilitation work has a fairly wide distribution on each package. Each package has 11 - 51 locations. More than 90% (ninety percent) of school locations verified to be rehabilitated are in the South Banten area. The wide distribution makes this work a multi-site construction project. A multisite construction project is a construction project characterized by the number of construction sites that are managed simultaneously in a regional, national or global scope. Multi-site projects are very characteristic, fast site turnover, rigid specifications, geographic differences, cultural diversity, and dependence on third parties [5].

Multi-site construction projects under implementation and completion have field problems with high complexity [6]. The variety of problems can be seen from the distribution of work locations, short execution times, weather, and poor access (tends to be bad). Improper and unplanned SCM implementation is suspected as one of the failure factors in multisite construction. This is a classic problem experienced by many construction projects, and can be detrimental for many parties [7].

As the main coordinator, the contractor is in a strategic position to manage all stakeholders and various resources throughout the planning of material supply in order to anticipate the risk of supply delays that can result in the project not being on time [7]. Risk can be caused by many things along the supply chain, however there are 4 categories of sources of risk, namely, Supply, Control, Process and Demand [8].

Geographical location, material suppliers and their distance from the construction site are factors that have a significant influence on construction costs, time and quality [9]. This requires a systematic management so that the project is not late. [10]. Facing that challenge construction companies began to invest in new skills and development of integrated SCM for the purpose of competitive positioning [11]. Planning and application of SCM Construction is a very promising approach to successfully achieve integration between several chain disciplines,

namely suppliers, designers / consultants, vendors, supplier / supplier contractors, subcontractors, transportation and storage and external internal clients [9], [12], [13].

From the above studies and many other previous studies, it is known that SCM can be implemented in construction work. This reflects that SCM can also be implemented in multi-site construction work. Proper and accurately coordinated SCM planning is expected to solve the problem of material procurement delays in multi-site construction. In addition, this research is expected to contribute by filling in the gaps in knowledge, which until now no one has discussed specifically about the design of implementing SCM in multisite constructions.

II. RESEARCH OBJECTIVES AND BENEFITS

1. Research purposes

This research is expected to provide an analysis of the causes of poor supply chain management in multisite constructions. The method used to achieve this goal is to identify and identify factors for failure of multisite constructions caused by poor SCM. After identification, the researcher offers SCM attributes that can be implemented in multisite Construction Supply Chain Management (CSCM).

2. Benefits of Research

The research provides input to service users (government / owners, multisite construction management), service providers (contractors) and consultants (planning consultants and supervisory consultants) that the importance of compiling correct, precise and effective SCM in multisite construction. Some of the benefits that can be expected from this research, among others;

- 1) Theoretically, this study provides an overview of the importance of compiling a multisite CSCM scheme and implementing SCM effectively so that construction failures caused by SCM can be minimized.
- 2) Practically, this research provides a construction SCM design by analyzing the SCM attributes that can be implemented in multisite and CSCM.
- 3) Encourage improvement of multisite construction governance management by improving CSCM performance.

III. RESEARCH METHODS

The descriptive qualitative approach used in this research is the research process that is carried out naturally and naturally in accordance with the conditions that occur in the field without any manipulative elements to the data collected [14]. Meanwhile, the research protocol used a Systematic review to classify and summarize the results of descriptive qualitative studies. The research protocol process begins with identifying questions, determining the location of the database, selecting and selecting data and research results relevant to the research objectives, extracting and finally presenting the results of the meta-synthesis.

Research data collection was carried out in 3 ways, namely literature studies, interviews and observations to multisite work locations. Interviews were conducted directly with service users, service providers and experts. The service users in question are the Banten Regional Settlement Infrastructure Center (BPPW), the Banten Provincial Education Office, the Regency / City Education Office and Schools benefiting from the multisite rehabilitation project from BPPW Banten. Service providers are parties who are partners, both individuals and business entities including Consultants (BPPW Individual Consultants, Planning Consultants and Supervisory Consultants), Contractors (main contractors and Subcontractors) and Suppliers (Distributors, Agents, Stores and other Suppliers) . While the experts referred to are experts who understand SCM and multisite construction in Indonesia. These experts consist of academics, researchers and other individuals who have sufficient understanding and knowledge.

For interview data, researchers submitted 43 interview proposals to potential sources in Bandung, Bekasi, Jakarta, Tangerang, Serang, Cilegon, Pandeglang and Rangkasbitung. Of the 43 proposals, 21 of them became sources and were successfully interviewed. There were several obstacles in conducting interviews apart from the availability of resource time, the Covid 19 pandemic was one of the obstacles in realizing the interview process. Several interview plans were cancelled due to the implementation of Large-Scale Social Restrictions (PSBB) and social distancing. The results of the analysis of interview data from 21 interviews were assumed to represent the sources involved in a multi-site construction project.

In addition, researchers also conducted field observations. Observation data is supporting data to strengthen data obtained from literature and interviews. Researchers make visits and direct reviews to the sites that are the object of this research in order to explore more deeply the phenomena that occur. Some of these observations were also accompanied by direct interviews in the field. During this observation visit, the researcher prepared a "Field

Visit / Observation Form" and a camera, this was done in addition to recording visual observation data as well as to strengthen the validity of the research data.

IV. INTERNAL AND EXTERNAL ASPECTS OF MULTISITE CSCM IMPLEMENTATION

1. Internal Aspects of Multisite CSCM Implementation

Construction is an industry that operates in an environment and conditions full of uncertainty. The complexity of the activities in a construction project causes the construction project to involve many parties, either directly or indirectly. Ideally, construction projects should be completed on time with the right budget and good quality, or in other words, construction projects are always tied to the Triple Constraint, namely Implementation Time, Budget and Quality of Work. Research [15] states that there are three emphases in every construction project, namely (1) the project is always in uncertainty, planning is sometimes not in line with what is happening in the field, (2) creating integrated needs for each resource in each part of the project and (3)) is subject to the urgency of delivering the desired results over a predetermined time frame.

Construction companies must focus on strategies that will improve the quality of their products / services and reduce unit production costs at each stage of construction especially in the supply chain. CSCM management involves many parties and is full of challenges. Companies must be able to build trust and collaboration among supply chain partners and implement the best methods that can facilitate the supply chain process. Furthermore, research [16] reveals that there are 9 key success factors (Critical Success Factor / CSF) in order to achieve supply chain and operation success. The 9 CSFs that are responsible for the greater impact on the industry are (1) Use of Information Technology, (2) Commitment to Management, (3) Partnership / Integration, (4) Quality of service, (5) Process, (6) Resources Ability, (7) Government intervention, (8) Skilled employees, (9) Trust.

2. Corporate Culture

SCM is proven to be successful in being applied to the Manufacturing Industry, but it is not successful in its application in the Construction Industry which is marked by the high number of waste. This is due to the very basic differences between the manufacturing industry and the construction industry. The manufacturing industry is a repeated production cycle with the same activities and use of materials so that it can be taken into account in more detail. Meanwhile, the construction industry is an industry that has different characteristics for each

project. The same job in different times and places will be treated differently, especially if there are different jobs, times and places. Even a construction project can differ from planning in its implementation.

Company habits and culture greatly influence the success of CSCM in construction projects. Successful CSCM can be achieved if management focuses on how to use their own products, planning processes, mastery of technology, and the ability to integrate the construction process [17]. The CSCM process includes the flow of materials, labor, information, fabrication, and equipment coming from many different parties. Several sources said that the construction service providers had not implemented the CSCM strategy correctly. The service provider already knows the intent and purpose of the CSCM preparation but is still limited as a formality document for the implementation of the work. Planning and material management is fully entrusted to field officers at work sites. Even if the work is subcontracted, the main contractor only calculates the installed volume without questioning the procurement and distribution process of materials.

From the results of observations and interviews with resource persons, in principle, service providers (main contractors and subcontractors) already understand the importance of planning and managing supply chains. Apart from the lack of reliable human resources and knowledge of CSCM, inconsistent policies and lack of willingness from service providers are deemed insufficient to implement SCM in construction projects.

3. Human Resources

Almost all interviewees who were successful in the researcher's interviews stated that companies involved in multisite work did not have special personnel to handle supply chain management. Supply chain planning is carried out based on practices in previous projects. The main contractor only provides a field coordinator who controls and manages project performance within the corridors for which he is responsible. subcontractors assign field managers to project units for which they are responsible. Material needs are submitted by the foreman who is sometimes also the contractor of paying wages. This condition occurs because most small and medium construction companies do not have experts and permanent workers. Experts and directors work only at the time of project implementation. This was also revealed in interviews with several sources.

In practice, service provider directors have control over all material needs in the field. Officers in the field provide a record of material needs to the directors, while the decision is when to supply and who is the supplier of the directors who decide. Most service providers have not been able to manage and plan the supply chain properly. Even in several interviews,

the informants did not know if there was training on CSCM, but they gave a positive response and were very interested in participating in the training.

4. Construction Management

Many studies say that project management is one of the determining factors for the success of CSCM. The main problem in multi-site project management is the management's ability to formulate and organize systems in planning, scheduling and supply chain control [18]. It is common knowledge that most small and medium companies in Indonesia do not yet have project managers who have qualified project control skills. The skills of a project manager greatly influence the CSCM pattern in construction companies. Skills in oral and written communication of a project manager are not only obtained from training and school but can also be obtained from previous experiences. These skills can be useful and are one of the keys to success in CSCM planning [19].

A multisite construction project involves many parties in its implementation but there is no Construction Management Consultant in it, either from service users or from service providers. From the service user, the Supervisory Consultant prepares from the consultant Service auction mechanism and also prepares Individual Consultants as an extension of the service user in overseeing the progress of the work. Basically, a multisite construction project involves many parties in the supply chain. In this supply chain series, in addition to human and material resources, it also involves data systems, software, accounting, transport fleets, equipment and other supporting facilities. Seeing the complexity of activities in the multisite construction supply chain, the roles of the project manager and the construction management team are very central.

V. RESULTS & FINDING

The influence of independent variable on the dependent variable and to the hypothesis is tested by Structural Equation Modelling (SEM). SEM used is SmartPLS 3. The stages in data processing are divided into 2, which are testing the outer model and testing the inner model. Outer Model Testing (Measurement Model Testing) At this stage, there are two things to be analysed, namely convergent validity, discriminant validity, and Cronbach's alpha, and composite reliability [33]. The results of data processing are presented as follows :

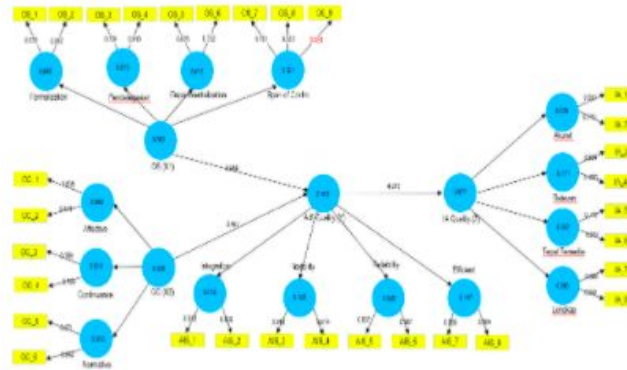


Fig 1. Measurement Model.

Convergent Validity

The loading factor value is used as a benchmark in conducting validity testing. The Loading Factor value is seen for each dimension and each indicator. Each dimension and indicator is valid if its loading factor is above 0.7 value [33]. However, in the early stages of research, the development of a *loading* value measurement scale of 0.5 to 0.6 is still acceptable [34]. From the above processing, the OS9 indicator is declared invalid and excluded from further processing.

The table below presents the test results for the *loading factor* and *convergent validity*.

Table 1. Outer Loading

Measurement Instruments	Outer Loading	Status (>0,5)
OS_1	0,678	Valid
OS_2	0,897	Valid
OS_3	0,724	Valid
OS_4	0,910	Valid
OS_5	0,876	Valid
OS_6	0,732	Valid
OS_7	0,701	Valid
OS_8	0,832	Valid
OS_9	0,438	Tidak Valid
OC_1	0,635	Valid
OC_2	0,578	Valid
OC_3	0,789	Valid
OC_4	0,769	Valid
OC_5	0,871	Valid
OC_6	0,942	Valid
AIS_1	0,913	Valid
AIS_2	0,802	Valid
AIS_3	0,743	Valid
AIS_4	0,814	Valid
AIS_5	0,887	Valid
AIS_6	0,587	Valid
AIS_7	0,809	Valid
AIS_8	0,984	Valid
IA_1	0,991	Valid
IA_2	0,719	Valid
IA_3	0,504	Valid
IA_4	0,905	Valid
IA_5	0,713	Valid
IA_6	0,997	Valid
IA_7	0,868	Valid
IA_8	0,841	Valid

The *loading factor* value in the table above shows the magnitude of the relationship between latent variables on each of the indicators. The *loading factor* value can be seen

directly in the *output outer setting* in the SmartPLS algorithm results. The results show that all indicators used in this study are valid.

Discriminant Validity

Indicator variables can be measured by evaluating the outcomes of cross-loading, which reveals that the correlation worth of indicators in the identical variable is healthier than the symptoms for different variables. For all constructs it is symbolize as follows:

Table 2. Cross Loading

	X1	X2	Y	Z
OS_1	0.678	0.484	0.122	0.217
OS_2	0.897	0.482	0.137	0.185
OS_3	0.724	0.494	0.190	0.350
OS_4	0.910	0.479	0.191	0.336
OS_5	0.876	0.464	0.460	0.464
OS_6	0.732	0.482	0.520	0.482
OS_7	0.701	0.453	0.491	0.453
OS_8	0.832	0.464	0.211	0,054
OS_9	0.438	0.482	0,369	0,226
OC_1	0.377	0.635	0,346	0,301
OC_2	0.345	0.578	0,266	0,003
OC_3	0.372	0.789	0,356	0,137
OC_4	0.310	0.769	0,392	0,230
OC_5	0.362	0.871	0,799	0,219
OC_6	0.277	0.942	0,871	0,335
AIS_1	0.298	0,228	0.913	0.141
AIS_2	0.360	0,181	0.802	0.260
AIS_3	0,209	0,186	0.743	0.288
AIS_4	0,398	0,349	0.814	0.276
AIS_5	0,389	0,226	0.887	0.274
AIS_6	0,156	0,088	0.587	0.258
AIS_7	0,264	0,055	0.809	0.191
AIS_8	0,276	0,133	0.984	0.280
IA_1	0.077	0.151	0.193	0.991
IA_2	0.078	0.194	0.241	0.719
IA_3	0.105	0.232	0.278	0.504
IA_4	0.140	0.154	0.246	0.905
IA_5	0.124	0.145	0.244	0.713
IA_6	0.073	0.104	0.202	0.997
IA_7	0.147	0.165	0.256	0.868
IA_8	0.185	0.214	0.264	0.841

As the value of cross-loading test above shoes, it complies to the standard, that all indicators are valid because they have the highest correlation value with each of its dimensions, compared to the other dimensions.

Table 3. Average Variance Extracted (Convergent Validity) test results

	AVE	Status (>0,5)
Struktur Organisasi	0.768	Valid
Komitmen Organisasi	0.891	Valid
Kualitas Sistem Informasi Akuntansi	0.773	Valid
Kualitas Informasi Akuntansi	0.675	Valid
Formalization	0.613	Valid
Delegation	0.698	Valid
Departmentalization	0.568	Valid
Span of Control	0.732	Valid
Affective	0.590	Valid
Continuance	0.609	Valid
Normative	0.761	Valid
Integration	0.815	Valid
Flexibility	0.830	Valid
Reliability	0.601	Valid
Efficient	0.583	Valid
Akurat	0.671	Valid
Relevan	0.588	Valid
Tepat Tersedia	0.609	Valid
Lengkap	0.712	Valid

The convergent validity measure in average variance extracted (AVE) values. AVE value more than 0.5 is required for the variable is declared valid [33]. Based on the AVE value above, it can be concluded that the 11 latent variable constructs have good validity (AVE > 0.5). This means that the information contained in each latent variable can be reflected in the manifest variable.

Cronbach's Alpha and Composite Reliability

Model reliability measurement is tested with Cronbach's Alpha and Composite Reliability. This can be seen from the output overview on the results of the SmartPLS algorithm. The criteria for the recommended value is above 0.700 [33]. The following are the results of Cronbach's alpha test, and also composite reliability for each research variable:

Table 4. Reliability Testing

	<i>cronbach's alpha</i>	<i>composite reliability</i>	Status (>0,7)
Struktur Organisasi	0.966	0.972	Reliable
Komitmen Organisasi	0.986	0.988	Reliable
Kualitas Sistem Informasi Akuntansi	0.983	0.985	Reliable
Kualitas Informasi Akuntansi	0.966	0.972	Reliable
Formalization	0.876	0.713	Reliable
Delegation	0.887	0.815	Reliable
Departmentalization	0.765	0.897	Reliable
Span of Control	0.804	0.926	Reliable
Affective	0.839	0.985	Reliable
Continuance	0.867	0.977	Reliable
Normative	0.912	0.890	Reliable
Integration	0.776	0.882	Reliable
Flexibility	0.882	0.761	Reliable
Reliability	0.876	0.803	Reliable
Efficient	0.812	0.820	Reliable
Akurat	0.797	0.777	Reliable
Relevan	0.901	0.841	Reliable
Tepat Tersedia	0.888	0.916	Reliable
Lengkap	0.872	0.822	Reliable

The results of the Cronbach's Alpha test and Composite Reliability are declared reliable because each variable has a value that exceeds the recommended value. This shows that the measurement model has good reliability. Thus, it can be stated that the measurement model is valid and reliable so that it can meet the requirements for further analysis.

Inner Model Testing (Structural Model)

In this analysis phase, two things become the test tools, the R Square (R^2), Q Square (Q^2) [33] analysis, and the t-statistical test to test the partial hypothesis obtained by using Bootstrapping calculations in the SmartPLS application [34].

R Square Analysis (R^2)

The R Square (R^2) analysis was performed on each endogenous latent variable which shows the degree of influence received by the endogenous latent variable from each exogenous variable that contributed to it. The greater the R^2 value, the greater the effect received by the endogenous variables [33].

Table 5. R Square (R^2) on Endogenous Variables Analysis

Based on the table above, we can learn that variable Quality of AIS (Y) is influenced by Organizational Structure (X1) and Organizational Commitment (X2) of $R^2 = 44.3\%$, and variable Quality of Accounting Information (Z) is influenced by Quality of AIS (Y) of $R^2 = 61.1\%$.

Q Square Analysis (Q^2)

The value of Q Square is used to see the greatness in the structural model where *predictive relevance* predicted if $Q^2 > 0$, and the model does not have *predictive relevance*.if Q^2 model < 0

Table 6. Q Square Analysis (Q^2)

	<i>cronbach's alpha</i>
Struktur Organisasi	-
Komitmen Organisasi	-
Kualitas Sistem Informasi Akuntansi	0.443
Kualitas Informasi Akuntansi	0.611
Formalization	0.643
Delegation	0.519
Departmentalization	0.618
Span of Control	0.521
Affective	0.643
Continuance	0.519
Normative	0.513
Integration	0.312
Flexibility	0.129
Reliability	0.523
Efficient	0.117
Akurat	0.639
Relevan	0.711
Tepat Tersedia	0.602
Lengkap	0.590

Variabel Laten	Q Square (Q^2)
Y (Kualitas Sistem Informasi Akuntansi)	0.269
Z (Kualitas Informasi Akuntansi)	0.057

Based on the table 6, the Organizational Structure (X1) and Organizational Commitment (X2) model on the Quality of AIS has a Q^2 value of 0.269 where the value > 0 means that the model has good *predictive relevance*. The AIS Quality Model (Y) on the Quality of Accounting Information (Z) has a Q^2 value of 0.057 where the value > 0 means the *predictive relevance* was considered good.

Hypothesis Testing

Hypothesis testing is already used to check the influence of the latent variables. In SmartPLS to check the importance of the trail coefficient utilizing bootstrap with a significance stage of 5%. The outcomes of the calculations to check the speculation are appeared within the following table.

Table 7. Hypothesis Testing

Hipotesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T-Statistics (IO/STERRI)	p-value	Kesimpulan
X ₁ (OS) -> Y (AISQuality)	0.315	0.322	0.120	0.120	2.624	0.009	Signifikan, H1 diterima
X ₂ (OC) -> Y (AISQuality)	0.335	0.323	0.149	0.149	2.245	0.025	Signifikan, H2 diterima
Y (AISQuality) -> Z (IA Quality)	0.260	0.270	0.083	0.083	3.127	0.002	Signifikan, H3 diterima

The interpretation of the process and results of testing the hypothesis above is presented as follows:

The Effect of Organizational Structure on the Quality of AIS

Using SmartPLS 3 the results which are presented in the table above with a significance level of 5% can be seen from the original sample value of 0.315 which indicates a positive value. The resulting T-statistic is 2,624 > T-table (1,960) and the p-value is 0.009 < 0.05. Thus H1 in the study is accepted, meaning that the organizational structure has a positive effect on the quality of the AIS.

The Effect of Organizational Commitment on the Quality of AIS

Using SmartPLS 3 the results which are presented in the table above with a significance level of 5% can be seen from the original sample value of 0.335 which indicates a positive value. The resulting T-statistic value is 2,245 > T table (1,960) and the p-value is 0.025 < 0.05. Thus, H2 in the study is accepted, meaning that organizational commitment has a positive effect on the quality of the AIS.

Effect of the Quality of AIS on the Quality of Accounting Information

Using SmartPLS 3 the results are presented in the table above with a significance level of 5%. It can be seen from the original sample value of 0.260 which indicates a positive value. The resulting T-statistic value is 3.127 > T table (1.960) and the p-value is 0.002 < 0.05. Thus H3 in the study is accepted, meaning that the quality of the accounting information systems have a positive effect on the quality of accounting information.

VI. SCM ATTRIBUTE AS THE KEY TO SUCCESSFUL MULTISITE CSCM

1. Integrated Information System

The biggest challenge in building an integrated CSCM is managing the flow of information into and out of the project. Management of information systems greatly influences planning and evaluation of logistics. The diverse characteristics and geographic location of the project sites make an effective information and communication system between the central and regional division project teams indispensable.

The results of observations show that communication between field officers, the administration section and company directors has not been effective. Communication only relies on cellphone and social media (whatsapp) as a medium for sharing project data. Meanwhile, the integrated and integrated data system has not been built and has not even been planned. This was also revealed from interviews with almost all informants. At this time, the pattern of communication and project coordination was still very conventional. Field workers greatly determine the policies that will be taken by the directors, so that directors have difficulty innovating in the supply chain. Directors' data is field data which is the result of a coordination meeting conducted by the site manager, foreman and supervisor.

Regarding this [24], in his study suggested a coordination mechanism for CSCM constructs that uses internet enabled mechanisms to improve the coordination process. This is in line with research [25] which references the use of Cloud Data (data cloud) together in coordination on multi-site projects with certain restrictions in accessing data between central management and work sites.

2. Logistics Procurement Strategy.

Multisite CSCM is very vulnerable to the uncertainty of time, quantity, quality, and price of the materials, labour and equipment needed in the process. This uncertainty occurs in all procurement activities at each stage of construction. Service providers are required to carry out comprehensive planning and control of logistic activities. The results of field observations prove that service providers prefer to pile up materials at work sites in order to anticipate all uncertainties, even though they realize this will result in inefficient, wasteful use of materials and increase storage costs. Nonetheless, stockpiling measures are still

considered an effective way of reducing the risks associated with a number of uncertainties that may arise in the supply network (eg, late delivery, incomplete orders, quality deficiencies).

According to [26] Uncertainty in supply chain arises largely due to the lack of available and accurate information regarding the status of materials at different stages in the supply network construction. This reinforces the basic concept in integrated multisite CSCM, namely developing an integrated and integrated logistics procurement strategy. So as to minimize the occurrence of conflicts of needs, ordering errors, delays, wrong scheduling between sites.

3. Logistic Distribution Strategy.

Logistic distribution is an important part of integrated multisite CSCM. The wide distribution and geographical location cause distribution planning to always change depending on the terrain and weather conditions at the work location. The accuracy of the information determines the accuracy of the strategy. In some work sites, sometimes a material transport vehicle cannot directly enter the work site. Distribution is sometimes carried out with the help of smaller vehicles, some are even transported using two-wheeled vehicles. Observations and interviews show that providers do not yet have a well-planned and integrated distribution pattern and strategy.

4. Storage and Warehouse

Almost all implementing contractors in multi-site work that are the object of this research do not have a warehouse specifically at the work site. The main contractor has a warehouse located in the main office, the additional warehouse is a transit warehouse before being taken to the work site. This transit warehouse will normally supply several adjacent sites. After the materials are distributed to the work site, neither the main contractor nor the subcontractor appears to have a warehouse. Materials that are susceptible to weather are stored in unused classrooms (being repaired) while bulk materials are placed in open fields which sometimes interfere with circulation in the work area. Material treatment in the field is important because it is related to efficient use of materials to prevent cost overruns. Materials that are mistreated in the field run the risk of spoilage, deterioration of quality, loss and deficiency before use.

5. Treatment of Residual Logistics and Waste

In integrated CSCM the treatment of Logistics, Waste and Waste is the final stage in the supply chain before a comprehensive evaluation of the supply chain is carried out. Remaining Logistics, Waste and Waste is closely related to how the ordering pattern, meeting field needs, distribution distribution patterns and material treatment in the field.

REFERENCES

- [1] I. Suprijanto, "kementerian-pupr-targetkan-perbaiki-2000-sekolah-dan-300-madrasah-tahun-2019," 2019. [Online]. Available: <https://www.bulelengkab.go.id/detail/artikel/kementerian-pupr-targetkan-perbaiki-2000-sekolah-dan-300-madrasah-tahun-2019-93>. [Accessed: 08-Aug-2019].
- [2] K. PUPR, "Kementerian PUPR Rehabilitasi 1," 2020.
- [3] D. Prasetya, "4105-ruang-sekolah-di-banten-rusak-parah.," 2015. [Online]. Available: <https://www.merdeka.com/peristiwa/4105-ruang-sekolah-di-banten-rusak-parah.html>. [Accessed: 09-Aug-2019].
- [4] W. Halim, "ketimpangan-masih-belum-tuntas," 2018. [Online]. Available: <http://bantenraya.com/berita/2018/10/04/2984/ketimpangan-masih-belum-tuntas>. [Accessed: 08-Aug-2019].
- [5] N. Blismas, W. Sher, and T. Thorpe, "NATIONAL AND GLOBAL MULTI-SITE PROJECTS," vol. 2, no. September, pp. 9–11, 1998.
- [6] M. Petruzzo, S. A. Jones, B. Morton, and A. Lorenz, "Challenges and Opportunities in Multi-Site Construction," 2019.
- [7] J. Utomo, D. Hatmoko, and F. Kistiani, "Model Simulasi Risiko Rantai Pasok Material Proyek Konstruksi Gedung," *Media Komun. Tek. Sipil*, vol. 23, no. 1, pp. 1–13, 2017, doi: <https://doi.org/10.14710/mkts.v23i1.14697%0AModel>.
- [8] R. Mason-jones and D. R. Towill, "Coping with Uncertainty : Reducing " Bullwhip " Behaviour in Global Supply Chains," 2000.
- [9] M. N. Jadid and M. M. Idrees, "A Geographic Interactive Supply Chain Management System for Construction Projects," vol. II, pp. 23–25, 2013.
- [10] Riswandi, M. Natalia, Mafriyal, Gusriyaldi, and T. Cristiani, "Faktor Penyebab Kegagalan Akibat Keterlambatan Proyek Konstruksi Pada Bangunan Gedung di Kota Padang," *JIRS*, vol. XV, no. April, pp. 24–36, 2018.

-
- [11] M. Khalfan, P. Mcdermott, and R. Cooper, "Integrating The Supply Chain Within Construction Industry," in Khosrowshahi, F (Ed.), 20th Annual ARCOM Conference, 1-3 September 2004, Heriot Watt University. Association of Researchers in Construction Management, 2004, vol. 2, no. September, pp. 897–904.
- [12] V. C. Durai and D. K. Sentamilselvan, "A STUDY ON SUPPLY CHAIN FRAME WORK IN CONSTRUCTION," vol. 4, 2016, doi: 10.5281/zenodo.60690.
- [13] G. A. Papadopoulos, N. Zamer, S. P. Gayialis, and I. P. Tatsiopoulou, "Supply Chain Improvement in Construction Industry," *Univers. J. Manag.*, vol. 4, no. 10, pp. 528–534, 2016, doi: 10.13189/ujm.2016.041002.
- [14] M. Raharjo, "STUDI KASUS DALAM PENELITIAN KUALITATIF: KONSEP DAN PROSEDURNYA," UIN Maulana malik Ibrahim Malang, no. April. pp. 1–28, 2017.
- [15] J. R. Turner and R. Müller, "On the nature of the project as a temporary organization," *Int. J. Proj. Manag.*, vol. 21, no. 1, pp. 1–8, 2003, doi: 10.1016/S0263-7863(02)00020-0.
- [16] M. S. A. Talib, A. B. A. Hamid, and A. C. Thoo, "Critical success factors of supply chain management: A literature survey and Pareto analysis," *EuroMed J. Bus.*, vol. 10, no. 2, pp. 234–263, 2015, doi: 10.1108/EMJB-09-2014-0028.
- [17] E. Salami, S. Aydinli, and E. L. Oral, "Barriers to the Implementation of Supply Chain Management- Case of Small to Medium Sized Contractors in Turkey," vol. 5, no. 9, pp. 516–520, 2016, doi: 10.21275/ART20161582.
- [18] I. N. Hashim and N. Chileshe, "Major challenges in managing multiple project environments (MPE) in Australia's construction industry," *J. Eng. Des. Technol.*, vol. 10, no. 1, pp. 72–92, 2012, doi: 10.1108/17260531211211890.
- [19] G. Briscoe, A. R. J. Dainty, and S. Millett, "Construction supply chain partnerships: Skills, knowledge and attitudinal requirements," *Eur. J. Purch. Supply Manag.*, vol. 7, no. 4, pp. 243–255, 2001, doi: 10.1016/S0969-7012(01)00005-3.
- [20] A.-W. Ghaith, "Supply chain management in construction Revealed," *Constr. Proj. Manag. An Integr. Approach*, no. March, pp. 308–339, 2005, doi: 10.4324/9780203006986.
- [21] G. Wang, A. Gunasekaran, W. T. Eric, and T. Papadopoulos, "Big data analytics in logistics and supply chain and applications Reference : Big Data Analytics in Logistics and Supply Chain Management : Certain," *Intern. J. Prod. Econ.*, 2016, doi: 10.1016/j.ijpe.2016.03.014.
- [22] F. Maulani, A. Suraji, and B. Istijono, "Analisis Struktur Rantai Pasok Kontruksi Pada Pekerjaan Jembatan," *J. Rekayasa Sipil*, vol. 10, no. 2, p. 1, 2014, doi: 10.25077/jrs.10.2.1-8.2014.

-
- [23]F. T. T. Phua and S. Rowlinson, "Cultural differences as an explanatory variable for adversarial attitudes in the construction industry: The case of Hong Kong," *Constr. Manag. Econ.*, vol. 21, no. 7, pp. 777–785, 2003, doi: 10.1080/0144619032000108245.
- [24]X. Xue, Y. Wang, Q. Shen, and X. Yu, "Coordination mechanisms for construction supply chain management in the Internet environment," *Int. J. Proj. Manag.*, vol. 25, no. 2, pp. 150–157, 2007, doi: 10.1016/j.ijproman.2006.09.006.
- [25]I. Petri, T. Beach, O. F. Rana, and Y. Rezgui, "Coordinating multi-site construction projects using federated clouds," *Autom. Constr.*, vol. 83, no. June, pp. 273–284, 2017, doi: 10.1016/j.autcon.2017.08.011.
- [26]D. A. Young;, F. A. Carl T. Haas, Ph.D., M. A. Paul Goodrum, Ph.D., and A. M. A. Carlos Caldas, Ph.D., "Improving Construction Supply Network Visibility by Using Automated Materials Locating and Tracking Technology," *J. Constr. Eng. Manag.*, no. NOVEMBER, pp. 1–13, 2011, doi: 10.1061/(ASCE)CO.1943-7862.

Understanding the Factors Influencing the Participation of the Warehouse Receipt System Program for Pepper Farmers.

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Abstract

The Warehouse Receipt System is a government program aimed at improving the welfare of small farmers, enabling them to postpone the sale of their goods to be stored in government warehouses and sold at a more profitable price. In practice, it shows the low level of farmer participation. This research is a qualitative study, trying to describe the causes of the problem through door-to-door interviews and questionnaires to pepper farmers. The results showed that several reasons that influenced and prevented pepper farmers from participating in the WRS program included the amount of pepper production produced by small-scale farmers, the lack of confidence of farmers in the program due to the absence of a pilot program, storage costs in warehouses were considered burdensome, farmers' reluctance to deal with bank loans due to complicated procedures and emotional feelings of local residents.

Keywords: Warehouse Receipt System, Participation, Pepper Farmer.

I. INTRODUCTION

The Warehouse Receipt System is one of the government programs intended to improve the welfare of smallholder farmers. Through this program, farmers are allowed to postpone the sale of their goods to be stored in government warehouses and sold at a more favorable price.

Regulation of the Minister of Trade Number 33 of 2020, concerning goods that can be stored in warehouses in the context of implementing the Warehouse Receipt System stated that commodities that can be stored in WRS warehouses include unhulled rice, maize, coffee, cocoa, pepper, rubber, seaweed, rattan, salt, gambier, tea, copra, tin, shallots, fish, nutmeg and frozen chicken.

While in Kepulauan Bangka Belitung province, the commodity that was chosen for the Warehouse Receipt System (WRS) program is pepper, Bangka Belitung is the largest pepper producing province in Indonesia which is known internationally for its quality of pepper known as muntok white pepper.

Even so, the price of the pepper commodity has experienced ups and downs, causing pepper farmers to experience losses and reluctance to grow pepper. To respond to this situation, the provincial government issued a Warehouse Receipt System program that promised many benefits for the economy such as: controllability and stability of commodity prices, guaranteed production capital, industrial raw material security, etc. [1] Even though the program promises many benefits for farmers and the economy, practice shows low levels of participation of farmers.

II. METHODS

This research is a qualitative study that aims to better understand the reasons for pepper farmers which still hinder them from joining the program. The types of data obtained are primary data from respondents and supporting information in the form of secondary data from previous research and literature studies. The data were collected by means of interviews and questionnaires to 100 pepper farmers and analyzed descriptively, while the sampling used was a purposive sampling method. Data collection was carried out from October to November 2019 and continued in March 2020. Questionnaires were distributed to pepper farmers respondents in Mendo Barat District, Kepulauan Bangka Belitung Province.

According to [2], there are several concepts that need to be considered in qualitative research, namely, among others:

1. Credibility which is validity concept in term of qualitative research. Research is said to have good credibility if it succeeds in achieving the goal of exploring problems, describing settings, processes, social groups or complex interaction patterns.
2. Transferability is the concept of external validity in term of qualitative research. Research is said to have good transferability if the reader of the research results can get a clear picture and understanding of both the context and focus of the research report.
3. Dependability is a concept of reliability in term of qualitative research. Research is said to have good dependability if it is carried out with structured data analysis and good interpretation so that other researchers will get the same conclusion when using the perspective, raw data and documents.
4. Confirmability is a concept of transparency which means the willingness of the researcher to openly disclose the processes and elements of the research.

III. RESULT AND FINDINGS



Fig. 1. Word Frequency Result

At the time of collecting data at the respondent's location, the researcher found that the majority of respondents did not know about the WRS program of which was the research topic, therefore the researcher also guided and interviewed every respondents in filling out the questionnaire and acting like program socialization activities. With the respondent's consent, the researcher used a recording device to capture the information provided. The time required for each respondent lasts around 30 minutes to then proceed to the residence of the next respondent. The frequency of words that dominated the interviews was about agriculture,

warehousing and pepper. The recorded data was then transcribed into writing manually considering that the language and dialect used during the interview were in accordance with the local language and dialect which had a slight difference from bahasa Indonesia.

The agreement level intervals on the Likert scale used are as follows:

Table 1. Likert Intervals

Interval	Tier
4,3 – 5,0	5
3,5 – 4,2	4
2,7 – 3,4	3
1,9 – 2,6	2
1 – 1,8	1

1. *Information*

The information factor is a crucial factor in the success of a program implementation.

Table 2. Statement Response No. 1, 3, 5, 29

Statement	Level of Agreement					Average
	5	4	3	2	1	
I know that the Warehouse Receipt System is a government program as an effort to improve the welfare of farmers where I can store my crops in government warehouses.	8	3 2	1 6	1 0	34	2,7
I know that the warehouse receipts can be exchanged for loan of money in the banks of SumSel Babel Syariah Bank, BRI Syariah and Perkreditan Rakyat Syariah Bank.	1 2	2 8	8	1 8	34	2,66
I know the location of the government warehouse is on Pangkalpinang Muntok street, Puding Besar District, Bangka Regency.	1 7	2 5	1	1 3	44	2,52
I know the cost of storing crops to government warehouses is IDR 1000, - per Kg for 6 months of storage.	4	1 7	8	1 6	55	1,96

Pepper farmers showed varying degrees of knowledge of the Warehouse Receipt System program. Apart from being daily laborers, the majority of the residents of the Mendo Barat sub-district work as farmers. Although some villagers serve as village officials but also have secondary livelihoods as farmers since they too own some fields. When asked for information as respondents, they did not know about this WRS program. They regretted that even as official at village levels they did not know about this program, let alone for mere farmer residents. Whereas, respondents who already had information about the program were certain heads of farmers union groups who had been previously invited by the provincial government to attend socialization events. Although only slightly in terms of quantity and did not get complete information.

Only a few residents have known about the government warehouse program in order to improve farmers welfare, but even with diverse perceptions and concepts compared to Warehouse Receipt System program. This is because the warehouse program was the Governor's program that was put forward during the election campaign to the people. Few respondents indicated knowledge of the warehouse procurement program but did not know for sure the location of the warehouse, its designation nor construction time even though the WRS program had actually started since the late of 2017 in Kepulauan Bangka Belitung Province.

It can be concluded that the majority of respondents have a low level of knowledge of the WRS program, whether the actual implementation of the program and the provisions relating to the program itself. It is unfortunate that information and outreach are still factors hindering good government programs, while research by [3] states that the pre-conditions that will affect the successful implementation of the SRG program in the future are the commitment of the local government, as well as education and program socialization.

In addition to the information factor which is still a crucial factor in the success of a program implementation, researcher also wants to describe other factors as follows:

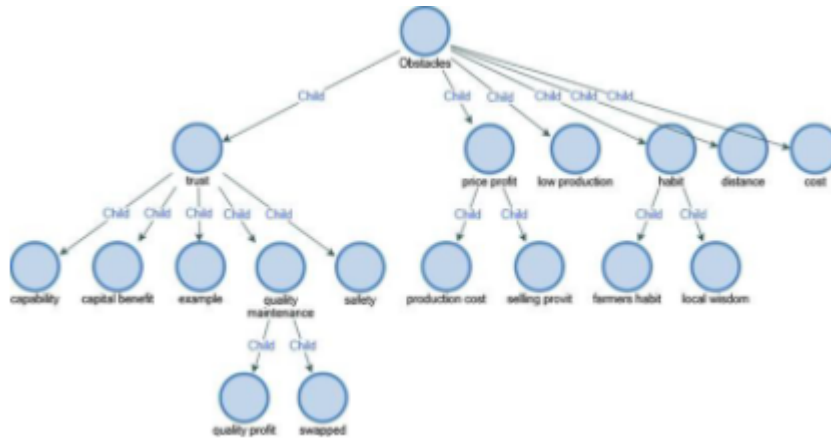


Fig. 2. Project Map.

2. Trust

Capability

Table 3. Statement Response No. 9

Statement	Level of Agreement					Average
	5	4	3	2	1	
I believe that the Government Warehouse is managed by trained and experienced officers because they have been trained by a government agency which is the Bhandra Ghara Rekha Ltd.	1	4	2	1	1	3,61
	5	8	1	5		

Farmers show a belief response that the WRS officers consisting of the warehouse head, warehouse admin and warehouse security are indeed persons who have the ability and experience in storing because they have been trained by government agencies which specialize in the warehousing sector. Meanwhile, the doubts are due to the unfamiliarity of the program and the lack of knowledge and socialization.

Quality maintenance

Pepper farmers have a doubtful response about the quality maintenance of pepper that they will store in the warehouse. Pepper farmers admit that producing quality pepper will have an impact on the difference in selling prices. Quality pepper will greatly affect the income and be more profitable. In terms of buyers, they will no longer be fussy about taking samples if the pepper looks white and clean. This causes farmers to pay attention to the quality of their pepper, giving rise to perceptions and concerns that pepper stored in government warehouses could get swapped or blended with other lower quality pepper.

Capital benefits

One of the benefits of the warehouse receipt program is to provide farmers with access to capital through bank loans while waiting for commodity prices to rise.

However, due to the low level of information and knowledge about the bank lending system that will be used, farmers are reluctant and afraid to deal with banks. The illustration regarding the terms of the profit sharing or the interest that must be paid causes the respondent farmers to not believe that the capital fund from the bank will be beneficial for them. Apart from the perspective of information, the respondent farmers also stated that they were reluctant to deal with banks because the procedures they felt would be impractical and troublesome compared to the practice of selling commodities that they are used to practicing, which is selling through middlemen.

Safety

Table 5. Statement Response No. 10, 6

Statement	Level of Agreement					Average
	5	4	3	2	1	
I believe Government warehouses are managed by officers who are responsible and trustworthy so that the safety of the crops I store in warehouse receipts is guaranteed and will not be stolen.	26	30	22	20	22	3,58
I feel that the distance between the government warehouse location and my place is not a problem because it is reachable.	22	40	44	26	8	3,42

Farmers showed a doubtful response about the safety of pepper when storing it in the warehouse. In general, respondent farmers have a sense of assurance in the capability of the government to take responsibility for compensation should an untoward event happen to the stored pepper. Meanwhile, the doubts are due to the nature of the local farmers whose confidence will be formed if there is true action of the actual incident as clear evidence.

Farmers showed mixed responses regarding the ease of access to the warehouse location. This was motivated by reasons of the distance between the village and the warehouse, as well as the safety factor. Pepper farmers consider their pepper harvest to be of valuable asset which is too risky to transport it by themselves to the government warehouses, this is because there has been an incident of pepper theft while traveling even though it was a long past event.

This similar response is also in line with the results of research by [4] which states that the WRS implementation constraints are due to the remote location of the warehouse so that there are transportation costs and efforts to deliver the commodities to the WRS warehouse.

Another illustration show that the lack of socialization and information factors will have an impact on many other aspects because misinformation will reduce confidence in the ability of a program, it is also stated in research by [5] that one of the challenges of WRS in increasing sales is due to poor information flow lead to an inappropriate understanding of WRS operations.

3. Low Production

Farmers expressed their difficulties in cultivating pepper commodities. Will cost as much as 50 million IDR to plant 2000 seeds of pepper. Pepper plants will need to crawl into the holder for it to grow. The wooden upholder will require 15,000 IDR each pepper seed for only one year of use. Evenmore, The harvest output will only result in 500 kg due to plant yellow diseases. Pepper plants become increasingly difficult to survive, the healthy looking pepper plant that begins to wither will die in the next few days. The selling price of pepper in the last three years each kg is only around 50.000 IDR. Therefore, planting pepper is an adverse action to farmers because the results obtained are not commensurate with the costs incurred.

Apart from not being aware of the program, pepper farmers stated that the reason they have not used the warehouse to store the pepper harvest was because the quantity of pepper produced was still relatively small. Even though it has reached the minimum requirement for storing pepper in a government warehouse, which is 200 kg, it will be more troublesome to store a few pepper to the warehouse location. The reason pepper farmers cannot produce more pepper is because of the presence of jaundice that attacks pepper plants, which is not yet known how to deal with [6]. Farmers will find it more convenient to start storing in warehouses when their stock of pepper reaches around 500 kg to 1 ton. This reasoning also similar to the research result by [7] researching rice farmers' interest in the WRS program, stated that one of the factors is that rice farmers will have an increased interest if rice production also increases.

4. Local Emotional feelings

Respondent farmers stated that in contrast to traders who are more profit-seeking, farmers prefer to hold pepper instead of holding money because they feel that if they hold too much of money at one time it will become more consumptive and spend out quickly. Respondent farmers expressed their pride if they had a large stock of pepper at home. When there are guests visiting the house and then they are smelling the aroma of pepper, that would raise the farmer's prestige feeling in the eyes of the community. Respondents of farmers stated that the pepper that had accumulated in the house's room was evidence of a day's hard work from morning to evening tilling the fields, the results of hard work that even capable of sending children to school. The fatigue after work will fade after seeing the many piles of pepper inside the house. This led to reluctance to store pepper in government warehouses.

5. Cost

Table. 6 Statement Response No. 30

Statement	Level of Agreement					Average
	5	4	3	2	1	
I have no objection to the cost of storing in the government warehouses at 1.000 IDR per kilogram every 6 months, because it is still fairly reasonable.	6	1 4	1 2	2 0	3 4	2,38

Respondent farmers expressed objections to the current storage fees. The issuance of current storage fees is considered to be increasingly burdensome for farmers and further reduce farmers' desire to store their commodities in warehouses. Although the object of the WRS program is to improve the welfare of farmers, it is not only farmers who are allowed to store pepper in the government warehouses, but also middlemen and wholesalers are allowed. Storage fee in government warehouses is considered to be too expensive for ordinary farmers. Even so, farmers realize that for middlemen and wholesalers, this cost is considered reasonable because the benefits of the WRS program will be more profitable than the storage costs incurred.

IV. CONCLUSION

Distrust and misperceptions were caused by farmers' low knowledge of the provisions and implementation of the program. Therefore, program socialization is something the government must pay attention to and increase its activities. Program socialization can be carried out by the government by collaborating with universities through the Community Service Program.

The distance between the farmer's village and the location of the government warehouse is still considered an obstacle to participation. Therefore it is recommended for the government and warehouse managers to prepare transportation means to pick up the pepper commodity from the villages for the time being. Pepper commodity picking can be done according to a routine schedule as agreement.

Jaundice that attacks pepper plants is still a bugbear for farmers. It reduces the production of farmer's pepper, renders their selling at loss and deprives their welfare. Farmers prefer to store their pepper goods at home if they only have a few, because it's more practical to convert into money should they need it. Therefore the government and researchers are expected to resolve the jaundice problem.

The storage fees in government warehouses hinder the desire for participation of pepper farmers because it is considered too expensive. Therefore, farmers suggest that the government does not impose tariffs or provide bailouts in order to eliminate storage fees for several years as an example and evidence that farmers can actually benefit from this program.

An interesting finding regarding the reasons that hindered the participation of farmers in the WRS program is the emotional feelings of the local community. Pepper farmers consider their pepper goods to be like gold bars for the society in general, saving pepper is like

investing in gold which indicates the results of the farmers' hard work and thus gives prestige to farmers who have a lot of pepper reserves in their room of home in the community.

The benefits of the warehouse receipt system program have not been perceived by the farmers yet because of the low level of participation. Therefore the government is suggested to be more focused on providing evidence through pilot project programs as success evidence rather than taking profit. And also eliminating the reasons which hinder participation, so that farmers really enjoy the real benefits of the program and as introducing new patterns of agricultural habits.

REFERENCES

- [1] BAPPEPTI, "Sistem Resi Gudang Memberdayakan Bangsa," Jakarta, 2017.
- [2] Y. Afiyanti, "Validitas dan Reliabilitas Dalam Penelitian Kualitatif," J. Keperawatan Indones., vol. 12, no. 2, pp. 137–141, 2008.
- [3] A. Fachruddin and L. Rahayu, "Evaluasi Prasyarat Keberhasilan Sistem Resi Gudang di Kabupaten Bantul," Agrar. J. Agribus. Rural Dev. Res., vol. 3, no. 2, 2017.
- [4] Endang, "Analisa Faktor-Faktor yang Menjadi Kendala Pelaksanaan Sistem Resi Gudang (SRG) Kabupaten Bojonegoro," J. Res. Anal. Econ., pp. 45–51, 2018.
- [5] R. Tsafu, "The role of warehouse receipt system in improving cashewnuts marketing by smallholder farmers in Mkinga district," 2015.
- [6] A. Munif and I. Sulistiawati, "Pengelolaan Penyakit Kuning pada Tanaman Lada oleh Petani di Wilayah Bangka," J. Fitopatol. Indones., vol. 10, no. 1, pp. 8–16, 2014.
- [7] A. Slamet Widodo and M. Sholicha, "Interest of Rice Farmers to Apply Warehouse Receipt System in Bantul Indonesia: Theory of Planned Behavior Approach," vol. 172, no. FANRes, pp. 245–250, 2018.

The Influence of Smart Tourism Technology (STT) on Intention to Visit in Talaud Island Regency

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Abstract

Technological sophistication provides a lot of ease of access information, including tourism information. Usually, before makes a travel itinerary, tourists often look for more information before making a decision. The objective of this research is to find out the effect of smart tourism technology application into the intention to visit in Talaud Island Regency through trustworthiness. This research has six hypotheses and is measured quantitatively by distributing questionnaires to 130 respondents. All the data collection is further analyzed with a structural equation modeling method. The results of this research found that information quality, source credibility, and accessibility are positive influences. On the contrary, interactivity and personalization do not significantly affect trustworthiness. In addition, trustworthy people have a positive effect on their intention to visit. The finding of this research also indicates that information which was received by the tourist would increase their confidence and encourage them to stay.

Keywords: Travel Intention, Smart Tourism Technology, Information Quality, Source Credibility, Trustworthy.



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I. INTRODUCTION

The development of information and digital technology continues to overgrowing. Digital technology makes it easy for many people to access the information they need anytime and anywhere; this is also applied in the tourism industry. Tourism is a multidisciplinary subject consisting of an understanding of psychological, geographic, economic, and other aspects. In essence, tourism depends on the perspective of vacation activities, which include the purpose of the trip, how much time is needed in the tour and how long will be spent during the holidays, and the situation being experienced in the country to be visited [1]. In the concept of improving the tourism industry, Smart Tourism, E-travel, and Augmented Reality Tourism became a trend that is currently overgrowing in the market. An organization must create a technology-based tourism concept starting from the moment a prospective traveler searches for information related to the tourist area, travel planning to when the future traveler executes their itinerary. Smart Tourism Technology (STT) is a technology-based tourism information search concept used by tourists to find information, transact, and communicate. Smart Tourism Technology, according to [2], is a technology-based tourism concept where obtaining information becomes very easy, detailed, and faster because it is supported by internet connectivity. In general, STT supports the trip planning process by providing relevant and detailed information to prospective tourists interactively to make decisions on their trips itinerary. Implementation of STT, use of existing internet technology will help tourists find new destinations and arrange their plans. Smart Tourism Technology included smartphone applications, online travel agent websites, and search engines; they can make it easy for users to access various travel information. The components of STT, namely information quality, source credibility, interactivity, accessibility, personalization [3],[4]. In the context of smart tourism, before someone decides to visit somewhere, they tend to do a little research to find information about the location. Trust in the information received will usually lead to a desire to see the area. The object of research in this study is the Talaud Islands Regency.

Talaud Islands regency itself is a regency located in the north of Central Indonesia that borders directly with the Philippines. Following its name, the area endowed with the ocean's vast natural richness and many beautiful uninhabited islands. This area is included in the central government development acceleration program because it classified in 3T (Terluar, Terdepan, Tertinggal) or Outer, Leading, Lagging regions. Because of its location on the Indonesian border, this area is always synonymous with retarded things. Besides, many people do not know this area, even though this area is one of Indonesia's gates in international trade and the gateway of the eastern region of Indonesia. Of course, this affects

the tourism industry. Based on data from the Central Bureau of Statistics from 2016 to 2018, domestic tourists who come to Talaud Islands are never more than 3,000 people; not only that, the number of foreign tourists visiting the Talaud Islands has only reached 277 people since 2016-2018. So, the research problem is the low level of tourist visits to Talaud Island. This research was conducted to see how much influence STT has on visiting tourists in an area, especially for border areas. This research was conducted using SEM analysis methods. In this study, we used the elaboration likelihood model as a theoretical framework to show a person's behavioral changes in processing the information they receive. Using ELM theory, one's belief that the story will impact decision-making in the future [4]. Acceptance of information can often lead to a change in a person's attitude [5]. Therefore, the use of ELM theory in applying STT becomes very important to see the intention to visit. This research is expected to help local governments, especially border areas, create an innovative product by utilizing STT to help increase the number of tourist visits in the area.

II. LITERATURE REVIEW

1. Elaboration Likelihood Model

Elaboration Likelihood Model (ELM) is a theory that explains the changing attitudes resulting from the acceptance of information from outside that has a clear communication pattern [4]. ELM explains that changes are not only influenced by cognitive aspects but can be through different assessments depending on the situation. This means that when a person is given information in an unpleasant situation, then the reaction that appears is adverse, and vice versa [5]. So it can be explained that each individual can differ in the way they respond to a message. In ELM, the motivation and ability of individuals to process the messages presented become very important [6]. Motivation represents the reason a person acts, one's desire, and the need for a message to convey. This can be affected by the pattern of processing messages. Meanwhile, the ability has an impact on one's intelligence and level of knowledge. Relates to how many letters are received after passing through communication interruptions and message repetitions [6]. According to ELM, this ability and motivation can be measure by building the concept of "elaboration likelihood." In ELM, there are two persuasion routes in processing information, namely the central route and peripheral route. On the main path, a person with high motivation and ability to process messages tends to be careful in dealing with the messages received and tends to be influenced by the quality of the information they receive [7]. While on peripheral routes, a person who has a lower motivation

and ability to process messages tends to pay attention to the attractiveness of the message resource without questioning the actual benefits of the information received [5].

2. Conceptual Framework

In this study, a conceptual framework was drawn up to determine the relationship of variables that affect the intention to visit prospective domestic tourists. In previous research, the conceptual framework consisted of information quality, source credibility, interactivity, accessibility, and personalization [3][4].

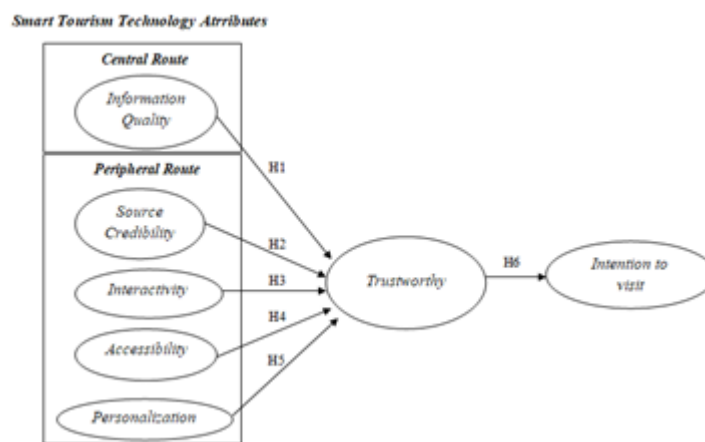


Fig. 1 Conceptual Framework [3] [4]

3. Information Quality

Information quality is determined by how valuable information is so that it can have a positive or negative impact on the recipient of the information [8]. The involvement of tourists in finding information related to their travels is usually done online i.e., using internet connectivity [9]. [10] explained that information quality is one reason consumers believe in a service, where consumers have felt that so far, the information provided can make a positive contribution. The quality of information depends on consumer needs so that the consumer considers that the information can be trusted by the consumer itself [11]. Disseminating honest and quality information related to travel on websites or social media can make consumers believe in that information [12].

H1: Information Quality has a positive effect on Trustworthy.

4. Source Credibility

Source credibility is the ability of information that can be trusted by others and assure the person [4]. Source credibility has also been used in advertisements to measure the credibility influence of such sources of information received by consumers, especially in the service industry. It can be measured through expertise, trustworthiness, attractiveness, and similarity [13]. The credibility of information is undoubtedly by its recipient when it comes to a trusting source [14]. Source credibility can influence consumer confidence when statements or information are judged to be genuine, honest, and to the point [14]. According to Schindler & Bickart (2012), in [15] the most important thing to assess a consumer's confidence in information is how the information presented, both in terms of its content and the writing style consisting of the choice of words and language styles used.

H2: Source Credibility has a positive effect on Trustworthy.

5. Interactivity

Interactivity is considered one of the most critical must-haves affecting user decision-making in electronic services [4]. An interactive website usually has a quick response, which is why responsiveness is referred to as vital because it relates to the feedback received by users when they access information [4]. According to [16], interactivity can be seen from the types of uses that are for education, two-way relationships, scientific research, and support in decision making. Quality interactivity, where information exchange occurs, can boost consumer confidence [17]. According to [18], interaction is the basis of building trust, where this trust is built gradually and can develop in the future

H3: Interactivity has a positive effect on Trustworthy.

6. Accessibility

Accessibility refers to the efficacy of websites providing information content to make it easier searched and accessed by its users [4]. Making web pages more comfortable to use and read by each user becomes the primary purpose of accessibility. The need for accessibility is to address visual, motor, auditory, seizures, and cognitive disabilities for those with disabilities [19]. Accessibility to information, where consumers feel the ease of accessing

it, can affect consumer confidence [20]. The ease of accessing tourist travel information both in terms of tourist sites, accommodation, public facilities, and transportation using the internet can encourage consumer confidence in the information it obtains [21].

H4: Accessibility has a positive effect on Trustworthy.

7. Personalization

Personalization is also the process of identifying consumers, collecting records of consumer behavior, analyzing consumer preferences, and customizing them to the needs of those consumers [22]. Personalization is also the process of identifying consumers, collecting records of consumer behavior, analyzing consumer preferences, and customizing them to the needs of those consumers [22]. When a consumer gets personalized information and service with his needs, then the consumer will have a higher sense of trust so that it becomes loyal [23]. According to [9], consumer confidence in particular websites that provide personalized information and services with consumer needs will have a positive effect in the future.

H5: Personalization has a positive effect on Trustworthy.

8. Trustworthy

Trustworthy is a person's level of trust when receiving information [14]. According to [21], trustworthiness is considered an essential dimension of accessing information by online. According to [24] intention to visit is a tourist trip that usually arises from tourists' mindset and behavior who can influence future travel decisions. This indicates that a person's desire tends to give a positive response in making future decisions [24]. [24] also explained that consumer confidence has a positive relationship with the intention to visit built from the recommendations of others. According to [25] demonstrated that there is a positive relationship between trust and will to travel where beliefs are obtained from information obtained either from a website, a person's review or from social media.

H6: Trustworthy has a positive effect on Intention to Visit

III. RESEARCH METHODS

The population of this study was domestic tourists. Since the Indonesian government was trying hard to recover the domestic tourism due the Covid-19 pandemic that occur across the world. The Indonesian government wants to target the rise of the tourism industry again by encouraging domestic tourists to take vacations with health protocols. The research questionnaire was distributed online, with 130 respondents who were domestic tourists with a minimum age of 17 year old. Holiday period is one of the screening questions in this study, where the minimum vacation time is above six days and conducted within a period of four months. The sampling techniques in this study use Non-Probability Sampling. Non Probability Sampling is a sampling technique that relies on a researcher's personal assessment rather than the selection of sample elements that fit the procedure. In the sampling process, the method used is a cross-sectional design [26]. The cross-sectional design is a research method that involves retrieving information done only once from samples in the population element [26]. To obtain the primary data source, researchers deployed a questionnaire. The questionnaires' deployment is done randomly and online using Google Form and then obtained using SEM (Structural Equation Model) research techniques using Lisrel software version 8.80. The measurement scale in this study used a Likert scale of 1-5 (strongly disagree - strongly agree).

IV. FINDINGS AND RESULTS

Pre-test data processing result was show, the validity of each indicator is declared valid because it has a value of KMO, Anti-Image, Factor Loading ≥ 0.5 and the reliability value of each variable is declared reliable because it has a Cronbach alpha ≥ 0.7 [27]. Structural model calculations in this study found that of the five elements of smart tourism technology (STT), three factors positively influence trustworthy, and two hypotheses have no positive effect. However main data result was indicates one indicator is invalid and one variable is not reliable. Hypotheses result show, H1: information quality has a positive influence on trustworthy with t-value, 2.33. H2: source credibility has a positive influence on trustworthy with t-value, 2.46. H3: Interactivity has no positive influence on trustworthy because it has a t-value below standard that is 0.14. H4: Accessibility has a positive influence on trustworthiness with t-value, 4.79. H5: personalization has no positive

influence on trustworthy because it has a t-value below standard that is 0.51. H6: trustworthy has a positive influence on trustworthy with t-value, 6.13.

VI. CONCLUSION

For that from six existing hypotheses, there are four supported hypotheses and two unsupported hypotheses. The R^2 value of information quality, source credibility, interactivity, accessibility, and personalization to trustworthy is 0,84, which means is the influence of the five variables on trustworthy is 84%. While the value of R^2 from trustworthy to intention to visit is 0,29 or the magnitude of its influence is 29%, there are still 71% of indicators that can influence intention to visit. This study's results indicate that the confidence of potential tourists to the information they receive can encourage intention to visit. With the results of existing research to increase the level of tourist visits in Talaud islands, the government should apply the concept of smart tourism technology. Proper use of communication media is one of the tools that can promote border areas. Local governments must have their own website containing a wide range of information and managed by the Regional Tourism and Culture Department. The purpose wants to carry out regional promotion. Local governments should integrate information across all existing communication media platforms, both social media and websites, so that the information provided is targeted and quality. Cooperation between the government as a decision-maker, business, and community is an important factor in realizing a good communication flow. Integration between every department in government is necessary to create a piece of information that is quality, trustworthy and has good credibility. This research can also help regional businesses create a good, quality, and unique product and service for visiting tourists. And the last, future research direction can be suggested to look at the health perceived value, which includes health facilities or information on the number of Covid-19 cases. So that future research can be conducted related to health perceived value of trustworthiness. Other than that, based on the value of R^2 of TR to IV, where there is still a 71% chance of being influenced by other factors, it can be advisable to look at the destination image influence on intention to visit. The aim is to determine whether the destination image of the Talaud Islands Regency can affect the intention to visit. Besides, research can also be conducted, taking into account infrastructure and regulatory factors that can affect the intentions of visits to Talaud Islands.

REFERENCES

- [1] S. J. Page, *Tourism Management*, 6th ed. London: Routledge, 2019.
- [2] U. Gretzel, M. Sigala, Z. Xiang, and C. Koo, "Smart tourism: foundations and developments," *Electron. Mark.*, vol. 25, no. 3, pp. 179–188, 2015, doi: 10.1007/s12525-015-0196-8.
- [3] C. D. Huang, J. Goo, K. Nam, and C. W. Yoo, "Smart tourism technologies in travel planning: The role of exploration and exploitation," *Inf. Manag.*, vol. 54, no. 6, pp. 757–770, 2011.
- [4] C. W. Yoo, J. Goo, C. D. Huang, K. Nam, and M. Woo, "Improving travel decision support satisfaction with smart tourism technologies: A framework of tourist elaboration likelihood and self-efficacy," *Technol. Forecast. Soc. Change*, vol. 123, pp. 330–341, 2017.
- [5] Y. Kang, A. H. Tan, and C. Miao, "An adaptive computational model for personalized persuasion," *IJCAI Int. Jt. Conf. Artif. Intell.*, vol. 2015-January, no. July, pp. 61–67, 2015.
- [6] D. Cyr, M. Head, E. Lim, and A. Stibe, "Using the elaboration likelihood model to examine online persuasion through website design," *Inf. Manag.*, vol. 55, no. 7, pp. 807–821, 2018.
- [7] L. G. Pee and J. Lee, "Trust in User-Generated Information on Social Media during Crises : An Elaboration Likelihood Perspective," *Asia Pacific J. Inf. Syst.*, vol. 26, no. 1, pp. 1–22, 2016.
- [8] Y. Gong, "Information quality choice and information disclosure in oligopoly," *Res. Econ.*, vol. 73, no. 3, pp. 216–224, 2019.
- [9] S. Y. Ho and P. Y. K. Chau, "The effects of location personalization on integrity trust and integrity distrust in mobile merchants," *Int. J. Electron. Commer.*, vol. 17, no. 4, pp. 39–72, 2013.
- [10] S. K. Prastiwi et al., "Dengan Mediasi Trust Terhadap Repurchase Intention Pada Mitra Umkm Go-Food Di," *J. Ekon. Manaj. Sumber Daya*, vol. 20, no. 1, pp. 44–54, 2019.
- [11] N. W. Masri, J. J. You, A. Ruangkanjanases, S. C. Chen, and C. I. Pan, "Assessing the effects of information system quality and relationship quality on continuance intention in e-tourism," *Int. J. Environ. Res. Public Health*, vol. 17, no. 1, 2020.

-
- [12] K. Berhanu and S. Raj, "The trustworthiness of travel and tourism information sources of social media: perspectives of international tourists visiting Ethiopia," *Heliyon*, vol. 6, no. 3, p. e03439, 2020.
- [13] N. Zakaria and C. S. Mustafa, "Source Credibility, Risk Communication and Well-being: A Conceptual Framework," *Procedia - Soc. Behav. Sci.*, vol. 155, no. October, pp. 178–183, 2014.
- [14] E. Ismagilova, E. Slade, N. P. Rana, and Y. K. Dwivedi, "The effect of characteristics of source credibility on consumer behaviour: A meta-analysis," *J. Retail. Consum. Serv.*, vol. 53, no. September 2018, 2020.
- [15] R. Filieri, "What makes an online consumer review trustworthy?," *Ann. Tour. Res.*, vol. 58, pp. 46–64, 2016.
- [16] G. Xexakis and E. Trutnevyte, "Are interactive web-tools for environmental scenario visualization worth the effort? An experimental study on the Swiss electricity supply scenarios 2035," *Environ. Model. Softw.*, vol. 119, no. March, pp. 124–134, 2019.
- [17] H. Bao, B. Li, J. Shen, and F. Hou, "Repurchase intention in the Chinese e-marketplace: Roles of interactivity, trust and perceived effectiveness of e-commerce institutional mechanisms," *Ind. Manag. Data Syst.*, vol. 116, no. 8, pp. 1759–1778, 2016.
- [18] Y. Gongan and L. Qi, "Exploring the effects of interactivity on consumer trust in e-retailing," 2008 Int. Conf. Wirel. Commun. Netw. Mob. Comput. WiCOM 2008, pp. 1–5, 2008.
- [19] A. Ismail, K. S. Kuppusamy, A. Kumar, and P. K. Ojha, "Connect the dots: Accessibility, readability and site ranking – An investigation with reference to top ranked websites of Government of India," *J. King Saud Univ. - Comput. Inf. Sci.*, vol. 31, no. 4, pp. 528–540, 2019.
- [20] Z. van Dun, J. Bloemer, and J. Henseler, "Perceived customer contact centre quality: Conceptual foundation and scale development," *Serv. Ind. J.*, vol. 31, no. 8, pp. 1347–1363, 2011.
- [21] H. Machackova and D. Smahel, "The perceived importance of credibility cues for the assessment of the trustworthiness of online information by visitors of health-related websites: The role of individual factors," *Telemat. Informatics*, vol. 35, no. 5, pp. 1534–1541, 2018.
- [22] J. Huang and L. Zhou, "Timing of web personalization in mobile shopping: A perspective from Uses and Gratifications Theory," *Comput. Human Behav.*, vol. 88, pp. 103–113, 2018.

-
- [23] G. Piccoli, T. W. Lui, and B. Grün, "The impact of IT-enabled customer service systems on service personalization, customer service perceptions, and hotel performance," *Tour. Manag.*, vol. 59, pp. 349–362, 2017.
- [24] L. Su, Q. Lian, and Y. Huang, "How do tourists' attribution of destination social responsibility motives impact trust and intention to visit? The moderating role of destination reputation," *Tour. Manag.*, vol. 77, no. August 2019, 2020.
- [25] A. M. Abubakar and M. Ilkan, "Impact of online WOM on destination trust and intention to travel: A medical tourism perspective," *J. Destin. Mark. Manag.*, vol. 5, no. 3, pp. 192–201, 2016.
- [26] D. F. Maholtra, Naresh K.; Nunan, Daniel; Birks, *Marketing Research: An Applied Approach. Fifth Edition*, Fifth. United Kingdom: Pearson Education Limited, 2017.
- [27] M. R. R. Adam, *Practical Guide of The Integrated Structural Equation Modeling with Lisrel & Amos for Marketing and Social Sciences Thesis*. Yogyakarta: Deepublish, 2019.

Determinants of Effectiveness Repayment Apps at P2P Lending Platform During Covid 19 Pandemic in Indonesia

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Abstract

The advance of technology development today brings an innovation in the financial industries all across the world, including in Indonesia. The financial technology continues to emerge from the sector of payment, investment and loans online or as we are familiar with the term P2P Lending platform. But, the growth of this business had a challenge when the Covid-19 Pandemic hit the country in the early 2020. The P2P lending platform experienced the first highest default rate due the difficulties of the SME's as its major customers' in repaying their loans. The objective of this research is to analyze the determinants of effectiveness repayment application on P2P platform in Indonesia. There were 133 respondents who were borrowers of the P2P lending platform was used as a sample. The data collection was further processed statistically using Structural Equation Method (SEM). The study showed that the repayment decision had significantly influenced perceived usefulness, perceived ease of use, perceived risk and information quality. Information quality itself had the highest influenced among others.



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Keywords: Perceived Usefulness, Perceived Ease of Use, Information Quality, Perceived Risks, Repayment Decision, Repayment Apps.

I. INTRODUCTION

The rapid advancement of knowledge and technology made changes in all aspects of businesses included in the financial system. Innovation in financial technology gave customers more alternatives in doing their financial transactions in more efficient and effective ways. The advance of information technology has encouraged the increase of innovation in many business and financial sectors. Financial technology is an innovative digital financial technology that offers financial services using information technology. As a new platform, financial technology offers more than simplifying financial transaction, minimizing cost and increasing financial services (Lee & Shin, 2018). Peer-to-Peer Lending (P2P lending) is a form of crowdfunding without involving any financial institution as the intermediaries (Cinca *et al.*, 2015) using an online platform (Ritter *et al.*, 2009). The P2P lending platform offers flexibility to both parties: lenders and borrowers (Meng, 2016). The lenders, as investors, expect a higher return from their investment in a P2P lending platform. Meanwhile, the borrowers can take advantage of the low transaction cost.

The financial technology is expected to fill the gap of financing needs and increase financial inclusion for Indonesians who were unbankable but had potential business. The financial technology could be seen as an alternative source of financing, especially for the ultra-micro segments to grow their business. The ultra-micro segments are characterized by their low daily income sales, doing business in densely populated housing areas and having simple self-owned trading business. In the year 2018, the total financial technology market in Indonesia reached US\$ 22 million with increasing rate at 16.3% yearly, in which lending occupied 31% of the total industry (Fintechnews.sg, 2018).

With the growing of P2P lending platforms, customers were enjoying to apply the loan in simple procedures without any obligations to provide collaterals. The data shown in the following table showed that in the three years in a row, there was an increasing growth of Small Medium Enterprise (SME's) in Indonesia, especially in Micro and Small segments, who were the major customers of the P2P lending platform.

Tabel 1

Percentage of SME's Credit in Indonesia for the year 2016-2018 (in %)

Year	Micro Segment Credit	Small Segment Credit
2016	24,50%	29,80%
2017	24,80%	29,90%
2018	25,40%	30,10%

Source: Bank Indonesia (2019)

Referred to the Ministry of Finance Regulation No. 22/ PMK.05/2017, micro financing was a financing facilities given to the micro business segment with the maximum loan plafond was ten million rupiahs and the maximum repayment was one year. Some of the SME's function in supporting economic growth including: created job opportunities; handled the poverty issues or income disparities, had contribution of 59.08% of GDP with the growth rate at 6,4% annually with the export volume reached at 14.06% from the total national export. Indonesian government committed to increase the financial inclusion by providing banking and financial access to all people. Therefore, the existence of the financial technology (FinTech) that could provide credit and loan facilities was expected to assist the government reached that goal. The next table showed the profile and growth of FinTech in Indonesia (in Rupiahs).

Tabel 2

Profile and FinTech Growth in Indonesia (as December 30th, 2019)

Description	Java Island	Outside Java Island
Accumulated Loan Disbursement (in Rupiahs)	75,71 Trillion	12,67 Trillion
Accumulated Borrower Account	16,94 Million	3,5 Million
Accumulated Lender Account	5,08 Hundred	1,04 Hundred
Outstanding Loan	13,52 Trillion	
Success Rate 90 Days	96,02%	
Number of Licensed FinTech	164	

Source: Otoritas Jasa Keuangan (2019)

Table 2 showed that there was a higher ability to pay from the borrower from both micro and small segments. The higher repayment ability rate (principal loan and interest) was mostly affected by the success of the borrower in doing their businesses using the loan from the P2P lending platform.

The financing industry faced a biggest challenge when the Coronavirus (Covid 19) was hit Indonesia in early 2020. The government took some strategic action to reduce the spread of the virus by issuing some rules and regulations such as: The Government

Regulation (PP No.21, 2020) and Presidential Instruction (Keppres No.11, 2020). The regulation gave the guidance for the government offices across the country to implement PSBB (Social Restriction in Large Scale). The PSBB rules prohibited the people from gathering in crowds, and the government limited the people's interaction in public, including: in school, malls, or in the religious places. This policy mostly hit the informal workers who were most of them worked in the SME's industries. The current data released by the Ministry of Cooperatives and SME's Republic of Indonesia showed that around 58.97 million SMEs had experienced some difficulties in production and marketing during the Covid-19 pandemic. The business problem faced by SMEs had a significant effect into the P2P lending platform. The update data release on May 30th, 2020 stated that there was a declining average of repayment performance until 90 days after the due date from 96.02% into 93.55%. The data showed that many borrowers of the P2P lending who are majority involved in the SMEs industry also had difficulties in running their business and in the same time had difficulties in repaying their loan at the committed time.

In response to this current situation, the Indonesian government released some policy to support the SMEs as the backbone of the Indonesian economy. The Indonesian Financial Services Authority released Regulation No. 11/POJK.03/2020 as the National Economic Stimulus as a Countercyclical Policy Impact of the Spread of Coronavirus Disease 2019). This regulation stated that the development of the spread of the Corona virus disease 2019 (COVID-19) has a direct or indirect impact on the performance and capacity of debtors, including micro, small and medium business (MSME), which could potentially disrupt banking performance and the stability of the financial system, which may further affect economic growth. Therefore, an economic stimulus policy is needed as a countercyclical impact of the spread of COVID-19. This regulation was valid for all financial sectors including formal banks, and also P2P lending platforms. Some policies to assist the SME's covered the reduction of the interest rate, extending the repayment deadline and financing restructuring adjusted with the borrower's abilities. The P2P lending must also follow this government regulation and in the same time initiate an innovative strategy such as introducing the Repayment Application (repayment apps) to assist the borrower in repaying their loan.

This study was expected to analyze the factors of effectiveness repayment apps at one of biggest P2P lending platforms (namely: MODALKU) during the Covid-10 pandemic in Indonesia.

II. LITERATURE REVIEW

1. Financial Technology (Fintech)

Financial technology is defined as mobile based technology to increase financial system efficiency (Kim et al., 2015) and a new type of information technology-based financial services (Lee & Shin, 2018). The advanced of digital technology was be able to change the current business model and in the same time create values by taking internet to do some changes (Walchek, 2015). The information technology was proven to change people's way of life since social interaction networking and relationship were interconnected with internet and technology (Lim, 2003). Fintech is an innovative business model in the financial services which was created from the rising of the sharing economy system, the loosening of government regulation (Blohm, 2013).

2. P2P Lending Platform

P2P lending is defined as all lending and borrowing activities among individuals using a technology platform without any intervention from a traditional financial institution (Lee & Shin, 2018; Ritter et al., 2009) and related to the internet-based financing platform (Stern et al., 2017). The P2P lending model involved borrowing and lending activities using digital technology platform (Meng, 2016), offered unbundling financial services (Chen, 2014) and acted as intermediary that connected the lenders and the borrowers (Schierz, 2010). The P2P lending platform analyzes data and information both from the lender and borrower to control the risk, set-up the maximum loan nominal amount, the loan duration and repayment scheme (Khosravi and Hussin, 2014).

3. Ultra-Micro Segment

Indonesia is famous for the huge microfinance sector, with over 50 million small medium enterprises (SMEs), representing some 97% of all enterprises and contributing no less than 30% of GDP growth in 2012 (Lim, 2003). However, many of these do not have adequate access to the bank financing they need to grow their businesses, particularly in rural areas. Most micro lending has been located in the urban areas of Java and Sumatra, where the Indonesian population is concentrated.

4. Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) was a framework that could be used to analyze which factors influence people in receiving the information and adopting the new technology. TAM introduced by Venkatesh (2009) to measure the individual ability to adopt and accept the

new technology. TAM concept focused more on two factors which referred to perceived usefulness dan perceived ease of use Venkatesh (2009). Later, this theory was further developed into Unified Theory of Acceptance and Use of Technology (Phonthanukit Thaworn, 2016). Some factors included the Perceived Usefulness, Perceived Ease of Use, Perceived Risk and Information Quality (Egbunike, et. Al, 2018).

5. Perceived usefulness

User assumption that the technology was able to assist in completing the works was used as a reference to explain the perceived usefulness concept (Davis, 1989). Meng (2016) stated that individuals would use the new technology only if they gave positive contribution to the working performances. Venkatesh (2009) explained that perceived usefulness was a main factor in individual usage intention in using the new technology. Davis (1989) in his theory mentioned that perceived usefulness could be used to measure how far a user believed in specific application to increase his work performances. There would be a positive action if the user gained some benefit while using that application (Gefen et al., 2003). Alarcon-del-Amo et al. (2014) explained that perceived usefulness had a positive effect into attitude and continuance intention (Liébana-Cabanillas et al., 2018; Chawla & Joshi, 2018; Lee et al., 2015; Shipps & Phillips (2013).

6. Perceived ease of use

Perceived ease of use referred to the ability in applying the technology (Venkatesh, 2009) at less effort by maximizing the feature in that application (Davis, 1989). If individuals believed that the usage of new technology applications was less effort and problem free, the customers were willing to adopt the technology easily (Lim, 2003). Gefen, et al. (2003) explained that perceived ease of use had direct and indirect effects in using the new application. Mwiya et al. (2017) and Alarcon-del-Amo et al. (2014) mentioned that ease of use had an influence on attitude. Perceived ease of use also had a positive influence for users in using the application (Liébana-Cabanillas F. et al., 2018; Lee et al., 2015; Shipps & Phillips, 2013).

7. Information Quality

Mwiya et al. (2017) stated that information quality could be measured with the quality content of the information system. Alarcon-del-Amo et al. (2014) said the information quality was the function related with the value of information output of a system. A good information quality would bring customer trust in using the technology. Shipps & Phillips (2013) mentioned

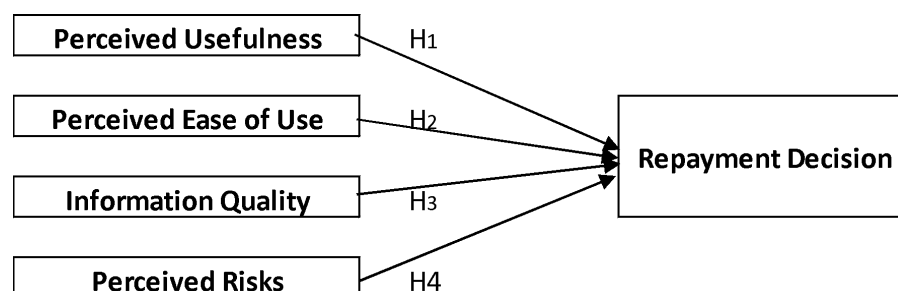
there were three main dimensions of information quality, including: accuracy, timeliness and relevance.

8. Perceived Risks

Each customer had an individual perception about all risks related to using the new technology Liébana-Cabanillas F. et al. (2018). Perceived risk defined as individual perception in anticipating risks associated with the products or services consumption Lim (2003). Shipp & Phillips (2013) added that perceived risk represented individual perception about the potential negative in the processing usage of products and services. Mwiya et al. (2017) stated that individuals are less interested in adopting higher risk platforms.

9. Repayment Decision

The borrower's decision in repaying the loan referred to the actual condition in applying the system (Davis,1989). Once the borrower feels comfortable in using the application, they will decide to use it. The actual technology usage referred to the familiarity or the frequency in using the application.



Source: Researcher Data Analysis (2020)

Figures 1

Research Theoretical Framework

Based on the proposed framework, the study was being able to develop some hypotheses as follows:

H₁: Perceived Usefulness has a positive effect on Repayment Decision for ultra-micro segments in Indonesia's P2P lending platforms. The perceived usefulness was the major factor in developing trust in acquiring and using the new technology which would assist the borrower in repaying the loans (Bachmann *et al.*, 2011).

H₂: Perceived Ease of Use has a positive effect on Repayment Decision for ultra-micro segments in Indonesia's P2P lending platforms. Eisingerich & Bell (2008) stated that the perceived ease of use created borrower trust if the borrower felt easy in using the new application.

H₃: Information Quality has an influence on Repayment Decision for ultra-micro segments in Indonesia's P2P lending platforms. Lenders in P2P lending platforms look for complete and clear information about their loan status, the interest rate, the duration of payment and any other issues. The smaller nominal of loanable funds shows the higher successful rate of loan repayment (Zhang *et al.*, 2017). The longer the duration of repayment, the higher the default rate (Zhang *et al.*, 2017). Higher interest rate gives higher return and higher risk associated with the default rate (Meng, 2016).

H₄: Perceived Risks has a positive influence on Repayment Decision for ultra-micro segments in Indonesia's P2P lending platforms.

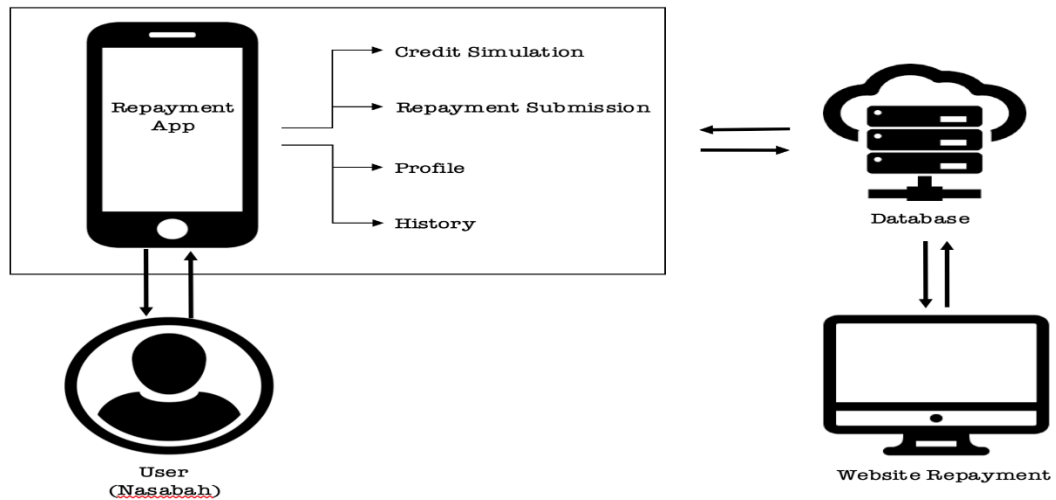
Lower risk application would develop the customer trust easier (Chen & Han, 2012). Borrowers in P2P lending platforms look for safety protection, which is measured by sufficient security to protect the user, safety transactional information and secured financing transactions (Meng, 2016). The borrower trust was developing if the platform would be able to deliver the usefulness, the easiness of use about the platform and in the same time give a secure feeling or be less risky in accessing the new technology.

10. Repayment Application Technology (the Worm)

As one of the biggest P2P lending platforms in Indonesia, MODALKU started to create an innovative strategy during the Covid-19 pandemic. The company committed to support the government policy in issuing the economic stimulus for the SMEs and at the same time, assist the SME's as its major borrowers to be able in running the business and finally fulfil their financial obligation to repaying their loan. The features in the Repayment Apps covered some specific programs, such as:

1. **Credit Simulation:** With this feature, the borrowers were able to get information about the calculation and estimated loan that can be applied adjusted with the borrower capabilities.
2. **Repayment Submission:** was an application to extend the repayment period in the agreed specific time adjusted with the borrower's financial abilities.
3. **Profile:** borrowers were able to access the update profile and loan application data.
4. **History:** this feature would show all the information and history of loan credit extension and also the loan repayment approval status (approved or rejected).

All application data would be stored in the MODALKU database and could be accessed through Repayment website. The website would allow the P2P lending platform to monitor and manage the loan repayment scheme application and finally make a decision to approve or reject the application. The flow of repayment loan extension application process can be explained as follows:



Source: Kurniasari F, et.al (2020)

Figures 2
 The Flow of Repayment Loan Extension Application Process

III. RESEARCH METHODS

This research was a hypothesis testing study to describe the causality among the repayment decision as dependent variable with independent variables consisted of: perceived usefulness, perceived ease of use, information quality and perceived risks (Cooper & Schindler, 2014). This study distributed 113 respondents who were P2P lending platform (MODALKU) ultra-micro segments borrowers who resided in Jakarta areas and were familiar with the new Repayment Apps (=the Worm). As a quantitative research, the respondents were asked to answer close-ended questions with 1-5 Likert scale (Nunnally, 1978). The first part of the questionnaires consists with the demographic questions and the second part of the questionnaires consist with the research questions. The perceived usefulness (PU) variable was indicated by three indicators, namely: the apps would help the borrower in managing and keep track the loan (PU1), the Repayment apps was useful for the borrower (PU2) and the using the apps would make the borrower able to check the loan status quickly/rapid transaction (PU3) (Mwiya et al., 2017). Mwiya et al. (2017) mentioned that the perceived ease of use (PE) was reflected into three indicators, such as: the easiness to operate (PE1); had a flexibility to use (PE2) and the features are simple and understandable (PE3). The information quality variable (IQ) was explained by three indicators, including: the relevancy of content with the current situation (IQ1), the accuracy information (IQ2) and the complete or trusted information (IQ3) (Mwiya et al., 2017). Oliver (1993) mentioned that perceived risks (PR) could be measured into two indicators: there are some risks when using the apps (PR1) and the repayment apps had to ensure the data security (security) (PR2). The Repayment decision (RD) according to Bhattacharjee (2001) could be explained with the two indicators, such as: I plan to use the apps soon (RD1) and I am sure I will use the apps in repaying my loan (RD2). All the primary data further tested statistically using Structural Equation Model with Lisrel 8.80 software.

IV. RESULTS AND DISCUSSION

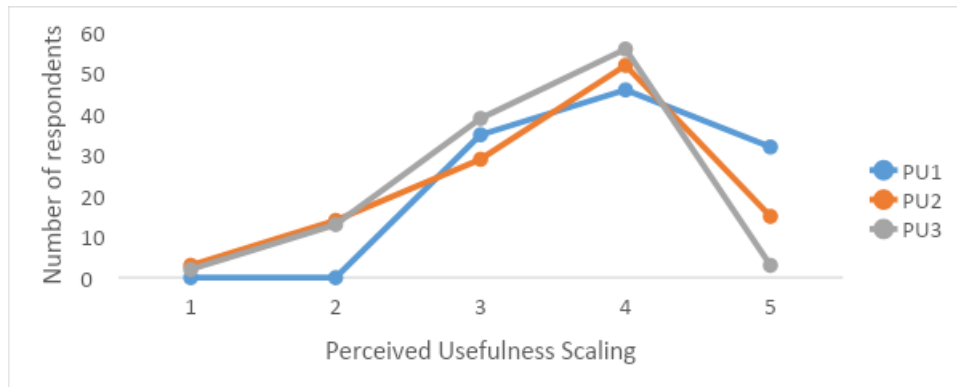
Demographic data explained the profile of the respondents; 73.5% respondents were female with the majority age being 30-39 years old (63.3%); 62% respondents had monthly income at between 1-4.9 million Rupiah. 99% respondents took SMEs loan financing with 71.30% loan duration period was less than a year with average loan nominal around five million Rupiahs (47.90%). Most of them (86%) found that Covid 19 had a significant effect in loan repayment and 33% were asking for temporary repayment holiday; 26.6% were looking for extension of repayment period; and 20.2% were asking for the flexibility of loan nominal repayment adjusted with their financial capabilities. The mean value analysis showed that for all independent variables, Information Quality (IQ) had the highest mean value of 4.30 and the Perceived Usefulness (PU) had the lowest mean value of 3.64

The average mean value of perceived usefulness variable as it stated in table 3 and further explained in figure 3, was 3.64, in which PU3 had the lowest mean value and PU1 had the highest mean value. This data showed that using the Repayment apps provided by the P2P lending platform would assist them in better managing and keeping track of their existing loan without necessary contact with the P2P lending platform office or sales agent.

Table 3
Mean Value of Perceived Usefulness Indicators

SCALE	1	2	3	4	5	MEAN
PU1	0	0	35	46	32	3.97
	0%	0%	31%	41%	28%	
PU2	3	14	29	52	15	3.55
	3%	12%	26%	46%	13%	
PU3	2	13	39	56	3	3.40
	2%	12%	35%	50%	3%	
Average						3.64

Source: Researcher Data Analysis (2020)



Source: Researcher Data Analysis (2020)

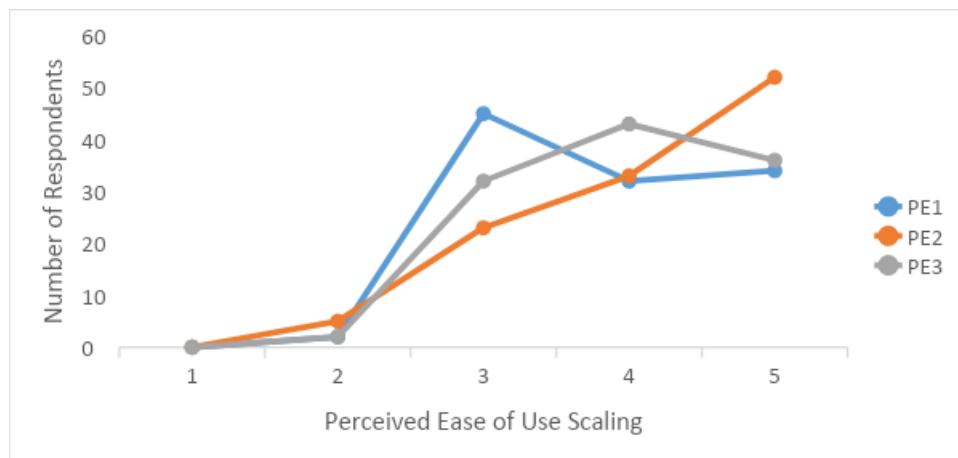
Figure 3
Perceived Usefulness Scaling

The average mean value of perceived ease of use variable in table 4 and further explained in the figure 4, was 4.01, in which PE2 had the greatest mean value and PE1 had the smallest mean value. This data showed that the majority of borrowers agreed that the repayment apps were flexible to use.

Table 4
Mean Value of Perceived Ease of Use Indicators

SCALE	1	2	3	4	5	MEAN
PE1	0	2	45	32	34	3.87
	0%	2%	40%	28%	30%	
PE2	0	5	23	33	52	4.17
	0%	4%	20%	29%	46%	
PE3	0	2	32	43	36	4.00
	2%	2%	28%	38%	32%	
Average						4.01

Source: Researcher Data Analysis (2020)



Source: Researcher Data Analysis (2020)

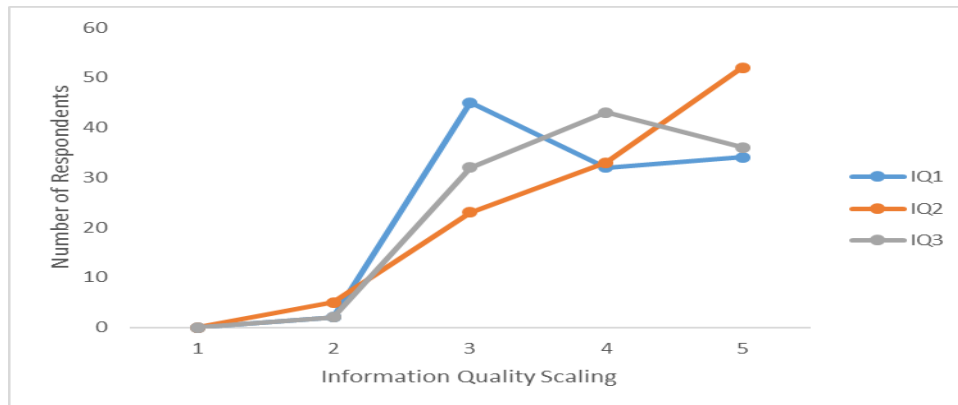
Figure 4
Perceived Ease of Use Scaling

Meanwhile, average mean value of information quality variable as it stated both in the table and figure 5, was 4.30, in which IQ1 had the highest mean value (4.33) and both IQ 2 and IQ 3 had the same mean value of 4.29. This data showed that the borrowers belief that all the information and its content provided in the repayment apps was relevance with the current situation. The information quality had the highest mean among all the independent variables used in this research.

Table 5
Mean Value of Information Quality Indicators

SCALE	1	2	3	4	5	MEAN
IQ1	1	3	15	33	61	4.33
	1%	3%	13%	29%	54%	
IQ2	0	2	12	50	49	4.29
	0%	2%	11%	44%	43%	
IQ3	0	0	12	56	45	4.29
	0%	0%	11%	50%	39%	
Average						4.30

Source: Researcher Data Analysis



Source: Researcher Data Analysis (2020)

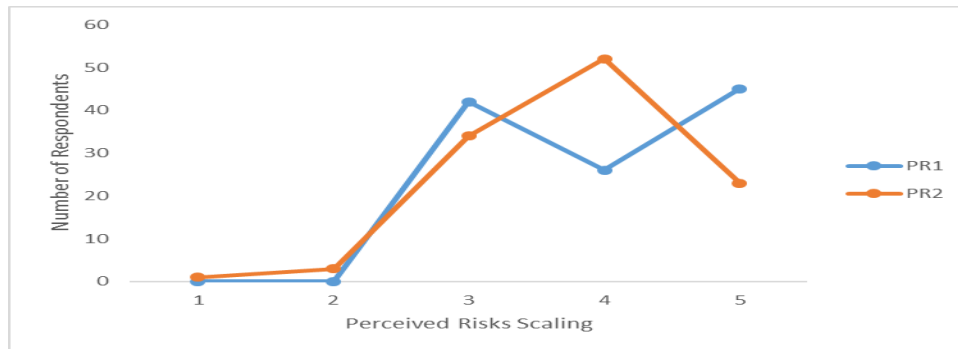
Figure 5
Information Quality Scaling

The PR1 had the greatest mean value and PR2 had the smallest mean value as perceived risks indicators. The average mean value of perceived risks variable as it stated both in the table and figure 6, was 3.92. It meant that the borrowers realized that there was some risk related with the security issues when using the repayment apps.

Table 6
Mean Value of Perceived Risks Indicators

SCALE	1	2	3	4	5	MEAN
PR1	0	0	42	26	45	4.03
	0%	0%	37%	23%	40%	
PR2	1	3	34	52	23	3.82
	1%	3%	30%	46%	20%	
Average						3.92

Source: Researcher Data Analysis (2020)



Source: Researcher Data Analysis (2020)

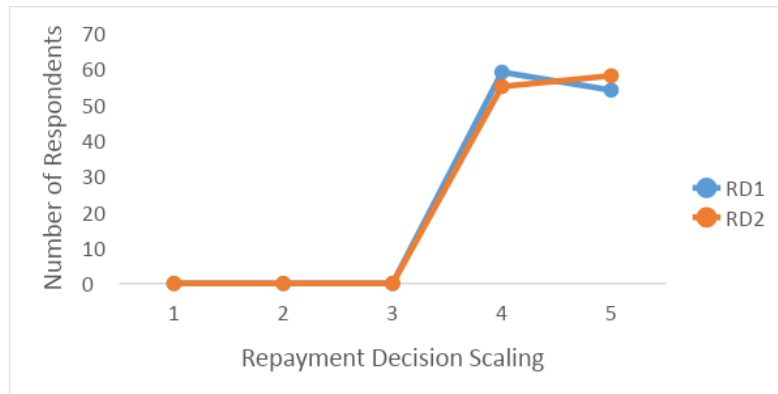
Figure 6
Perceived Risks Scaling

In the repayment decisions variables, RD1 indicator had the lowest mean value (4.48), and RD2 had the highest mean value of 4.51. Meanwhile the average mean value for both indicators was 4.50. The data showed that all borrowers strongly agree to use the repayment apps in managing and settling their loans in the P2P lending platform.

Table 7
Mean Value of Repayment Decision Indicators

SCALE	1	2	3	4	5	MEAN
RD1	0	0	0	59	54	4.48
	0%	0%	0%	52%	48%	
RD2	0	0	0	55	58	4.51
	0%	0%	0%	49%	51%	
Average						4.50

Source: Researcher Data Analysis (2020)



Source: Researcher Data Analysis (2020)

Figure 7
Repayment Decisions Scaling

Using Pearson correlation method and pre-test, it found that the critical value of $t > 0.671$, showed that all indicators had strong correlation. Reliability test using Cronbach's Alpha coefficient showed the number of 0.911, which means that this research is valid. The table 8 showed that only the AGFI indicator had value less than < 0.90 and there were perfect theories in this research. The table 9 showed the value of R Squared and Adjusted R Square for each variable:

Table 8
Result for Goodness for Fit Testing Model

GOF Indicator	EstimatedValue	Testing Result	Conclusion
Absolute Fit Value			
GFI	$GFI \geq 0.90$	0.90	Good Fit
RMSEA	$RMSEA < 0.08$	0.048	Good Fit
Incremental Fit Value			
NNFI	$NNFI > 0.90$	0.98	Good Fit
NFI	$NFI > 0.90$	0.97	Good Fit
AGFI	$AGFI > 0.90$	0.89	Marginal Fit
RFI	$RFI > 0.90$	0.96	Good Fit
IFI	$IFI > 0.90$	0.98	Good Fit

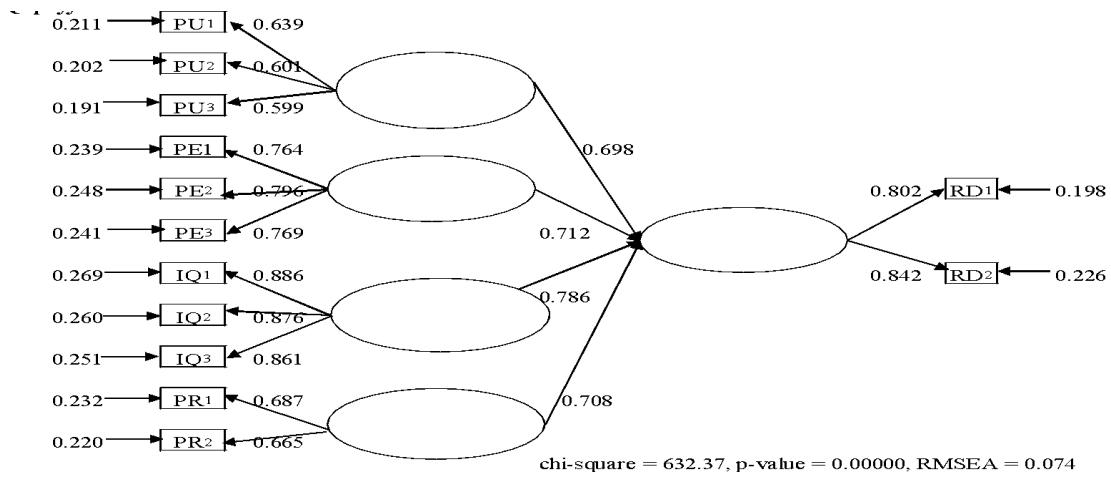
Source: Researcher Data Analysis (2020)

Table 9
R-Squared and Adjusted R-Square

Variables	R-Square	Adjusted R-Square
Perceived Usefulness	0.005	-0.005
Perceived Ease of Use	0.361	0.334
Information Quality	0.862	0.783
Perceived Risks-Free	0.040	0.031

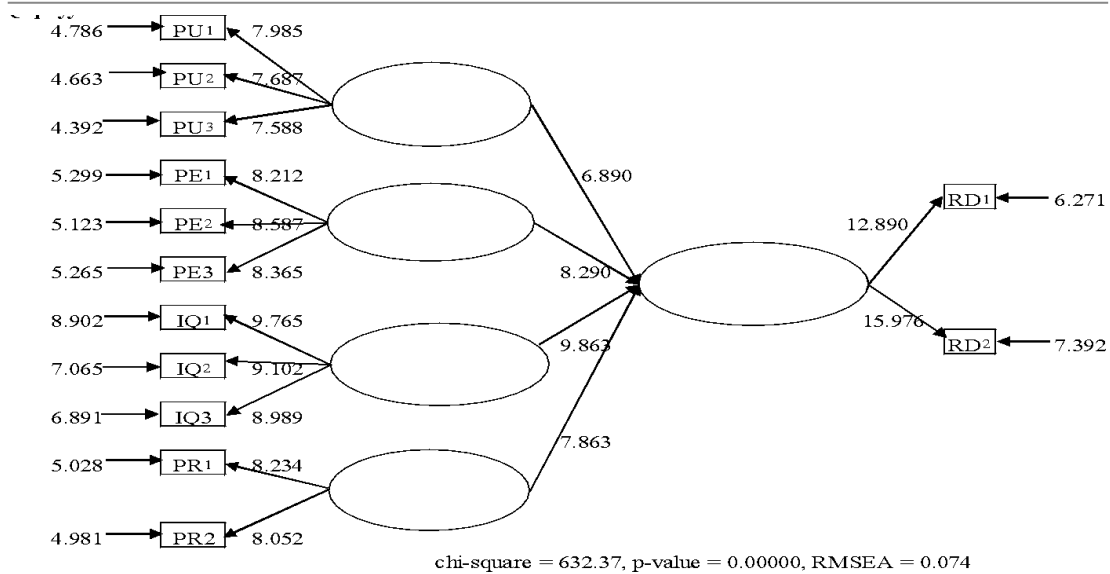
Source: Researcher Data Analysis (2020)

Meanwhile, the result of hypothesis testing using path diagram, could be explained as follow:



Source: Researcher Data Analysis (2020)

Figure 8
Structural Diagram (Standardized)



Source: Researcher Data Analysis (2020)

Figure 9
Structural Diagram (T-Value)

The result of hypotheses testing could be explained below:

Table 10
Result of Hypothesis Testing

Hypotheses	Variables	Coefficient Standard	t-Value	Statistical Conclusion
H ₁	PU → RD	0.698	6.890	Data Supported
H ₂	PE → RD	0.712	8.290	Data Supported
H ₃	IQ → RD	0.786	9.863	Data Supported
H ₄	PR → RD	0.708	7.863	Data Supported

The research able to create a structural equation model as follow:

$$RD = 0.698*PU + 0.712*PE + 0.786*IQ + 0.708*PR, \text{ Errorvar.} = 0.43, R^2 = 0.783$$

$$\begin{matrix} (0.040) & (0.050) & (0.063) & (0.048) \\ 6.890 & 8.290 & 9.863 & 7.863 \end{matrix}$$

The result of hypotheses testing could be explained further:

H₁: Perceived Usefulness had a positive effect on repayment decision, with the t-value > 2 (6.890), with the effect value of 0.698. The research showed that the repayment decision was influenced by the ability of the repayments apps in handling the transaction rapidly in more effective ways. This finding supported the previous research done by Lim (2003) who mentioned that borrowers preferred to get more alternative payment systems using the advanced technology during the Covid 19 pandemic. Even though the repayment apps could offer a more simple way in settling the financial transaction, customers still considered other important factors such as: security protection and data privacy.

H₂: Perceived Ease of Use had also a positive effect on repayment decision, with the t-value of 8.290 and the effect value of 0.712. The result supported the previous research that mentioned that perceived ease of use had a significant effect on using the apps Khosravi and Hussin (2014). The previous research showed that perceived ease of use had a significant effect on attitude (Liébana-Cabanillas et al., 2018; Mwiya et al., 2017; Alarcon-del-Amo et al., 2014). The less effort in using the repayment apps would encourage the borrower to use it more frequently (Shipps & Phillips, 2013). If users found difficulties in accessing the digital platform, it would also influence their reluctant behaviour in adapting the new technology (Lim, 2003). The result of this research also aligned with the previous study of Chen (2014) who explained that one key success factor for the P2P lending platform to attract the users was the ability to provide the user interface (UI) and user experience design (UX). Most borrowers were willing to use the repayment apps if they felt that the apps were easy to use, flexible, simple and understandable.

H₃: Information quality had the highest and significant influence on customer decision to repay the loan in Indonesia's P2P lending platforms, with the t-value of 9.863 and the effect value of 0.786. The borrower paid greater attention to all the information related with the current situation, including: the interest rate, the loan payment amount, the outstanding loan, the term and schedule of payment. The finding was supported by research by Chen *et al.* (2014) who explained that information quality had a positive and significant effect on lenders' trust in making lending decisions.

H₄: Perceived Risk had a significant influence on repayment decision with the t-value of 7.863 and the effect value of 0.708. The risk related with the repayment apps in P2P lending platform were security issues in using the apps. A higher safety protection level would increase the level of the repaying decision through a P2P lending platform. The result supported previous study that explained that the safety protection had a significant effect in the P2P lending platform business (Chen *et al.*, 2014; Meng, 2016). This finding aligned with the study of Lee et al. (2015) who mentioned that security guarantee was the major factor in

the online payment system. The repayment apps in P2P lending platforms are a new concept in Indonesia financial business and there is an urgency for the government to set-up a clear regulation to protect the interest of the borrowers in using the repayment apps especially during the Covid 19 pandemic. The finding also supported the research done by [2] who explained the secure platform would keep the secrecy of the borrowers.

VI. CONCLUSION

Information quality had the highest effect in influencing borrower decisions to repay their loan. Meanwhile, all the variables such as perceived usefulness, perceived ease of use and perceived security and risk free had a positive impact in developing the borrower decision in using the repayment apps. The repayment application platform should develop innovation that focuses more on user-friendly features and experiences using more understandable languages and symbols. Therefore, the researcher suggested that the Repayment apps had to provide interactive features with more User Experience (UX) or User Interface (UI) design. The P2P lending platform had to maintain long relationships with the borrowers and ensure that they were able to develop an integrative system that could protect data security of their customers.

The R-square of this research showed the value of 0.783. It meant that even if all the independent variables had a positive impact in borrower decision to repay the loan with 78.3% effect, there might be other variables that could be considered to make the repayment apps more successfully implemented, such as: social networking and customer knowledge ([Lim, 2003).

There're an urgency to encourage the support of the technology financial ecosystem, including the government in initiating a clear regulation to protect the stakeholders and at the same time had to deliver the highest standard of service quality to attain firm competitiveness and performance (Meng, 2014). The successful implementation of repayment apps as an alternative for the borrower in repaying their loans would bring more benefit to P2P lending platform itself, such as: lowering the default rate and in the same time support the government mission to running the SME's business back to normal again in a more speedy time.

REFERENCES

- [1] Bennett, N., & Lemoine, G. J. (2014). What a difference a word makes : Understanding threats to performance in a VUCA world. *Business Horizons*, 57(3), 311–317. <https://doi.org/10.1016/j.bushor.2014.01.001>
- [2] Blume, B. D., & Covin, J. G. (2011). Journal of Business Venturing Attributions to intuition in the venture founding process : Do entrepreneurs actually use intuition or just say that they do? *Journal of Business Venturing*, 26(1), 137–151. <https://doi.org/10.1016/j.jbusvent.2009.04.002>
- [3] Bogenhold, D., Bonnet, J., Dejardin, M., & Lema, D. G. P. de. (2016). Contemporary Entrepreneurship : Multidisciplinary Perspectives on Innovation and Growth. https://doi.org/10.1007/978-3-319-28134-6_16
- [4] Capraro, V., Everett, J. A. C., & Earp, B. D. (2019). Priming Intuition. *Journal of Experimental Social Psychology*, 83, 142–149. <https://doi.org/https://doi.org/10.1016/j.jesp.2019.04.006>
- [5] Codreanu, A. (2016). A VUCA ACTION FRAMEWORK FOR A VUCA ENVIRONMENT . LEADERSHIP CHALLENGES AND SOLUTIONS. *Journal of Defense Resources Management*, 7(2), 31–38.
- [6] Dhir, S., & Sushil. (2018). *Flexible Strategies in VUCA Markets*. India: Springer.
- [7] Fassinger, R. E., Shullman, S. L., & Buki, L. P. (2017). Future Shock : Counseling Psychology in a VUCA World. *The Counseling Psychologist*, 45(7), 1048–1058. <https://doi.org/10.1177/0011000017744645>
- [8] Fitriyah, N. (2019). Multivariate analysis of strategic management and business development in service sector. *Polish Journal of Management Studies*, 19(1), 145–156. <https://doi.org/10.17512/pjms.2019.19.1.11>
- [9] Frantz, R. (2005). Two minds: Intuition and analysis in the history of economic thought. In *Two Minds: Intuition and Analysis in the History of Economic Thought*. <https://doi.org/10.1007/b103871>
- [10] Greengard, B. Y. S. (2011). Malcolm Gladwell on Intuition. *PM Network*, 25(10), 80–82.
- [11] Isenman, L. (2018a). Intuitive Cognition and Intuition. *Understanding Intuition*, 51–79. <https://doi.org/10.1016/b978-0-12-814108-3.00003-8>
- [12] Isenman, L. (2018b). The Importance of Embodied Experience and Imagery in Intuition. *Understanding Intuition*, 155–172. <https://doi.org/10.1016/b978-0-12-814108-3.00007-5>
- [13] Isler, O., Maule, J., & Starmer, C. (2018). Is intuition really cooperative? Improved tests support the social heuristics hypothesis. *PLoS ONE*, 13(1), 1–14. <https://doi.org/10.1371/journal.pone.0190560>

- [14] Jemison, D. B. (1981). The Contributions of Administrative Behavior To Strategic Management. *Academy of Management Review*, 6(4), 633–642. <https://doi.org/10.5465/amr.1981.4285714>
- [15] Jiang, R., & Kortmann, S. (2014). On the importance of mediating dynamic capabilities for ambidextrous organizations. *Procedia CIRP*, 20(C), 85–92. <https://doi.org/10.1016/j.procir.2014.05.036>
- [16] Millar, C. C. J. M., Groth, O., & Mahon, J. F. (2018). Management Innovation in a VUCA World: *California Management Review*, 61(1), 5–14. <https://doi.org/10.1177/0008125618805111>
- [17] Misra, R., Srivastava, S., & Banwet, D. K. (2019). Do religious and conscious investors make better economic decisions? Evidence from India. *Journal of Behavioral and Experimental Finance*, 22, 64–74. <https://doi.org/10.1016/j.jbef.2019.02.003>
- [18] Ompany, G. E. C. (2013). A F UZZY A HP A PPROACH FOR UPPLIER S ELECTION PROBLEM : CASE STUDY I N A. 4(3), 11–23. <https://doi.org/10.5121/ijmvsc.2013.4302>
- [19] Patel, N., Baker, S. G., & Scherer, L. D. (2019). Evaluating the Cognitive Reflection Test as a Measure of Intuition/Reflection, Numeracy, and Insight Problem Solving, and the Implications for Understanding Real- World Judgments and Beliefs. *Journal of Experimental Psychology: General*, 148(12), 2129–2153. <https://doi.org/10.1037/xge0000592>
- [20] Pratt, M. G., & Dane, E. (2007). Exploring intuition and its role in managerial decision making. *Academy of Management Review*, 32(1), 33–54.
- [21] Probst, G., Raisch, S., & Tushman, M. L. (2011). Ambidextrous leadership. Emerging challenges for business and HR leaders. *Organizational Dynamics*, 40(4), 326–334. <https://doi.org/10.1016/j.orgdyn.2011.07.010>
- [22] Riegler, A. (2007). Superstition in the Machine. 57–72.
- [23] Swift, T. (2016). The perilous leap between exploration and exploitation. *Strategic Management Journal*, 37(8), 1688–1698. <https://doi.org/https://doi.org/10.5465/ambpp.2014.10924abstract> •
- [24] Tushman, M. L., & O'Reilly, C. A. (2012). Ambidextrous Organizations: Managing Evolutionary and Revolutionary Change. *California Management Review*, 38(4), 8–29. <https://doi.org/10.2307/41165852>
- [25] Unhelkar, B. (2018). *Big Data Strategies for Agile Business : Framework, Practices and Transformation Roadmap*. Taylor & Francis Group.
- [26] Wagstaff, P. (2014). Intuition. *Plane and Pilot*, 50(8), 20.

-
- [27] Wang, Y. M., & Elhag, T. M. S. (2006). Fuzzy TOPSIS method based on alpha level sets with an application to bridge risk assessment. *Expert Systems with Applications*, 31(2), 309–319. <https://doi.org/10.1016/j.eswa.2005.09.040>
- [28] Ward, S. J., & King, L. A. (2018). Individual differences in reliance on intuition predict harsher moral judgments. *Journal of Personality and Social Psychology*, 114(5), 825–849. <https://doi.org/10.1037/pspp0000153>
- [29] Wewior, J., Alevifard, S., Kohl, H., Steven, M., & Seliger, G. (2014). Intellectual capital statement in IPS2. *Procedia CIRP*, 16, 301–307. <https://doi.org/10.1016/j.procir.2014.02.017>
- [30] Zollo, L., Yoon, S., Rialti, R., & Ciappei, C. (2018). Ethical consumption and consumers' decision making: the role of moral intuition. *Management Decision*, 56(3), 692–710. <https://doi.org/10.1108/MD-10-2016-0745>

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