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BACHELOR'S THESIS

EFFECT OF IMPLEMENTATION OF THE NEW DIGITALISATION SYSTEM: CASE STUDY: PT CROWN INDONESIA

By

Muchamad Iqbal

11201608004

Presented to the Faculty of Business and Social Sciences

In Partial Fulfillment of the Requirements for the Degree of

SARJANA ADMINISTRASI BISNIS

In

INTERNATIONAL BUSINESS ADMINISTRATION

FACULTY OF BUSINESS AND SOCIAL SCIENCES

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

Effect of Implementation of the New Digitalisation System:

Case Study: PT Crown Indonesia

By

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In the new era of industrial revolution 4.0, various challenges and entities arise in accordance with a new competitive level playing field that took advantage in the advancement of technology. Digitalization has been one of the prominent aspects in this new era, many businesses have realized by going to a more digital aspect will come with great benefits for the business overalls. Thus, it was necessary for the company of PT Crown to have undergone a change of operational procedure to substitute their previous operational relocation system to a new more digital one. Hence, the purpose of this research is to find out how what would be the impact to the company and mostly to the staff employees when this new system is implemented. It is also to find out whether this system could be used for a different job criterion in the company and whether this could be use in the other branch around Indonesia.

This research report will use a prescriptive analysis method and the data gathers will be a mix of quantitative. Questionnaires and interviews are dispersed in order to get the data which then data will be analysed to measure the findings and conclusion of this research.

Keyword(s): E-Packing, Digitalization, Old System, Logistics

DEDICATION

This thesis is dedicated from the bottom of my heart to my family, especially my father who has been working so hard to support me in to finish my study and bearing with all troubles I made. And to all the staff members of PT Crown Indonesia for guiding me during my internship program and help to gain the data I needed, members of International University Liaison Indonesia and my friends for personally supporting me during these hard times.

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CHAPTER ONE: INTRODUCTION

1.1. BACKGROUND

In the past decade, organization has undergone increasing levels of disruption (de Boer, et al., 2022). With changes in customer preferences, demands of uncertainties, disruptive and challenging conditions are all intimidating the planning systems for many organizations to unprecedented degrees. With barriers in trading, national security interests, as well as logistics disruptions, businesses are forced to find alternatives to the globalized the supply chain management. Thus, businesses are then taking the appropriate measures by calling for drastic operational and capital cost reduction in certain areas while demanding rapid growth in others (de Boer, et al., 2022). As a result, understanding an employee's job performance is a critical and crucial part in increasing an organization's performance during these operational changes (Hashim, Azib, Mansor, Muhammad, & Estiar, 2017). Nonetheless, although the mentioned information may be true, research regarding information system and system quality factors that contribute to increase employee's performance are still limited.

Nowadays, companies, organizations, and individuals have become dependent on information systems due to their rapid development in recent years. Furthermore, information system has provided speed, convenience, and accuracy in process data to become necessary and important information (Sukmawan & Wahdiniwaty, 2019).

Figure 1: Supply Chain Disruptions Make a Comeback

Source: (Sweeney, 2022)

With the unprecedented pressure from the ongoing health hazard that has been raging on for the past couple years that abruptly disrupted the supply chains for business due to the subsequent series of lockdowns and restrictions, to the variety of international business challenges ranging from red tapes to exchange rates, businesses have found themselves striving to survive globally during these rather disruptive situations (Sweeney, 2022).

Global supply chains have faced considerable number of obstacles because of the COVID-19 epidemic. The flow of raw supplies and completed items is still being slowed or even temporarily stopped by several national lockdowns, which is affecting the production process. For supply chains, the epidemic has not necessarily brought forth any fresh difficulties. It revealed certain previously unknown weaknesses, and COVID-19, of course, has resulted in employee shortages and losses for many businesses. However, in general, it has exacerbated and accelerated supply issues that previously existed (Harapko, 2021). Thus, being able to integrate a seamless information system to their businesses, organizations are able to increase employee performance which will in hope contribute to the success of the organization.

An organization is composed of an array of different kind of people, ranging from different gender, age, work status as well as level of education, are among the demographic variables that have a significant influence on company performance. According to the study done by Dr Dinesh Vallabh and Osward Mhlanga (2015) to the current study's substantial association between gender and perceived business performance. Gender did not significantly differ about any of the characteristics that might affect the success of the firm, according to the current study's substantial association between gender and perceived business performance. And when it comes to education and training, it is crucial if organizations want to increase their business performance. It is also the case, according to studies by Dr. Bahadur Ali Soomro, Nadia A Abdelmegeed Abdelwahed, Imam Abdulrahman Bin Faisal and Dr. Naimatullah Shah, that age does not have a positive and substantial connection with business performance (2019).

Information systems are defined as a combination of work procedures, people, information, and technology that are organized for the betterment of the organization's goal as a whole. On the other hand, employee performance is the actual work that can attained by a certain individual or a group of people in the said organization (Sukmawan & Wahdiniwaty, 2019). Being able to understand how information system and the quality as a whole will provide a better understanding of how to improve the overall productivity and performance of an organization.

Information quality is characteristics of the output offered by the information system itself (Bahari & Mahmud, 2010). Indicators of information quality can be listed as the following: accessibility, timeliness, completeness, and relevancy. With accessibility, the information system should be perceivable, operable, and understandable for the users. The information of the user should be in a way that is presented in a manner where there is nothing undetectable. For instance, those who

are visually impaired should have access to the same information via the use of touch or audio as an alternative. As for operable, users should be able to utilize the said system in a manner that enables a user-friendly way, where the interactive elements of the interface should be easily operated. Finally, the user should be able to comprehend the meaning and purpose of the information presented in proper context (Patrizio, 2022). Hence, the introduction of information should not be a hindrance in people being able to process the data since it should be adapted to how the users will intake the said information.

Timeliness should also be a factor when measuring information quality. The meaning of timeliness refers to the time that is expected for accessibility and the availability of the said information, in other words, it can be measured as the time between when the information is expected and ready to be use (Loshin, 2009). Thus, logically speaking, with the use of information system, businesses are able to enhance the timeliness of information that are being received.

Information completeness refers to the extent to which the information obtained is sufficient to solve a particular problem. Since this information is assessed by the extent to which it can help solve a particular problem, it is highly relative. As result, should the information provided is enough to execute a decision, it is complete, if not, then the use of the said system should not be able to give the expected results (Atomiye, 2017). Hence, when utilizing information system, it is expected that the information provided should be complete to execute particular actions and resulted in expected outcome.

Finally, relevance of information can be defined as the degree of correspondence of the received information at a given time, in other words, information that is received in a timely manner (Atomiye, 2017). To understand an entity or object better, information must introduce something new. Data considered relevant are those that assist a person, give new information, or are beneficial to a person. Thus, relevancy of

data ensures that the data being produce by the said information system can be utilized to help the organization grow as a business and contribute to their performance.

System quality is the dimension based on the technological factors for a website or system (Pang, Suh, Hong, Kim, & Lee, 2010). It can be measured by reliability, correctness, and integration (Bahari & Mahmud, 2010). Before any information system was implemented in any businesses, many businesses opted for a more traditional system to record and process data to execute their day-to-day activities. Thus, understanding how the traditional system has been working and how it affects the employee performances of the business should be taken into consideration when contemplating how and when to implement a newly established information system.

Reliability can be defined as the system capability to fulfill intended tasks for a specified performance period (Mrugalska & Tytyk, 2015). As information system was established in the past decade, traditional system has been around for years. Seeing how businesses have been utilizing traditional practices for decades, it is safe to assume that the reliability of the system quality of a business has a major contribution to the employee performance achievements.

A system's correctness is its ability to perform the exact tasks specified in its specification (Wilson, 2015). Thus, it can be implied that the traditional system that has been applied has correctly been used for year before the introduction of information system. Finally, integration is an important part of measuring system quality due to business management evaluates business risks and quality consistency through integration as part of the assimilation process (Lehtonen, 2018). As a result, understanding the integration part of a business system quality is crucial in how it affects the performance of a business.

Being able to evaluate an employee's job performance by utilizing information system has been an ongoing activity in the research of information system (Hashim, Azib, Mansor, Muhammad, & Estiar, 2017). As job performance can be measured by productivity, efficiency, and rating, it can be assumed that information quality and system quality have a major impact and effect on these said factors.

Productivity is the concentration of the output of certain activities (Weir, 2018). Understanding how information quality affect the productivity, alias output, of the employees of an organization can help better understand just how it influences the overall job performance of an employee. By having better productivity would ultimately contribute to an organization's performance while simultaneously enhancing its reputation and reduce wastage of resources (Hashim, Azib, Mansor, Muhammad, & Estiar, 2017).

In contrast, efficiency refers to having implemented systems and processes that allow employees to accomplish their tasks as quickly as possible (Rhoades, 2022). Being able to differentiate and understand the capability of both information quality and system quality regarding just how efficient those qualities are can help better understand which system has the most influence with regards to job performance. Lastly, rating, in which an employee's performance or accomplishment is measured using rating scales (Ohme & Zacher, 2015). All these factors can help provide a better understanding of how information and system quality influence job performance of an individual and see whether information help contribute with the increase of productivity, efficiency, and rating of employees in an organization.

In a world where information technology is constantly changing the business processes, it is imperative that organizations fathom the aspects of how information and system quality have a contributing affect and influence on the overall job performance

of an individual which ultimately would alter the courses of how organizations would conduct their businesses.

1.2. RESEARCH PROBLEM

Based on the background and purpose, there are few research problems, which are:

1. This research attempts to identify whether demographics has a significant impact on the new information system quality.

2. This research attempts to identify whether demographics has a significant impact on the old system quality.

3. This research attempts to identify how significant impact of system quality of the old system to employee performance, to know whether it is still relevant or not.

4. This research attempts to identify how significant impact of information quality of the new system to employee performance.

1.3. RESEARCH QUESTION

The following are the research questions that will be investigated further in this research study in relation to the above-mentioned research concerns. The following are the research questions:

1. How much influence does the demographics have in relation with the new information system in place?

2. How much influence does the demographics have in relation with the old system quality in place?

3. How much the old system quality has in relation with the employee's performance?

4. How much the new information system has in relation with the employee's performance?

1.4. RESEARCH PURPOSE

The focus of this research is to determine which of the two systems, when applied in the workplace, has a greater influence on employee performance. Furthermore, enabling the company to choose whether the new information systems of E-packing to invest in more and implement across additional departments.

This research will help to verify on how much significant the factors correlate to the result of the performance of the employees. The introduction of the new information system may have an effect on how the organization performs its duties. The evaluation of an employee's performance in terms of efficiency may have a favourable impact on the relationship.

The company age demographic segment has a wider gap considering its present in Indonesia since the 1970's (Antara, 2009), and thus the increasing number of the younger working population means the gap of the older employees are even wider. This research will enable to find out the impact of such technological change in those demographic age group, and how much of an impact those variables would be on the performance result.

1.5. RESEARCH SIGNIFICANCE

This research is significant because of the following:

1. This research will be useful for people or organizations that are planning to implement and replace the working office operational system by knowing what variable would be the biggest factors that would affect the performance.

2. This study significance helps to determine which of the two systems the organization should invest more in because it will have a higher impact on employee performance.

3. This study will assist researchers and other businesses in identifying whether the company's demographic segments have a significant impact on the decision to implement new technologies in the workplace.

1.6. RESEARCH LIMITATION & SCOPE

The data collected from the questionnaires are targeted at those who are associated with the new system, crown relocation office and warehouse staff members. These are selected because of their involvement in the new system and thus will provide a relevant answer to the survey questionnaires form. (Any missing data will be that is related to this survey will be mentioned and put into reason on why it does occur and how we could fix such issue).

There are various challenges did occur during the gathering of data because this type of data collection requires not only survey questionnaires but also first-hand observation of the system. During the COVID-19 pandemic which create a more difficult situation to collect the observation data especially when there was an occurrence where the office was close for time being. It is also noted the number of absents that were present due to large-scale social restrictions or PSBB (Azanella, 2020) and other external factors also hinders the collection process. The data so far gather is through the means

of Google Form online survey, this is a more flexible approach on creating such survey due to its online based platform.

The other challenges that should be taken into consideration while doing this survey is the number of team members in the operation department of Crown, to use the statistic approach to find the right measurement on the outcome the number of correspondents or participants is too few. This could result in a more bias data or tend to be less accurate. Thus, outreaching other participants that could be applicable in the questionnaire. The relevancy of the outcome of this survey is still valid because the interviewee is still part of the Crown logistics team but located in the other parts of Indonesia.

This research focus on the people working in PT Crown Indonesia and some other relocations companies that has already implemented a system similar to the E-packing system.

CHAPTER TWO: LITERATURE REVIEW

Logistics includes inbound, outbound, internal, and external movements. Logistics is the planning, implementing, and controlling of processes for the efficient and effective transportation and storage of goods, including services, and related information from the point of origin to the point of consumption (Vitasek, 2013). The Oxford Dictionary online and the New Oxford American Dictionary both define logistics as "the thorough organization and implementation of a large operation" and "the coordination of a complex activity involving numerous personnel, facilities, or supplies," respectively. As a result, logistics is sometimes viewed as an engineering discipline that develops "human systems" as opposed to "machine systems."

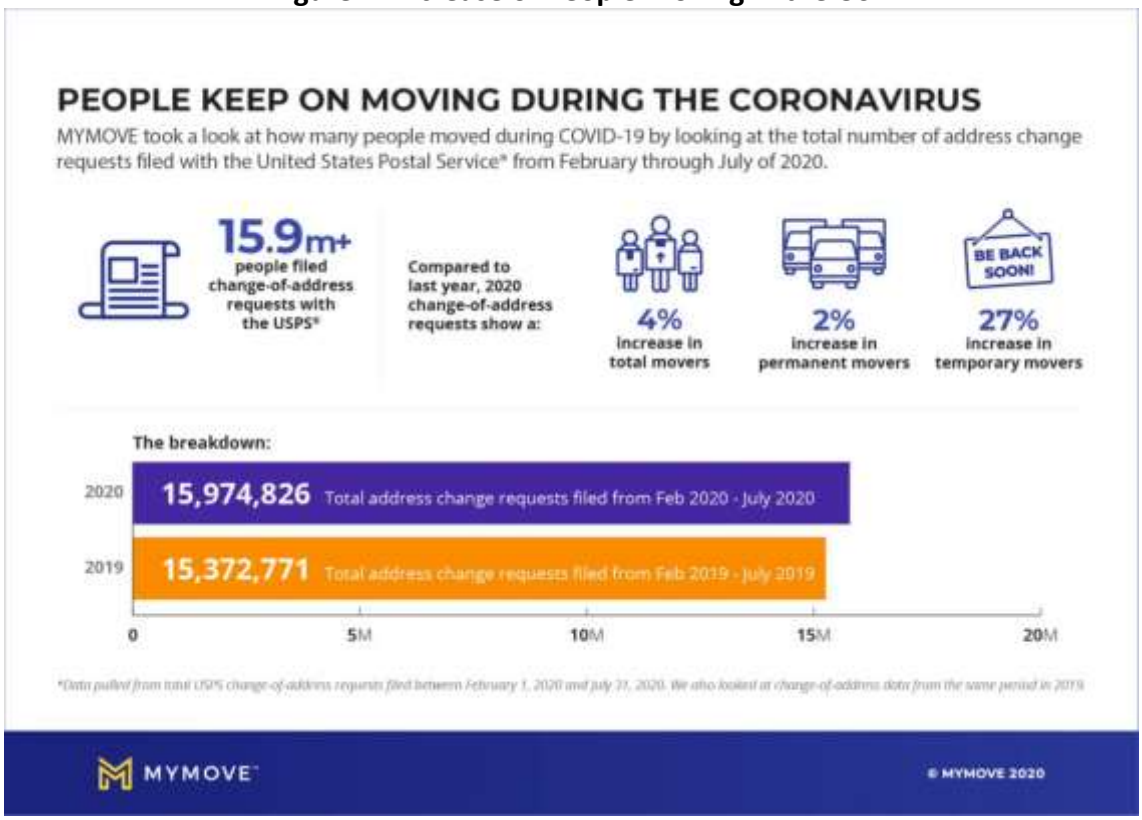
Transporting things from one location to another is the core of logistics. So, warehousing and transportation serve as the two main purposes of logistics. Moving military troops, supplies, and equipment was a crucial function originally performed by logistics. Despite its continued importance in the military, logistics is now more frequently used to refer to the movement of commercial items along the supply chain. Many businesses offer this service to factories, retailers, and other sectors with significant transportation needs. Some people own the entire infrastructure, including everything from trucks to warehouses to software and jet planes, while others only focus on one or two components. Several well-known logistics companies include FedEx, DHL, UPS.

Tools will be used by an effective logistics process within an organization to examine and visualize the production's complexity. These tools ought to integrate data, stock, production, warehousing, employees, resources, packaging, and safe final product delivery.

The constantly changing market needs and concentration of the entire supply chain at the level of customer service, forcing both in the business and scientific world to seek modern solutions that improve logistics processes. This leads to a transformation current solution towards smart supply chains. The use of modern technology is aimed at improving logistics processes at the operational level by shortening execution time activities, minimizing bottlenecks and errors that result from the flow of faulty information. Today, one of the most essential responsibilities will be to ensure flexibility in future supply chain planning, due to increased supply chain complexity and uncertain supply and demand. The expansion of network-based cooperation and the application of Industry 4.0 are two of the most significant criteria for supply chain flexibility. 4.0 advancements (Skapinyecz, Illés, & Bányai, 2018).

During the COVID-19 pandemic, countries are more dependent on logistics more than ever. Due to various lockdown throughout the world, the movement of things are relied solely on the ground of the logistics department. Online shopping platforms were booming to minimize interaction in a physical store. The movement of things were not only in a sense of everyday items, but also the movement of the population. There was an increased number of people moving due to the pandemic with that the largest-scale remote work experiment in the history of the workplace is under underway. Businesses were falling short, and many went under due to the pandemic, this makes people move back from the city to a more rural areal especially to work from home (Bowman, 2022).

Figure 2: Increase of People Moving in the US



Source: USPS (Bowman, 2022)

It can comprehend that the importance of this new system and the growing number of relocations is due to the data presented above, which also highlights the increased requirement for work and risk of error.

2.1. DEMOGRAPHIC

Age, gender, education, income, and experience are just a few examples of demographic variables that have a big impact on how well a business performs. While small business issues and business skills have received a lot of attention, demographic considerations have received far less attention.

2.1.1. AGE

Age affects how employees see technology; attitudes about older employees in the workplace imply that older persons will find it challenging to reframe latest technologies. Due to the idea that older employees do not want to deal with new technological development and those older persons tend to be more technophobic. People's perceptions of their own learning capacities may be influenced by their social environment. For instance, a person may believe they are too old to learn, but the environment may also play a role (Fitzgerald, Bonnet, & Welch, 2013). It is by understanding this issue will allow us to determine how significant the age demographic's influence on workplace technology innovation may be.

2.1.2. GENDER

According to gender studies, masculinity (characteristics connected to men) and femininity (characteristics related to women) are social-psychological categories (Rabindarang, Khuan, & Khoo, 2014). Also, by employing the Theory of Planned Behavior to examine how gender, age, and education affect the adoption of new technologies in Saudi Arabia, an emerging technological nation. 37 percent of the variation in behavioral intention among Saudi knowledge workers is explained by this validation. Except for the moderating effect of perceived behavioral control on behavioral intention by educational level, there were no statistically significant interactions among the moderator variables (White Baker, Al Gahtani, & Hubona, 2007).

Research conducted in a university in Malaysia, there are gender disparities in attitudes about the use of IT-related tools and apps. The three variables of usefulness, confidence, and aversion were used to gauge the respondents' sentiments. Between male and female student teachers, there were no appreciable differences. The same levels of attitudes were displayed by both sexes (Wong & Hanafi, 2007).

2.1.3. EDUCATION

Education is the conscious, methodical, and ongoing process of transmitting, provoking, or acquiring information, including any learning that emerges from that process (Chazan, 2022). Education frequently has a key effect in how people see modern technologies, this study demonstrates the existence of a connection between technology and educational attainment.

The degree of education and performance in modern technology learning have been proven to be significantly correlated in several studies. a higher education level's acquisition of complex cognitive structures results in a stronger capacity to learn in fresh contexts. According to earlier studies, education level is positively correlated with a stronger capacity for learning, meaning that people with higher levels of education would be more open to modern technologies than people with lower educational levels (Dahawy & Kamel, 2005).

2.2. SYSTEM QUALITY (OLD SYSTEM)

The old system which consists of mostly manually written physical elements in the operational tasks are a much basic method of collecting data. For instance, every item in the relocation job must be manually written and then be input into the journal entry. This requires certain aspect of good handwriting that could be readable and patience to write all those items (Istami, 2021).

The physical element of such system has its pros and cons, most of the pros came from the fact this system has been present for so long it already became a habit no further training is needed. Because the company has existed for over half a century, older employees tend to already get used to the basic and habits play a huge factor in the operational procedures.

2.2.1. RELIABILITY (COMFORT)

The reliability of the old system in terms of comfort should be acknowledge, it is because considering that the older generation employees might have the possibility to

prefer the older technology in the system quality (Klimova, Simonova, Poulova, Truhlarova, & Kuca, 2016).

2.2.2. CORRECTNESS (UNCESSARY TO CHANGE)

It claims that when new technologies replace rather than augment our humanity, society tends to reject them. Pecuniary externalities boost labor productivity directly, but they do not always boost multifactor productivity. Unless they personally benefit from new technology, older employees are less inclined to adopt it. However, when the benefits and usability of new technology overcame their concerns of inadequacy, older employees were eager and willing to use it. To gauge how severe the influence will be, the older employees' ability to be correct in their assessment of the newer technology deployed in the organization is examined. Exploring and trying new things helps the user get a more accurate perception of how challenging learning is, this can result in acceptance or rejection (2013). The unnecessariness o

2.2.3. INTERGRATION (IRRELEVANCY)

The integration between the old system and the new E-packing system seems to undertake certain opinions. This variable shows the integration between the two systems in terms of relevancy of the two. In the digital era in Industry 4.0 sometimes known as the digital revolution, compels businesses to confront unique technological, organizational, and competence-related difficulties (Adamik, 2019). To find out from the data whether the old system in the system quality is no more relevant in the industry 4.0 and especially being competitive.

2.3. INFORMATION QUALITY (NEW SYSTEM)

Previous research has looked into the impact of information systems on employee job performance and productivity. This had become one of the most popular topics. Many academics are interested in studying various forms of there was a link between these three factors. As a lot of today's works rely on the use of the information

system, the information system, the information system, the information system, the information system. To ensure the availability and dependability of the system employees may be able to do a good job. User The quality of the system has a significant impact on satisfaction resulting in beneficial outcomes for individuals performance or productivity (Delone & Mclean, 2003).

Other researchers explored the effects of information systems on individual job performance as well. Ruiz-Mercader, Sabater-Sánchez, and Merono-Cerdan (2006) proposed a theoretical model that indicates an interaction between the quality of information, system, and organizational performance, as well as system ease of use, which can lead to an increase or decrease in individual job performance. Meanwhile, Ali (2013) discovered that user task performance is influenced by measures of information and system quality. They investigate the connections between information systems and user performance by looking at a variety of factors such as system utilization, system quality, information quality, and user performance. They found that the aforementioned elements have a good impact on user performance and have the most direct impact on individual job performance.

The Crown E-Packing app gives the company service partners the ability to participate in end-to-end tracking of customer shipments worldwide. The E-packing system is a new digital system that is use to help in helping everyday tasks for as of now mostly the operational relocation division jobs. This system is based on a cloud server where data could be input directly into the cloud server, then can be accessed anywhere in the world using any device that are logged in. This creates a fast and efficient way to hinder any issues came up by using the old system.

The E-packing system consists of functions are as follows (Crown, 2021):

- Collecting of every data item that are scanned by the operational mover staffs, item barcode.

- Data are submitted directly into the cloud without no 3rd party involvement thus, diminishing errors.

- Bar codes are attached to its items to be scanned instead of manually written down, this will reduce time consumption and further human errors.

- Data and information regarding the customers items in the relocation's operations will be directly sent to the customers.

Figure 3: E-Packing App for the Customer

Source: (Crown Worldwide Group App, 2021)

2.3.1. ACCESSABILITY (COMFORTNESS AND ACCESS)

The reliability of the old system in terms of comfort should be acknowledge, it is because considering that the older generation employees might have the possibility to prefer the older technology in the system quality (Klimova, Simonova, Poulova, Truhlarova, & Kuca, 2016).

2.3.2. TIMELINESS (LEARNING PERIOD)

The amount of time needed to understand the new system and its uses must be taken into consideration, the quicker and the faster the employees able to understand the E-packing app; the faster and more productive it is as time are less wasted in order to learn the system. With new technology implemented in the system also means team members need to learn it as well, the question related to this is the learning curve of the new system which question whether the learning curve of the system is steep and does it affect the daily tasks. The processing of information takes time. However, in today's technologically advanced society, the "access time" to finish a search for information has been shortened. As a result, more time should be spent mentally absorbing or processing the content, allowing the process of "transferring information from the 'working' to the 'long-term' memory" to take place (Yannie, 2000).

2.3.3. COMPLETENESS (UNDERSTANDING NEW SYSTEM)

Businesses need to know how to use technology to support their goals and the corporate leaders must become more aware of how these new applications will impact their companies' operations and workflows. As employees learn to use technology alongside them, this will also alter how they perform their duties inside an organization. Thus, by understanding more about the process of integration with technology will allow an increase of performance to be present (Wilburn & Wilburn, 2018).

2.3.4. RELEVANT FUNCTION (FUNCTIONALITY)

The relevancy is referred to the functionality on how significant the new E-packing system benefits in terms of functionality and the relevant of its to job to the tasks at hand and thus affecting the performance (Huang, Lee, Chiu, & Yen, 2014). The big utility factor in relevancy is determined to have factor related to the information quality. The relevant function essentially focuses on how much the intended learners truly believe that the training is relevant for and fits and how much of a significant the instruction and the technology directly support daily job tasks (T. Kidd & Song, 2008).

2.4. EMPLOYEE PERFORMANCE

Employees are a crucial component of the business. The performance of the workforce determines whether the organization succeeds or fails. The way a worker performs their job responsibilities and completes necessary tasks is referred to as their performance. It speaks to the usefulness, excellence, and efficacy of their product or services, performance is a factor in how valuable we consider each person to be to the company (Ciner, 2019).

The goal of PT. Crown Indonesia's plan to boost employee performance is to provide the company a competitive edge over its rivals in its field by investing in technical advancements. Employees will have less work to do as a result of technology that automates procedures, giving them more time for other tasks. The new E-packing software can assist in gathering and analysing data that would often go unused or need personnel to spend a significant amount of time extrapolating. Additionally, new technology may be leveraged to enhance corporate operations and, as a result, boost employee and business efficiency.

2.4.1. PRODUCTIVITY

The new technologies constituted new downstream "factors of production" from the standpoint of vertically integrated incumbents (Cozzolino, Verona, & Rothaermel, 2017). That means the productivity of the company in terms of output during a certain amount of time will have a positive relationship, also because a relating efficiency factor.

In the other words that the effectivity of technological advances allows the production rate to increase, it is because newer technology is aimed to ease the job of the employees doing their task.

2.4.2. EFFICENCY

Many businesses have embraced reengineering as a powerful tool for implementing changes that would improve their efficiency and competitiveness. The motive was frequently the understanding that the process needed to be sped up, that more resources were needed, that productivity and efficiency needed to be improved, and that competitiveness needed to be improved (Attaran, 2003).

The efficiency of the performance of the employees during the job was put to question. This was to measure how the employees performed during the job. Not only in the documentation department in the relocation, but also in terms of how data being kept upon with more prone to mistakes and issues relating to the old system. It is not only will businesses be able to automate processes, but they will also be able to function in new ways because of embracing technology.

2.4.3. RATE

The customer service technology used by E-packing is focused on enhancing the customer experience and equipping employees to provide greater customer support and service. Technology advances in customer service enable companies to offer a more individualized contact experience while saving money (Bansal, 2021).

The new system enables the sales department and relocation department to contact clients directly or automatically via email without having to manually enter the customer's information. Customers might also use their own E-packing bespoke app tailored for them to come into direct contact the departments.

2.5. PREVIOUS STUDIES

Several studies that have been done in the past to support the study are listed in the table below. For this study, many significant hypotheses derived from past studies will be used as variables and sub-variables.

Table 1: Previous Studies for Research

No.	Title of Research and/or Articles	Variables and Sub-Variables	Findings
1.	*How Business Process Reengineering Affects Information Technology Investment and Employee Performance Under Different Performance Measurement* **Invalid source specified.**	**IT Investment** **BPR Implementation** **Employee Performance** -Cost reduction in internal -Cost reduction in external -Quality Improvement in internal -Quality improvement in external -Lead time shortening in internal -Lead time shortening in external	-Investment in technology can minimize transaction time and paperwork while also making better use of human resources, resulting in improved performance. -To secure and facilitate the success of BPR adoption, businesses must spend heavily in technology. -Implementing new technology increases employee performance, generates a new working environment, and supports the need for employees to develop new and improved work habits.
2.	*Investigating the Relationship between Information System Usage and Employee Job Performance Among Staff at a Local*	**System Quality** **Information Quality** **Employee Job Performance**	-The quality of the system has a vital role in enhancing performance and increasing the volume of work done by users.

No.	Title of Research and/or Articles	Variables and Sub-Variables	Findings
	Government Office in Malaysia (Hashim, Azib, Mansor, Muhammad, & Estiar, 2017)		-The company's systems must be updated and upgraded on a regular basis to guarantee that employees can access information quickly.
3.	*The Impact of Digitalization on Business Models* (Bouwman & Molina-Castillo, 2018)	**Business Model Experimentation** - Innovation Activity - Strategy - Competitive Intensity - Technology Turbulence **Business Model Practices** - Innovativeness - Overall Performance	-The value added to the company is significant in terms of pace, business image and accessibility. -Businesses must follow the trend in order not to become obsolete. Employees have to adapt to the changes made. - Innovativeness has a direct effect on to the overall performance of the company
4.	*Role of Digitalization of Business Messages* (Hossen, 2016)	**Digital Technology** - Digital Revolution - Media Integrity - Flexible Interaction - Transaction - Internet **Intra-personal Communication** - Communicators - Messages - Noise - Feedback - Context - Channel	-Effective communication will result in the success of a business. -Technical advancement in building a good communication by going more digital will update the improve the business process. -By going digital, now companies will become more attractive, flexible,

No.	Title of Research and/or Articles	Variables and Sub-Variables	Findings
			time efficient, cheaper, and storable.
5.	*The Challenge of Going Digital* (Vidas Bubanja & Bubanja, 2017)	**Digitalization** - Digital assets - Digital usage - Digital empowerment workforce **Digital Process** - Product - Business model - Competition - Globalization - Skills **Digital Challenges** - Hyperawareness - Informed decision making - Fast execution	-Companies need to secure a high quality and affordable infrastructure -Educated managers and skilled workers is a necessary human capital for the digitalization to properly function

2.6. DIFFERENCE IN RESEARCH

System quality is linked to information quality, and information quality is linked to organizational impact, which, in turn, influences employee performance (Hashim, Azib, Mansor, Muhammad, & Estiar, 2017).

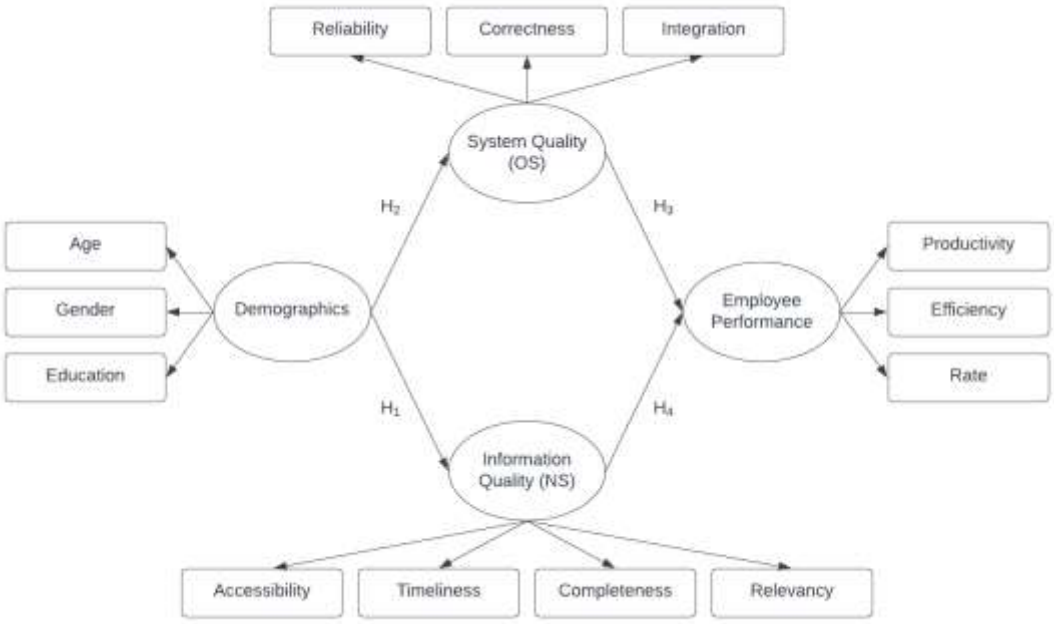
The previous research done by Ali and Younes (2013) claim that the quality of an information system has a direct and indirect impact on individual performance, with a strong direct association. The most critical components that contribute considerably to individual performance are integration and system reliability. According to the findings, the influence of information quality on individual performance is favorable and significant, which is consistent with earlier research. The impact of these attributes on individual performance has been demonstrated in this study.

Indonesia is a large nation, where the population are more spread out compared to most nations. The company in this case study operates everywhere across Indonesia, which is what differentiates the research's findings from those of earlier studies. In a developing nation like Indonesia, where technological advancement inequality is high, people in the western region of Indonesia stand to gain more from technology transformation than those in the eastern parts of Indonesia (Agahari, 2018). The research is attempting to determine whether the demographical aspect play a part in the installation of new technologies in the business, especially because the having to function across Indonesia.

This study also aims to determine if the demographics aspect in this organization would still have a significant influence on overall performance given the state of technological advances in Indonesia.

2.7. RESEARCH MODEL AND HYPOTHESIS

Figure 4: Research Model



Source: Lucid Chart

This research model which shows the representation of the various key points and relationships between each variable that dictates on how the research will outcome. The main variable elements in the research model below are “Demographics”, “System Quality”, “Information Sytem”, “Employees Performance”. With each has its own sub-variable. The use of Scientific Management theory by Fredrick Winslow is used to obtain this research model, the theory suggests the use of a more scientific approach in the business environment will help to do work in the most efficient way (MasterClass staff, 2020). This is demonstrated by studying how work is done in day-to-day operational tasks in companies and finding new ways to gain efficiencies, by means of which digital expansion helps contribute to theory.

1. Demographics: Age, Gender, and Education
2. Information Quality (NS): Accessibility, Timelines, Completeness, and Relevancy
3. Old System (OS): Reliability, Correctness, and Integration
4. Employee Performance: Efficiency, Productivity, and Rate

The hypotheses, in accordance with the above research model, are described as below:

H_1 : Demographics has a high significant impact towards the Information Quality New System

H_2 : Demographics has a high significant impact towards System Quality

H_3 : System Quality has a high significant to Employee Performance

H_4 : Information Quality has a high significant to Employee Performance

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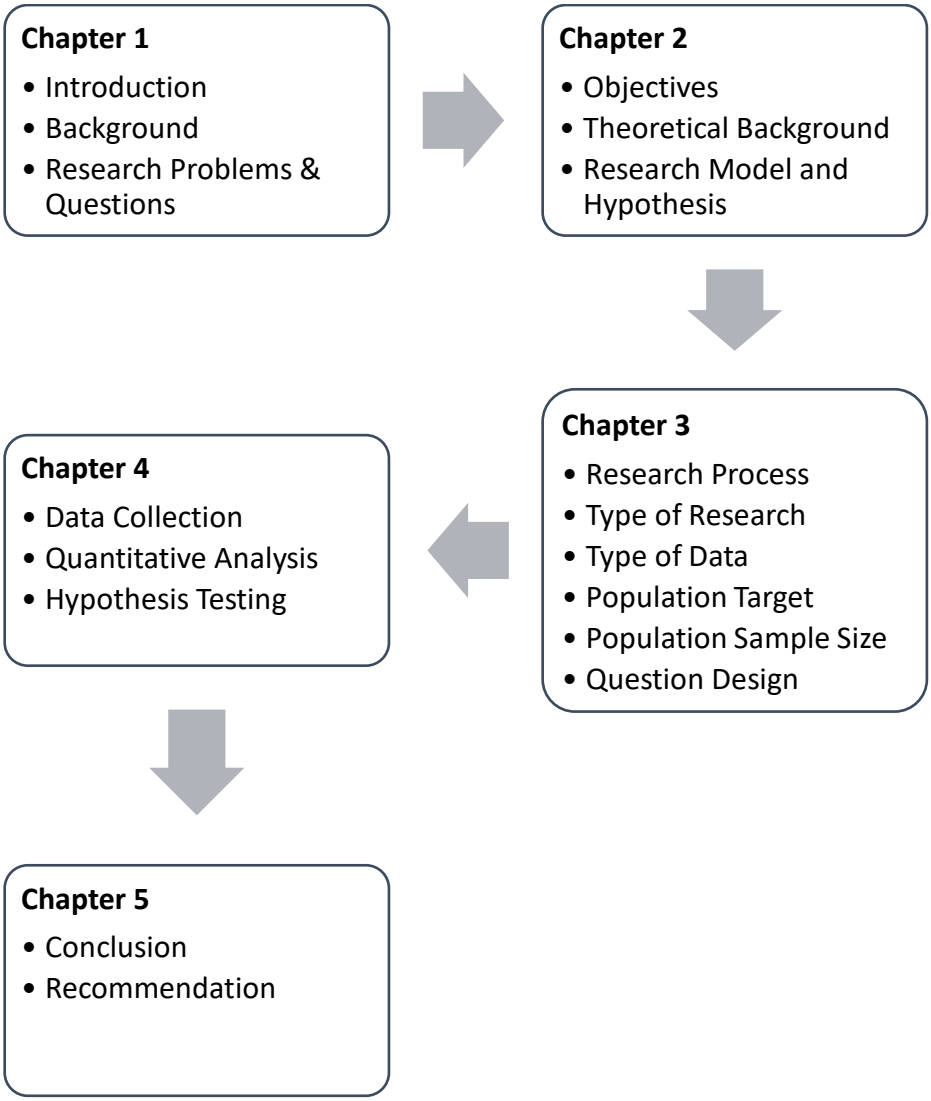
CHAPTER THREE: RESEARCH METHODOLOGY

3.1. RESEARCH PROCESS

To have a significant understanding of this research, of how the new, old system and the employees' performance correlate with each other, surveys in the form of online questionnaires were handed out to the target population. This chapter provides an overview of the research methods to be used. The steps in the research approach for this research report are as follows:



3.2. VARIABLES

Variables and sub-variables were chosen to test the hypotheses in order to support the research. These variables and their sub-variables were chosen in accordance with prior research, and additional modifications were made to account for the different research problem. Along with their appropriate scales to assess the variables, the sub-variables also include statements that will serve as their representation in the distributed questionnaire.

Table 2: Variables and Sub-Variables of Research Study

Variable	Sub-variable (indicator)	Statement	Scale/Choices	Type of Scale
Demographic	Age	How old are you?	a) Below 18 b) 18-27 c) 28-39 d) 40-60 e) 61 and above	Nominal
	Gender	What is your gender?	1: Male 2: Female	Nominal
	Education	What was your last education?	1: High School / SMA/SMK 2: S1 3: S2 4: S3	Nominal
Information Quality (New System)	Completeness (Brynjolfsson & Yang, 1996)	I totally understand the use of E-packing system.	1: Strongly Disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree	Likert
	Timeline (Yannie, 2000)	It took me some time to learn the E-packing system, and because of that it hampered my performance.	1: Strongly Disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree	Likert

Variable	Sub-variable (indicator)	Statement	Scale/Choices	Type of Scale
	Accessibility (Klimova, Simonova, Poulova, Truhlarova, & Kuca, 2016)	I am more comfortable with the new system, namely the E-packing system.	1: Strongly Disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree	Likert
	Relevancy	Because of the training, E-packing system really helps me in doing my job.	1: Strongly Disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree	Likert
System Quality (Old System)	Reliability (Klimova, Simonova, Poulova, Truhlarova, & Kuca, 2016)	I am more comfortable with the old system, namely handwritten inventory.	1: Strongly Disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree	Likert
	Correctness (Brynjolfsson & Yang, 1996)	I feel that changing to the E-packing system is unnecessary.	1: Strongly Disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree	Likert
	Integration (Adamik, 2019)	I feel the old system is irrelevant and less than optimal in today's digital era.	1: Strongly Disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree	Likert
Employee Performance	Efficiency (Attaran, 2003)	I manage to reduce the amount of working time to finish my task with the E-packing system.	1: Strongly Disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree	Likert
	Rate	I feel the E-packing system can help to improve the relationship with the client directly.	1: Strongly Disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree	Likert

Variable	Sub-variable (indicator)	Statement	Scale/Choices	Type of Scale
	Productivity	I feel the new system allow me to be more productive in doing my task/job.	1: Strongly Disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree	Likert

3.3. TYPE OF RESEARCH

This research report will use a descriptive quantitative analysis method, which aim to find the optimal recommendation for the decision-making process through examining the data collected (Sandelowski, Barroso, & Voils, 2007). For learning analytics, an insightful forecast from predictive analysis can be analysed using specific models designed for prescriptive analysis to produce automated recommendations or solutions. The use of Amos and SPSS software are done in order to find the correct result from the real data gathered by the means of variable. The measurement and correlation between the variables allow us to understand on how the conclusion and recommendation should be.

3.4. TYPE OF DATA

The gathering of data is essential in the making of this research statistical analysis, and thus the use of both primary and secondary research data is utilised. Primary data, which can also be referred to as raw or first-hand data, are data that have been generated for the first time by the researcher with the intent of addressing a study problem (Sandelowski, Barroso, & Voils, 2007). Online questionnaires will be used to gather primary data, through the means of google form survey.

Data that implicit as a second-hand information are referred to as secondary data. These data could have already been gathered and recorded by someone other than the researcher for a reason unrelated to the current study issue. (Sandelowski,

Barroso, & Voils, 2007). To assist the research, secondary data from sources such annual reports, books, journals, and other publications of past studies will be used.

3.5. DATA GATHERING

To assist the research, secondary data from sources such annual reports, books, journals, and other publications of past studies will be used in the form of primary and secondary data collection method.

Source of data for this research was gather from internally in the company, to be more specific in the Crown Indonesia nationwide. The information gather was in the form of quantitative data which was distributed by the use of online questionnaires. Some reference would also be access through the company itself by ARC.

3.5.1. PRIMARY DATA COLLECTION

The primary data collection of this research will be acquired by the distribution of questionnaires to the PT Crown employees Indonesia working throughout the country that are involved in the 6 processes of E-packing.

3.5.2. SECONDARY DATA COLLECTION

The secondary data collection of this research is acquired by the various collection journal articles, textbooks, journal articles and books from their perspective websites to accommodate this research study (Anantadjaya & Nawangwulan, 2018).

3.5.3. POPULATION AND SAMPLING

The probability cluster sampling approach is the foundation of this study. Researchers can divide their target population into groups using this technique. Instead of distributing the sample over the entire area, cluster sampling creates pockets of sampled units. Therefore, cluster sampling is quite effective in a specific area or

geographical sample by combining focus individuals inside a limited area into a single group, allowing researchers to determine much more manageable subsections of the targeted population that have comparable features (Setyaningsih, 2012).

The overall sample size is substantially less than the total population size since the nature cluster sampling is a survey research method where the researcher divides the target audience into smaller naturally existing groupings or clusters (Anantadjaya & Nawangwulan, 2018). To investigate huge populations, researchers often use cluster sampling, instead of giving each member of the target audience a questionnaire. The target population is divided into more manageable, homogenous groups, which helps researchers produce accurate results while also expediting and conserving money (Formplus, 2021). This approach is useful for examining potential group differences. The target population of this research that we manage to gather the data are the employees in PT Crown Indonesia located in Indonesia. The total number of employees in PT Crown Indonesia is later than filtered into a naturally occurring group of those working in the Relocation Department. Then, another filtration is carried out to obtain a fresh cluster of individuals who directly utilized the new E-packing technology. This is the last cluster from which the data for this study will be collected.

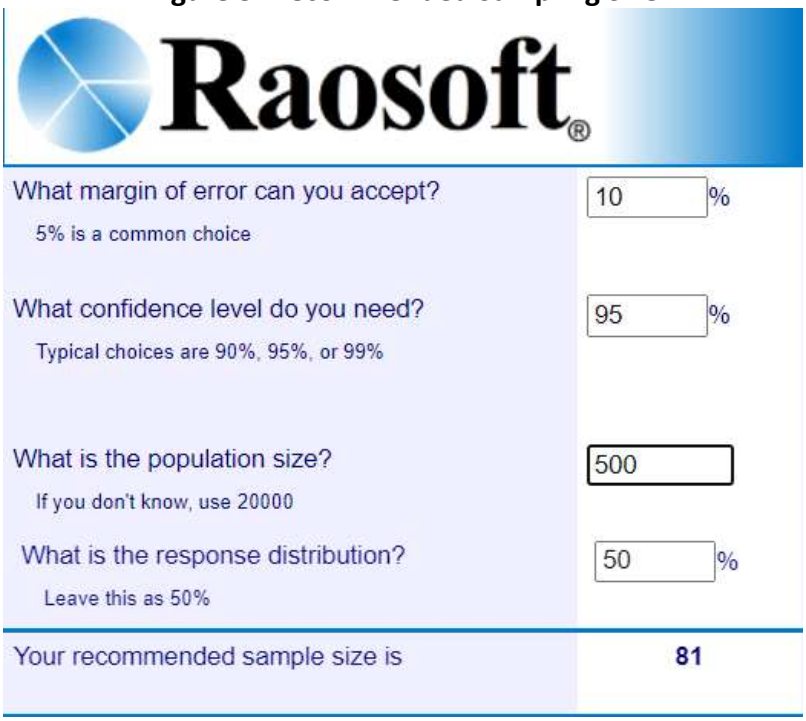
Table 3: Sampling Filtering

No	Filters	Population
1.	Those who are working in PT Crown Indonesia	500
2.	Employees of PT Crown living in Indonesia	500
3.	Employees Operating in the Crown Relocation department	220
4.	Employees of PT Crown working with E-packing system directly/indirectly	115

3.5.4. SAMPLING SIZE

Since the study of this research are conducted using the use of sampling since not all the PT Crown employees are directly involved in the use of E-packing app and thus, they cannot be studied. A margin of error is the maximum amount of error that the study will accept (Raosoft, 2022). Given the size of the population, the margin of error for this study is 10% and the degree of confidence is 95%. With a total employee of PT Crown Indonesia of 500 employees thus, the recommended minimum sampling size in this research is 81 to obtain the best outcome possible given the indicated margin of error and confidence level (Istami, 2021). The data acquired for this research is based on those who have a link to the new system since it uses a probability cluster sampling technique. Distribution of 115 surveys in the form of questionnaires to its 500 workers. 108 of those were eventually acquired back to form the quantitative data of this research.

Figure 5: Recommended Sampling Size



Source:

3.6. DATA ANALYSIS

The data analysis consists of data gather from the primary and secondary data collection. This research identification of primary data will be gathered by the means of questionnaires survey distributed online then be analyze by the used of Likert 5 scale. SPSS (Statistical Package for the Social Sciences), a program created to analyze scientific data pertaining to the social sciences, will be used to process primary data. The software application would then provide a representation of graphical data that allow data could be easier to apprehend after processing, evaluating, and generating a distinctive pattern between various entered data variables (William, 2022). The questionnaire will continue to the post-test to obtain the result for primary data then the validity and reliability should be taken into consideration in the pretest.

3.6.1. VALIDITY

The level of a test's consistency and stability in measuring what it is designed to evaluate is referred to as test reliability. The simplest definition of a trustworthy test is one that is consistent both within and over time. Consider a bathroom scale that gave you noticeably different readings each time you stepped on it, regardless of whether you had gained or lost weight, to get an idea of the fundamentals of test dependability. If such a scale did exist, it would not be regarded as trustworthy.

Table 4: Reliability Cronbach's Alpha Value Scale

Kaiser-Meyer-Olkin (KMO) Value Scale	
Scale	**Statement**
0.90 – 1.00	Marvellous
0.80 – 0.89	Meritorious
0.70 – 0.79	Middling
0.60 – 0.69	Mediocre
0.50 – 0.59	Miserable
< 0.49	Unacceptable

Source: (Hair, Black, & Babin, 2010; Chan & Noraini, 2017)

3.6.2. RELIABILITY

The user can examine the characteristics of measuring scales and the components that make up the scales using reliability analysis. In addition to providing information about the correlations between the scale's constituent items, the reliability analysis technique creates several frequently used scale reliability measures. You can calculate inter-rater reliability estimates using intraclass correlation coefficients (IBM, 2021).

Table 5: Reliability Cronbach's Alpha Value Scale

Cronbach's Alpha Value Scale	
0.93 – 0.94	Excellent
0.84 – 0.93	Reliable
0.64 – 0.84	Adequate
0.45 – 0.64	Acceptable
< 0.45	Not Satisfactory

Source: (Taber, 2018)

3.6.3. GOODNESS OF FIT

Goodness-of-fit evaluates how well sample data fits a distribution from a population having a normal distribution. Simply put, it makes assumptions about whether a sample is biased or accurately reflects the facts that would be present in the wider population. Statistical techniques that draw conclusions about observed values are included in goodness-of-fit tests. Testing residuals for normality or determining whether two samples were drawn from the same distributions are two popular applications for goodness-of-fit tests (Kenton, Goodnes of Fit, 2021).

Table 6: Goodness of Fit Measurement/Criteria

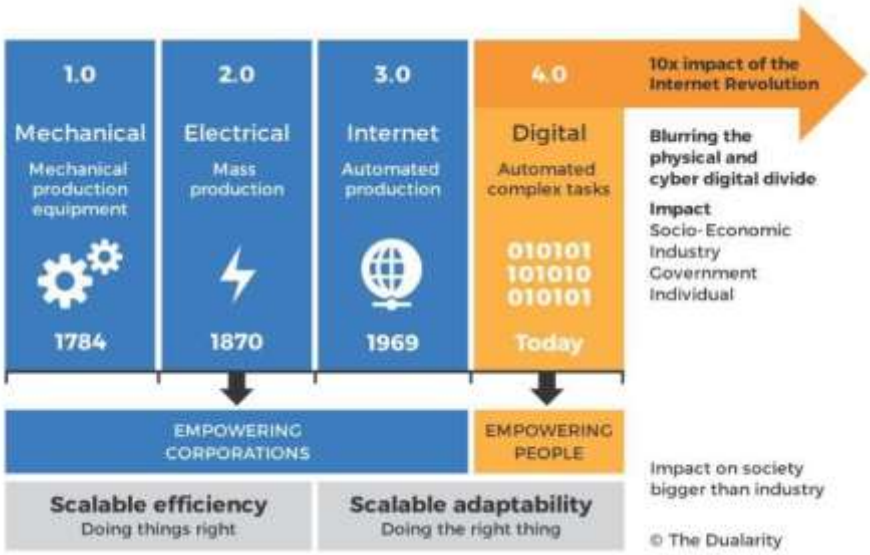
Measurement/ Criteria	**According to Santoso** (2018)	**According to Schumacker & Lomax** (2010; Budiman, Anantadjaya, & Prasetyawati, 2014)**; Wijaya** (2009; Budiman, Anantadjaya, & Prasetyawati, 2014)	**According to Ghozali** (2004; Budiman, Anantadjaya, & Prasetyawati, 2014)**; Santoso** (2009; Budiman, Anantadjaya, & Prasetyawati, 2014)
CMIN/df (Normed Chi-Square)	CMIN/df < 5 = better	CMIN/df ≤ 2 = better	CMIN/df ≤ 5 = better
RMSEA (Root Mean Square Error of Approximation)	RMSEA < 0.05 = better	RMSEA ≤ 0.08 = better	RMSEA ≤ 5 = better
GFI (Goodness of Fit Index)	GFI value closer to 1 = better	GFI value closer to 1 = better	GFI value closer to 1 = better
AGFI (Adjusted Goodness of Fit Index)	AGFI value closer to 1 = better	AGFI value closer to 1 = better	AGFI ≥ 0.09 = better
TLI (Tucker-Lewis's Index)	TLI value closer to 1 = better	TLI value closer to 1 = better	TLI ≥ 0.09 is better
NFI (Normed Fit Index)	NFI > 0.9 = better	-	NFI ≥ 0.09 is better
CFI (Comparative Fit Index)	CFI closer to 1 = better	CFI closer to 1 = better	CFI closer to 1 = better
PNFI (Parsimonious Goodness of Fit Index)	Higher PNFI value = better	-	Higher PNFI value = better
PGFI (Parsimonious Goodness of Fit Index)	Higher PGFI value = better	-	-
RMR (Root Mean Residual)	RMR < 0.05 = better	RMR ≤ 0.05 = better	RMR ≤ 0.05 = better

CHAPTER FOUR: DATA ANALYSIS

4.1. PT CROWN INDONESIA

In the new business 4.0 industrial revolution era that is the trend towards automation and data exchange in manufacturing technologies and processes. which also rely on the establishment of digital trail and its use. Digital technology has transformed the industrial and manufacturing world. To keep pace with the fast-growing technological enhancements accompanying Industry 4.0, there is a great need to evolve and change the way we work. The industries now stand on the crossover of this new era, where machines acquire human characteristics, including cognitive capabilities (Monika Gadre, 2020). The theoretical framework of the 4.0 industrial revolution is applicable to numerous corporations to explore their method of business in terms of transactions, operational and interaction with their customers and employees.

Figure 6: Industrial Revolution



Source: (Monika Gadre, 2020)

Table 7: Industrial Revolution Timeline

Industry Revolution	Period	Features
Industry 1.0	1760-1840	Water and steam powered mechanical manufacturing
Industry 2.0	1870-1914	Mass production using electricity & Assembly line production
Industry 3.0	20th century	Digital Revolution – Use of computers
Industry 4.0	21st century	Virtual System, Cyber world, Internet of Things, AI

Source: (Monika Gadre, 2020)

The Crown Worldwide Group, headquartered in Hong Kong, provides a range of logistics and related services: personal effects transportation and storage from offices in 53 countries. Services include international and domestic household goods shipments, global mobility, immigration, departure, destination and setting in services, fine art storage and transportation, hard and soft copy records management and storage, freight forwarding, third-party distribution, wine storage, office fit out and commercial relocation. Crown Worldwide Indonesia - Indonesian company with registration number 66/22370 issued in 2009. (Crown Records Management, 2021).

With the brands of Crowns Worldwide consisting of:

- *Crown World Mobility* - provides corporate relocation services for companies moving employees internationally or domestically.

- *Crown Relocations* - provides removal and transportation services to assist people relocating both internationally and domestically. Crown Relocations also provide services to support other aspects of a relocation, such as obtaining visas, family support and purchasing real estate in a customer's new home.

- Crown Records Management - provides secure document storage, management, destruction of records and high-level consolation, to organizations in over 40 countries throughout the world.

- Crown Fine Art - provides transportation, installation, and storage services.

- Crown Workspace - provides a tailored approach to office design, interior fitouts, and commercial relocations.

- Crown Logistics - provides international freight forwarding, logistics for furniture fixtures and equipment and the hotel and oil and gas industries.

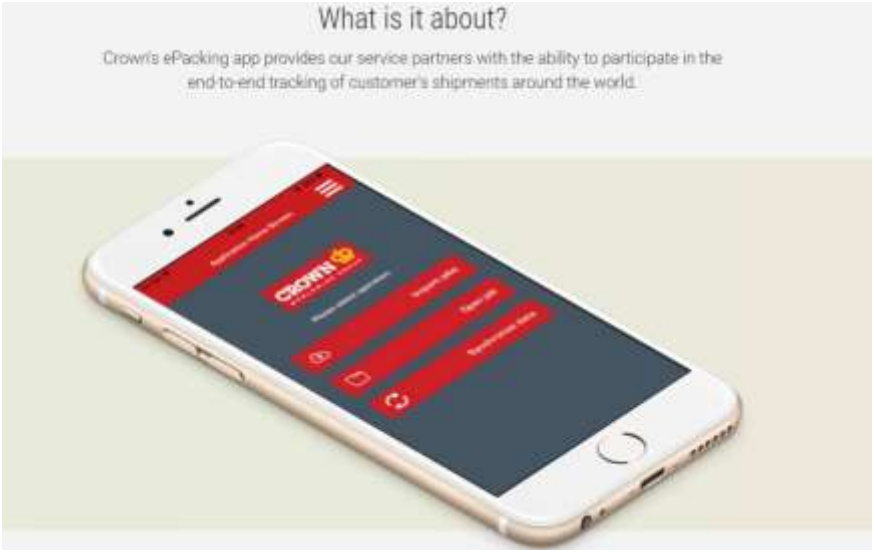
- Crown Wine Cellars - offers wine storage and handling at facilities in Hong Kong and mainland China.

PT Crown Worldwide Indonesia however have not only focus operated the Crown Records Management and Crown Logistics in the Indonesian region but also operating as a branch which connected to another international region. The offices branches in Indonesia includes Jakarta, Medan, Surabaya, Bali and more. It is noted Jakarta as the main HQ in the Indonesian operation (Crown, 2021).

The e-packing system is the newly implemented mobile system designed for the operations staff to help with various tasks electronically, this will remove the time consuming practice of hand writing inventory. The crown company in indonesia has just only implementeing this system recently of last year 2019 (Istami, 2021), where before the use of hand writing inventory was still widely practice in the Crown Operations. As to remain competitive, this new implementation of the new system is crucial in the digital era as well as increasing number of people in the market rely technology because

of its simplicity and reliable factor while also giving an image crown isn't falling behind its competitors.

Figure 7: Crown E-Packaging Application



Source: (AppAdvice, 2021)

A good supply chain management where in terms of expedition in the Crown Relocation services reflected and based by how every product that are being transferred are taken care by various chain or organizations and step procedures. It is by managing a good chain, the company will be able to cut excess cost, time wasted and etc (Triskele Logistics, 2022). Business Process Reengineering (BPR) is a method for transforming business processes and reshaping all business processes, involved technologies, and related management systems, as well as the underlying organizational structure and values, to achieve significant improvements in performance across the board (Huang, Lee, Chiu, & Yen, 2014).

The use of the old system which was based on the handwriting has various issues below it sleeves, one of the main issue was that the use of hand writing means every data has to be manually written which relate to a more time consuming. The objective of implementing the new system was to remove any unnecesary time consuming

practice which would hinder the effiency of staff members operating in the crown operations. Various tasks such as to create electronic inventories, record exceptions, capture photographs, obtain sign offs, create loading charts are now could be better implemented.

The purpose of this evaluation analysis report is to measure and find out whether the new implemented e-packing system is better in terms of efficiency and value, to also find on how well the staffs are handling such new system and to remove their old habits and adapt to the new one. This report will undergo and practice the use of qualitative and quantiative in gathering research data by the means of questionnaires, findings and experiencing first hand. The data collected will then be summarize and measured statistically to find correlation to determine the result of the findings (Monica Franzese, 2019).

The abnormalities or phenomena occurrence during the finding of this research was the to measure and find the most efficient method of utilising the fleet in PT Crown company. The recent pandemic event had a significant impact on the relocation logistics sector, as nations began to close their borders to one another. People tried to flee to their own country as a result, which increased the logistics of relocation. The company was working to improve the system in order to boost productivity and reduce any potential risks associated with the work. They have developed a system known as E-packing.

Identifying the major barriers when changing from the old system to the new system, the issues, interactions, and feedbacks from the employees which not only in terms of satisfaction or experience but also in overall performance or output after the new system is implemented.

This research will also help to verify on how much significant the factors correlate to the result of the performance of the employees. The company age demographic segment has a wider gap considering its present in Indonesia since the 1970's (Antara, 2009), and thus the increasing number of the younger working population means the gap of the older employees are even wider. This research will enable to find out the impact of such technological change in those demographic age group, and how much of an impact those variables would be on the performance result.

4.1.1. DAILY WORK SCHEDULE

If the results of this study show that using the new information system has a bigger impact on employees' performance, the new information system should also be used to replace previous systems. The daily work schedule and a domestic relocation move are two systems that the new information system may utilize. System, product, and service efficiency is increased because of the technology. It assists in managing contacts and personnel records, maintaining data flow, and tracking and streamlining operations. In addition, by running operations more efficiently, the company is able to save expenses and expand quickly (Them You & Me, 2018).

The work schedule refers to the days and hours that an employee is assigned for paid employment. It contains information about their individual shift, such as the days of the week and hours of the day they should work for the company, and it also helps employees plan their time during the day. As for now, the daily work schedule in the company PT Crown relies on a hardcopy that must be input manually by the employees. This might possibly create inefficiency and inconsistency. This research will recommend the best possible outcome by using the variables and data to decide whether the daily work schedule should be implemented as well in the E-packing application.

Figure 8: Example of Daily Work Schedule

Source: (Bhimani, 2022)

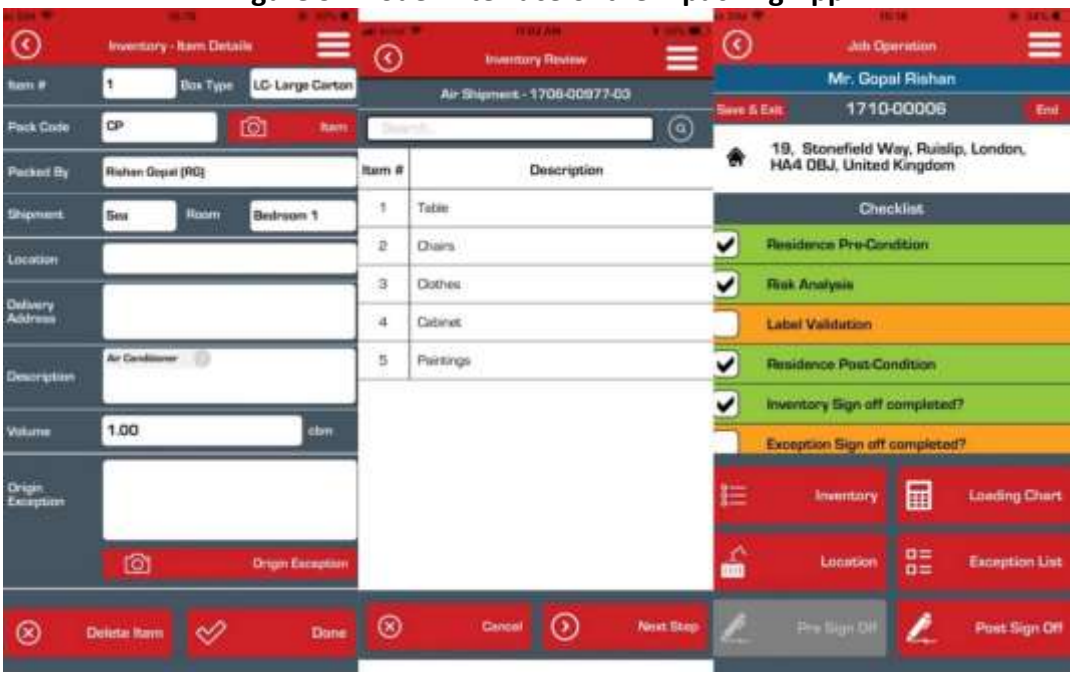
4.1.2. DOMESTIC LOCAL MOVE

PT Crown relocation also oversees the local domestic move, this is the relocation move within the same city area. It is during the job occurrence, a documentation of the job is being recorded, and as for now the local domestic move the documentation is being in the form of hardcopy and inputted manually by the employee in charge.

This manual input might create the arise of certain issues that might possibly affect the performance during the job. For instance, the manual input in the form of handwriting might have a negative clarity to read upon by other employees. It also that documentation data for each item being move must be input manually on the hardcopy and the soft copy manually, this means extra job that could increase the chance of error. Being a hardcopy as it is before being inputted in the data server computer, have the chance to be broken/damaged in the process.

Different form the E-packing software that allows each individual item to have their own individual bar code tag that could ease the job for the employees. However, so far, the E-packing software has only been applied to a more international and inter-island route in Indonesia.

Figure 9: Model interface of the E-packing App



Source: (AppAdvice, 2021)

4.2. CHARACTERISTICS OF RESPONDENTS

The questionnaire was distributed to 115 correspondents that has met the criteria that has involved with the use of E-packing and valid to answer the questions given in PT Crown Indonesia. Only 108 out of 115 correspondents can be gathered for the survey, that number serves as the basis for the study calculations.

4.2.1. GENDER COMPOSITION

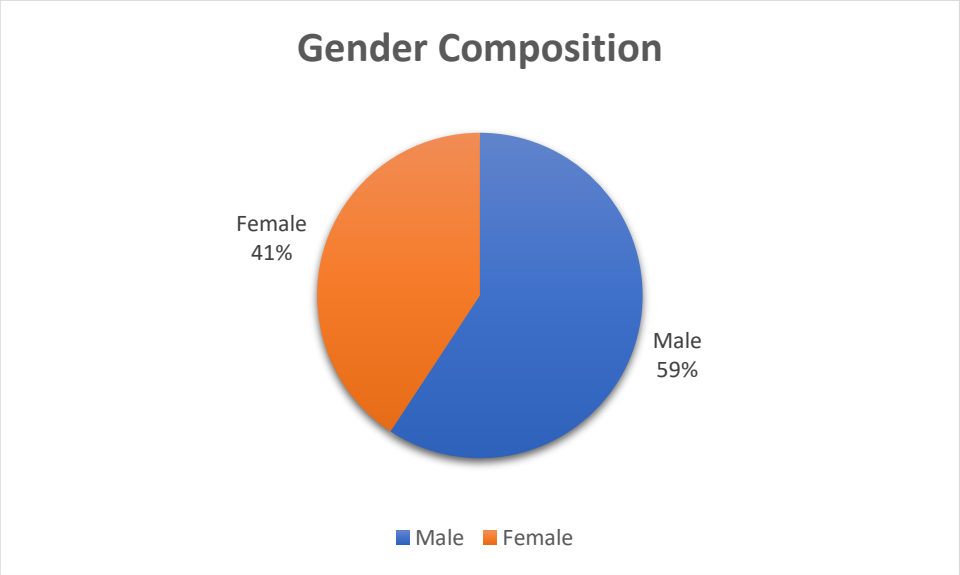
The following table illustrates the characteristics of respondents by gender:

Table 8: Gender Composition

Title		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	64	59.3	59.3	59.3
	Female	44	40.7	40.7	100

Source: SPSS

Figure 10 Gender Composition of The Target Population



Source: SPSS

4.2.2. AGE COMPOSITION

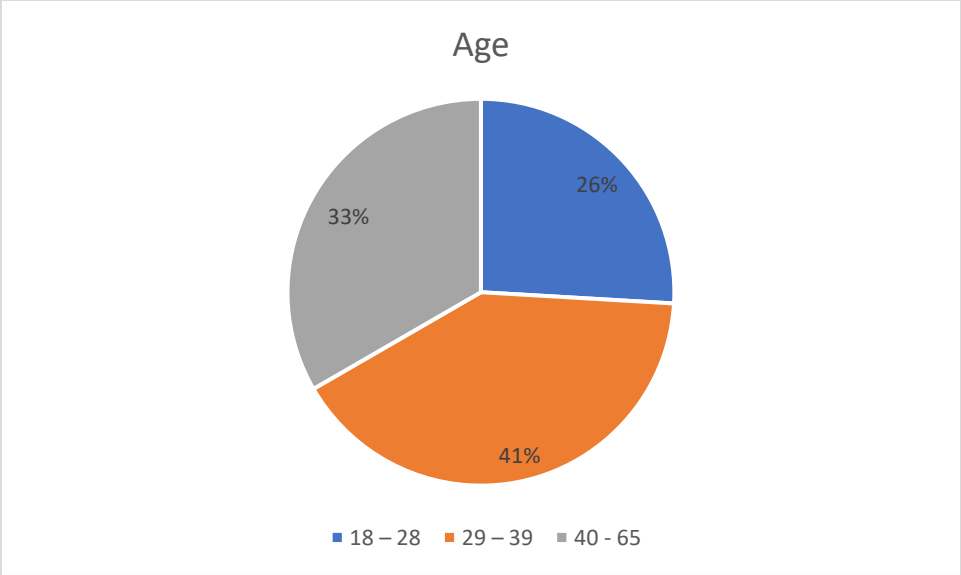
The percentage is shown in the table below is of age shows an evenly distributed questionnaire to people on all different age groups. It can be understood that majority of employees that interacts with the E-packing system is at the age group of 29 – 39 years old.

Table 9: Age Composition

Title		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18 – 28	28	25.9	25.9	25.9
	29 – 39	44	40.7	40.7	66.7
	40 - 65	36	33.3	33.3	100.0

Source: SPSS

Figure 11 Age Composition of The Target Population



Source: SPSS

4.2.3. EDUCATION

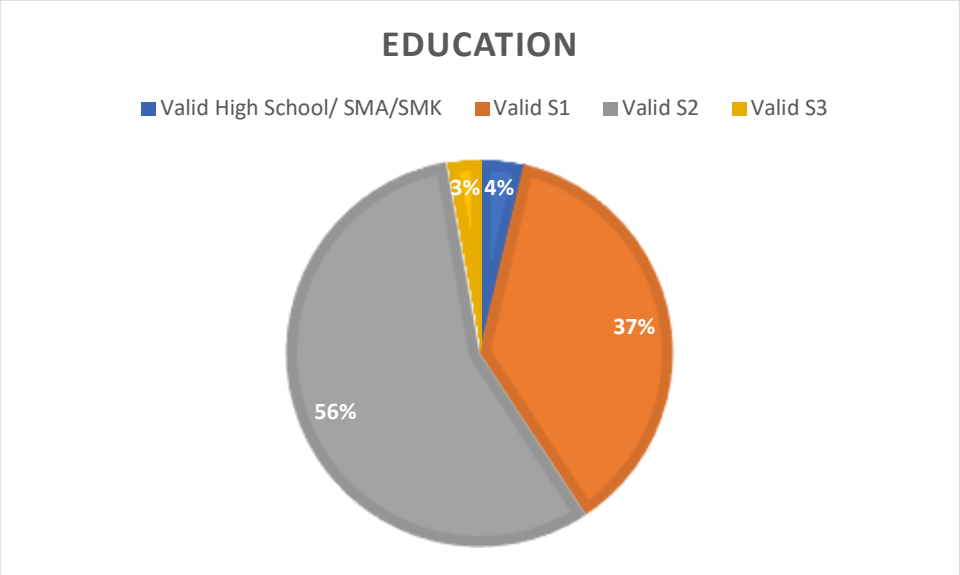
The following table illustrates the characteristics of respondents by education background:

Table 10: Education Background

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High School/ SMA/SMK	4	3.7	3.7	3.7
	S1	40	37.0	37.0	40.7
	S2	61	56.5	56.5	97.2
	S3	3	2.8	2.8	100.0

Source: SPSS

Figure 12 Education Background of The Target Population



Source: SPSS

4.3. STATISTICAL ANALYSIS

The act of gathering and analysing data to find patterns and trends is known as statistical analysis. It's a technique for attempting to eliminate bias from information assessment by utilizing numbers. It may also be viewed as a scientific instrument that assists in making decisions (Brooks, 2022). In instances like obtaining research interpretations, statistical modelling, or creating surveys and studies, statistical analysis might be applied (Tech Target, 2020).

The most basic type of statistical analysis, descriptive statistics uses numbers to describe the characteristics of a data collection. It facilitates the condensing of enormous data sets into more manageable and straightforward formats. Descriptive statistics are used to offer a data summary or to represent an entire sample within a study community.

The table below shows the descriptive statistics result of each indicator:

Table 11: Descriptive Statistics

Descriptive Statistics									
	N	Mean		Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
GEN	108	1.42	0.049	0.514	0.264	0.553	0.233	-1.215	0.461
AGE	108	3.07	0.074	0.770	0.593	-0.128	0.233	-1.292	0.461
EDU	108	2.58	0.059	0.613	0.376	-0.449	0.233	-0.034	0.461
RELE	108	4.05	0.046	0.481	0.231	-0.381	0.233	3.833	0.461
COM	108	3.86	0.076	0.791	0.625	-1.017	0.233	1.056	0.461
TIME	108	2.50	0.062	0.649	0.421	-0.105	0.233	-0.194	0.461
RELI	108	2.94	0.085	0.878	0.771	0.296	0.233	-1.253	0.461
ACCESS	108	3.84	0.063	0.658	0.433	-0.826	0.233	1.476	0.461
CORR	108	3.22	0.065	0.674	0.455	0.260	0.233	0.157	0.461
INTEG	108	3.65	0.074	0.765	0.585	-0.706	0.233	0.178	0.461
PROD	108	3.03	0.096	1.000	0.999	0.287	0.233	-1.352	0.461
EFF	108	3.41	0.097	1.005	1.010	0.175	0.233	-1.021	0.461
RATE	108	3.26	0.076	0.790	0.624	0.081	0.233	-0.489	0.461
Valid N (listwise)	108								

Source: SPSS

Small standard deviation means that the values are close to the mean and large standard deviation means that the values are father from the mean. Standard deviation measures the dispersion of data compared to its mean, which is computed by taking the square root of its variance. In other words, in order to interpret the findings, statistical analysis is a helpful method that enables us to condense the participant data into a single, summary number. Although they cannot provide information for causal analysis, descriptive statistics give the research a valuable method for summarizing data and giving a description of the sample (RN & RN, 2009).

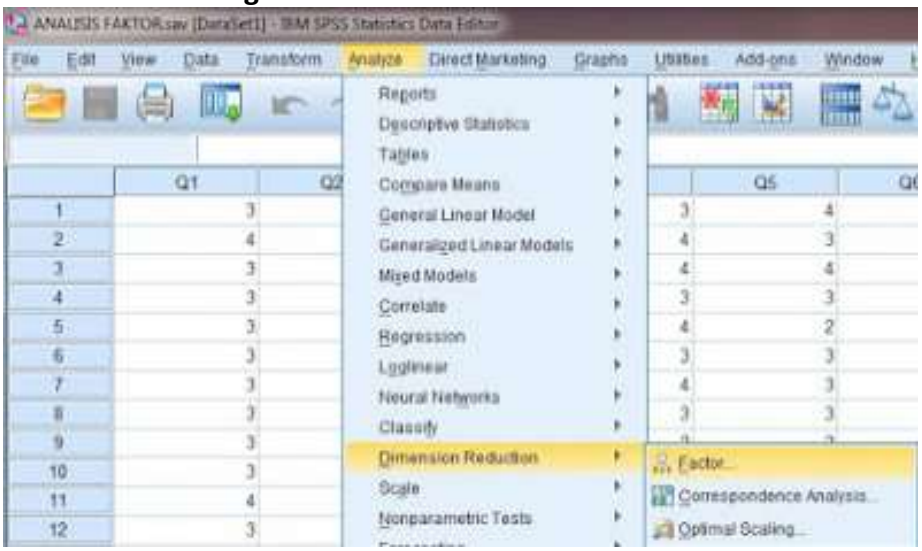
4.4. VALIDITY TEST AND RESULTS

The quality of a research can be evaluated through the validity and reliability. According to Middleton (2019) reliability is about the consistency of a measure and One of the most widely used procedures for assessing distributional shape is Fisher's measure of skewness and kurtosis or the coefficient of excess, based on the third and fourth central moments or in other words the extreme value comparisons between one tail and the other. It gauges how frequently outliers appear in the distribution (Blanca, Arnau, López-Montiel, Bono, & Bendayan, 2013).

4.4.1. VALIDITY TEST

Validity is needed to measure the data collected whether the data collected can be used or not. The research can be said valid if the research can accurately measure what is being measure. Validity can be considered related to accuracy. This research is using KMO and Bartlett's test to find out whether the data is va1lid or not. KMO test is found on SPSS, with following steps; open analyse -> dimension reduction -> factor -> descriptive (check all the options available) -> apply. if the KMO test results the value above 0.6, the data is valid.

Figure 13: Screenshot from the SPSS



Source: SPSS

Table 12:Validity Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.711
Bartlett's Test of Sphericity	Approx. Chi-Square	461.303
	df	78
	Sig.	0.000

Source: SPSS

The minimum value of KMO value usually is 0.60 – 0.69, if the result shows bigger than 0.6 means that the data is reliable that makes it valid and accepted for the research (Taber, 2018).

4.4.2. RELIABILITY TEST

Reliability is related to the consistency of a measurement of a concept. If the result is the same and consistent by using the same method, then the measurement is considered reliable (Middleton, 2019). The minimum value of Cronbach Alpha usually is 0.5, if the result shows bigger than 0.5 means that the data is reliable.

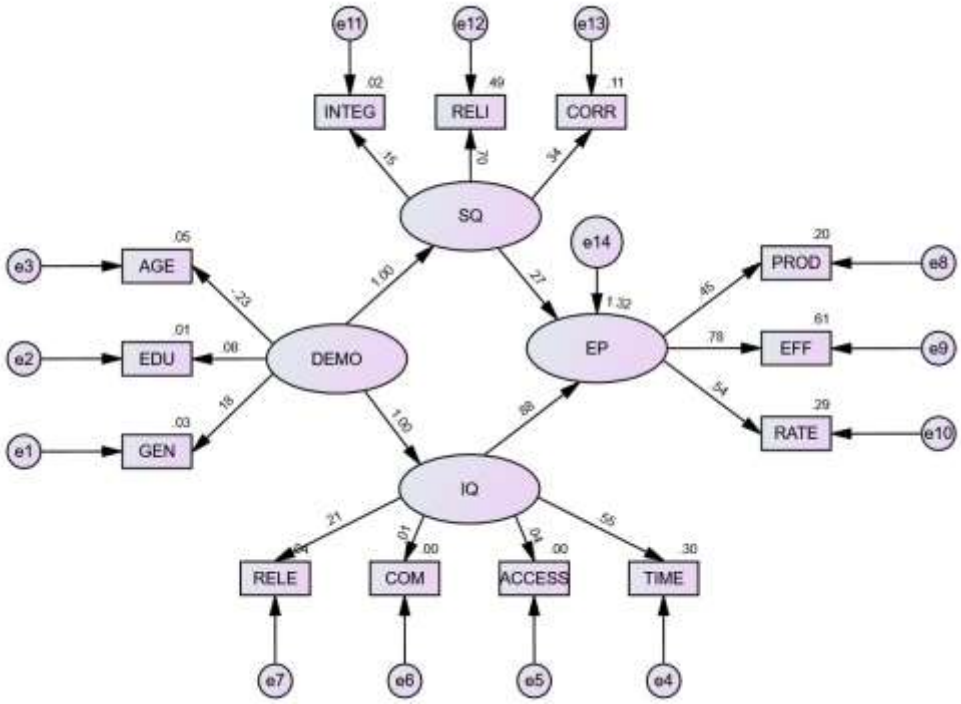
Table 13: Reliability Cronbach's Alpha Value Scale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.580	0.552	13

Source: SPSS

4.5. AMOS PATH ANALYSIS RESULTS

Figure 14: AMOS Diagram



Source: AMOS

Table 14: Abbreviations

No.	Abbreviation	Full Description	No.	Abbreviation	Full Description
1.	AGE	Age	10.	RATE	Customer Rating
2.	EDU	Education	11.	DEMO	Demographic
3.	GEN	Gender	12.	COM	Completeness
4.	INTEG	Integration	13.	ACCESS	Accessibility
5.	RELI	Reliability	14.	TIME	Timeliness
6.	CORR	Correctness	15.	EP	Employee Performance
7.	PROD	Productive	16.	IQ/NS	Information Quality
8.	EFF	Efficiency	17.	SQ/OS	Old System
9.	RELE	Openness to Experience			

Source: AMOS

This research model which shows the representation of the various key points and relationships between each variable that dictates on how the research will outcome. The main variable elements in the research model below are “Demographics”, “System Quality”, “Information Sytem”, “Employees Performance”. With each has its own sub-variable. The use of Scientific Management theory by Fredrick Winslow is used to obtain this research model, the theory suggests the use of a more scientific approach in the business environment will help to do work in the most efficient way (MasterClass staff, 2020). This is demonstrated by studying how work is done in day-to-day operational tasks in companies and finding new ways to gain efficiencies, by means of which digital expansion helps contribute to theory.

Table 15: Variables Diagram Relationship

			Estimate
System Quality (Old System)	←	Demographic	1.00
Information Quality (New System)	←	Demographic	1.00
Employee Performance	←	Information Quality (New System)	0.878
Employee Performance	←	System Quality (Old System)	0.272

Source: AMOS 2022

Demographic has a positive influence of 1.00 towards System Quality. This discovery can be supported by Van Waes and et al. (2019), where impact of the local demographic, cultural, ethnic, and economic conditions have a positive impact on quality management system. In addition, this results also aligned with findings from Almahamid, Sleihat, and Abbady (2012), which revealed that there is a significant statistical impact of e-business systems quality and demographic variables.

Demographic has a positive influence of 1.00 towards Information Quality. The result is supported by Singla and Aggarwal (2018) where the research examined the

content quality of Indian university websites from the perspective of end users based on their demographic characteristics including gender, age, educational level, and status. Additionally, another study conducted by Cheburet and Odhiambo-Otieno (2016) attempted to research socio-demographic factors of health workers affected data quality and found that the former has a positive influence on the latter.

Information Quality has a positive influence of 87.8% towards Employee Performance. This finding can be aligned with research conducted by Al-Mamary, Shamsuddin, and Aziati (2014) where information quality has a high positive association with employee performance. Additionally, this finding is also supported by Makau, Lagat, and Bonuke (2017) where the researchers concluded that information quality has a significantly influenced on hotel performance to very a great extent. Furthermore, a study by Hikmawan and Santoso (2020) demonstrated that human resources information system has a positive and significant influence on employee performance.

System Quality has a positive influence of 27.2% towards Employee Performance. A study conducted by Bahari and Mahmud (2010) found that there is a positive effect of system quality, information quality, and service quality on individual performance as well as organizational performance. Another research conducted by Hamzah, Reni, and Damang (2021) found that there is an insignificant score on employee performance and service quality.

Table 16: Demographics Variables

			Estimate
Gender	←	Demographic	0.184
Education	←	Demographic	0.075
Age	←	Demographic	-0.232

Source: AMOS 2022

Gender has an explanatory power of 18.4%. This study result can be supported by Matagi, Baguma, Rutanga, and Baluku (2020) where the results indicated that gender does not significantly influence organizational and levels of job performance. Furthermore, according to Sari, Nindita, Pahlawi, and Ayu (2020), whose research attempted to examine the factors that play a role in improving the performance of online drivers, gender had a positive and not significant effect in moderating the incentive relationship with the performance of online transportation drivers.

Education has an explanatory power of 7.5%. This result can be aligned with Faruk (2018) whose results showed that the variables of education and training and leadership influence simultaneously yet partially on employee performance.

Age on the other hand has an explanatory power of -23.2%. The result of this can be supported by Kunze, Boehm, and Bruch (2013) a study conducted by where age is a negative impact towards resistance to change which the latter acts as an intermediation between age and job performance.

Table 17: Information Quality Variables

			Estimate
Timeliness	←	Information Quality (New System)	0.548
Accessibility	←	Information Quality (New System)	0.037
Completeness	←	Information Quality (New System)	0.014
Relevancy	←	Information Quality (New System)	0.21

Source: AMOS 2022

Timeliness has an explanatory power of 54.8%. This finding aligned with findings from Alkhateeb, Mahdi, and Almsafr (2012) results show that there is a positive relationship between each of the time planning and time attitude with the job performance.

Accessibility has an explanatory power of 3.7%. According to Familusi and Ajayi (2015), whose the focus of the research was to assess the degree of knowledge access and usage, as well as to pinpoint the causes of low productivity and look into the difficulties encountered with information access and utilization. According to the survey, a lack of internet access and a large student load placed on each university faculty member's plate for instruction and supervision were the main contributors to low productivity.

Completeness has a positive explanatory power of 1.4%. The correlation between self-efficacy and better performance outcomes may well be explained by increased attentional assignment to assignment activities, including monitoring stimulus-response relationships and concentrating focus on learning and memory activities (Sykes, Venkatesh, & Johnson, 2014). As a result, understanding how the system work does provide a positive correlation with employee performance.

Relevancy has an explanatory power of 21%. The finding can be supported by a study by Themanson and Rosen (2015), whose objective was to examine the relationships between self-efficacy and behavioural and neural indices of task performance and task-relevant attentional control. According to the research, the connection between self and better performance outcomes may be explained by a higher attentional allocation to task-relevant processes, such as keeping track of sensory input patterns and concentrating on mental processing activities.

Table 18: System Quality Variables

			Estimate
Integration	←	System Quality (Old System)	0.148
Reliability	←	System Quality (Old System)	0.702
Correctness	←	System Quality (Old System)	0.338

Source: AMOS 2022

Integration has an explanatory power of 14.8%. The result of this finding aligned with a study conducted by Prasad (Prasad, 2021), where the researchers presented an integrated new-age performance management framework aligning the internal and external factors of an organization which has a positive effect in employee's performance.

Reliability has an explanatory power of 70.2%. According to Johanim and Yahya (2012), their research results provide evidence of construct reliability and validity of the job performance, thus, the construct of reliability has a positive correlation with job performance. Another study conducted by Rokima and Tentama (2020), suggested that there was a positive correlation between reliability performance scale and test aspects and indicators that form the variables of employee performance.

Correctness has an explanatory power of 33.8%. This finding can be supported by Lee, Lim, and Oah (2020), whose study attempted to compare the effects of accurate and inaccurate feedback on work performance under two different work conditions. Researchers concluded that accuracy does, in fact, have a positive relationship with work performance since inaccurate feedback was found to be equally effective as accurate feedback under the non-visible condition but less effective than accurate feedback under the visible condition.

Table 19: Employee Performance Variables

			Estimate
Productivity	←	Employee Performance	0.446
Efficiency	←	Employee Performance	0.783
Rating	←	Employee Performance	0.541

Source: AMOS 2022

Productivity has an explanatory power of 44.6%. A study conducted attempts to analyse the findings indicated that safety and wellbeing have a detrimental to productivity, and that the second work productivity hypothesis has an impact on employee performance (Kholik, 2017). Another It is highly advised that the procedures be successfully applied in order to boost productivity and employee performance in a construction company, since study revealed specific human resource management methods do so (Ngwenya & Aigbavboa, 2016).

Efficiency has an explanatory power of 78.3%. Supporting research found that that self-efficacy could mediate delegating leadership style to employee performance, work motivation on employee performance, and work environment on employee performance (Wulandari, Djawoto, & Prijati, 2021). According to additional research, infrastructure and supervision have a favourable and considerable impact on workers' productivity, and as a result, staff performance has a favourable and significant impact on the standard of essential services (Nengsih, et al., 2021).

Rating has an explanatory power of 54.1%. According to a study, vibrant performance parameters had a significant impact on performance ratings, those characteristics interacted to predict ratings and not only with one another but also with the purpose of ratings, and evaluation methods that can record dynamic performance information may be of great practical significance (Reb & Greguras, 2010).

4.6. GOODNESS OF FIT MODEL RESULTS

The goodness-of-fit test measures how well sample data fits a population's normal-distributed distribution. It simply assumes that a sample is skewed or fairly represents the information that would be present in the larger population. Goodness-of-fit tests encompass statistical methods that provide interpretations of observed values. Two common uses for goodness-of-fit tests are checking the normality of

residuals or evaluating whether two samples were taken from the same distributions (Kenton, 2021).

Table 20: Goodness of Fit Results

Measurement/ Criteria	**According to Santoso** (2018)	**According to Schumacker & Lomax** (2010; Budiman, Anantadjaya, & Prasetyawati, 2014)**; Wijaya** (2009; Budiman, Anantadjaya, & Prasetyawati, 2014)	**According to Ghozali** (2004; Budiman, Anantadjaya, & Prasetyawati, 2014)**; Santoso** (2009; Budiman, Anantadjaya, & Prasetyawati, 2014)	**Result**	**Fit**
CMIN/df (Normed Chi-Square)	CMIN/df < 5 = better	CMIN/df ≤ 2 = better	CMIN/df ≤ 5 = better	5.035	Good
RMSEA (Root Mean Square Error of Approximation)	RMSEA < 0.05 = better	RMSEA ≤ 0.08 = better	RMSEA ≤ 5 = better	0.194	Moderate
GFI (Goodness of Fit Index)	GFI value closer to 1 = better	GFI value closer to 1 = better	GFI value closer to 1 = better	0.632	Moderate
AGFI (Adjusted Goodness of Fit Index)	AGFI value closer to 1 = better	AGFI value closer to 1 = better	AGFI ≥ 0.09 = better	0.485	Moderate
TLI (Tucker-Lewis's Index)	TLI value closer to 1 = better	TLI value closer to 1 = better	TLI ≥ 0.09 is better	0.226	Good
NFI (Normed Fit Index)	NFI > 0.9 = better	-	NFI ≥ 0.09 is better	0.325	Good
CFI (Comparative Fit Index)	CFI closer to 1 = better	CFI closer to 1 = better	CFI closer to 1 = better	0.355	Moderate

Measurement/ Criteria	According to Santoso (2018)	According to Schumacker & Lomax (2010; Budiman, Anantadjaya, & Prasetyawati, 2014); Wijaya (2009; Budiman, Anantadjaya, & Prasetyawati, 2014)	According to Ghozali (2004; Budiman, Anantadjaya, & Prasetyawati, 2014); Santoso (2009; Budiman, Anantadjaya, & Prasetyawati, 2014)	Result	Fit
PNFI (Parsimonious Goodness of Fit Index)	Higher PNFI value = better	-	Higher PNFI value = better	0.80	Good
PGFI (Parsimonious Goodness of Fit Index)	Higher PGFI value = better	-	-	0.46	Good
RMR (Root Mean Residual)	RMR < 0.05 = better	RMR ≤ 0.05 = better	RMR ≤ 0.05 = better	0.097	Moderate

4.7. HYPOTHESIS TESTING

Table 21 P Value

			P
SQ	<---	DEMO	0.679
IQ	<---	DEMO	0.084
EP	<---	SQ	0.673
EP	<---	IQ	0.008

Source: AMOS

Hypothesis is an idea or the concept planning that has been tested or done in the research experiment, the results will then be predicted. The data of the hypothesis stated above shows in the real-life problems happening currently in PT Crown Indonesia.

Hypotheses can be classified into the following categories based on the literature analysis and conceptual framework:

Table 22 P-value Statistical Significance

P- Value	Decision
P-value $\geq$ 0.05	Since the outcome is not statistically significant, the null hypothesis is to be rejected.
P-value $\leq$ 0.05	The result is statistically significant. In general, choose the alternative hypothesis above the null hypothesis.
P-value $\leq$ 0.01	Since the outcome is highly statistically significant, the alternative hypothesis is accepted instead of the null hypothesis.

Source: (Byjus, 2022)

H_1: Demographics has a high significant impact towards the Information Quality (New System).

The result of the p-value is 0.084 which is more than 0.05, showing that the result is not statistically significant, suggesting that the null hypothesis should be retained, and the alternative hypothesis should be rejected. As a result, it may be said that demographic factors have a negligible/low significant influence on the Information Quality (new system).

H_2: Demographics has a high significant impact towards System Quality (Old System)

The result of the p-value is 0.679 which is more than 0.05, showing that the result is not statistically significant, suggesting that the null hypothesis should be retained, and the alternative hypothesis should be rejected. As a result, it may be said that Demographic factors have a negligible/low significant influence on the System Quality (Old System).

H_3: System Quality (Old System) has a high significant to Employee Performance

The result of the p-value is 0.673 which is more than 0.05, showing that the result is not statistically significant, suggesting that the null hypothesis should be retained, and the alternative hypothesis should be rejected. As a result, it may be said that System Quality (OS) factors have a negligible/low significant influence on the Employee Performance.

H_4: Information Quality (New System) has a high significant to Employee Performance

The result of the p-value is 0.008 which is less than 0.05, which indicates that the result is statistically significant, thus, rejecting the null hypothesis. This outcome can be interpreted that Information System (NS) has a high significant influence towards Employee Performance.

4.8. DISCUSSION

When two variables are correlated, it may be determined whether there is any link between them, while the p-value tells us whether a research's findings are significant statistically. Even while correlation shows how two variables are related, it

does not prove cause and effect. In other words, correlation just shows that the numbers often move together rather than determining whether a movement in one actual number causes a change in another number because in statistics, the correlation coefficient is used to assess how closely two variables are related (Joseph, 2021).

The findings show that the utilization of the new and old systems in the firm is not greatly influenced by demographics.

Table 23 Correlations and P-Values of Variables Results

Variables			**Correlation**	**Result** (Hinkle, Wiersma, & Jurs, 2003; Athuman, 2018; Santoso, 2018)	**P-value**	**Result** (McLeod, 2019; Jaadi, 2019)
Demographics	-->	Information Quality	1.00	Weak Positive Correlation	0.084	Not Statistically Significant
Demographics	-->	System Quality	1.00	Weak Positive Correlation	0.679	Not Statistically Significant
Old System	-->	Employee Performance	.27	High Positive Correlation	0.673	Not Statistically Significant

Source: AMOS

According to the research's correlations and p-value results, the linear correlation between the variables is not significant for the provided selected population, even though there is some form of link in between variables. This shows that there is not enough data to conclude that a population-level influence is present. Although an effect could exist, it's conceivable that the hypothesis test won't pick up it because the

effect is too little, it can be the case that there is too much volatility or that the sample size is too small especially for a case study such as this (Frost, 2021).

It is possible to prevent the business from drawing inferences and making decisions based on random noise in the data by getting outcomes that are not statistically significant. High p-values aid in avoiding costly errors. High p-values might serve as a helpful warning against making snap judgments or reaching conclusions based on differences that might just be random error but appear to be significant.

Overall, even though there are correlations between the variables, the strength of the associations is not statistically significant enough due to the small sample size adopted in this research, even if the sample size is appropriate given the model's fitness findings. Still, the findings demonstrate some degree of correlations among the provided variables even though the associations are regarded as being inconsequential.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATION

5.1. CONCLUSION – INPUT REGRESSION WEIGHT

The study's final observations and findings are presented in this chapter. Conclusions and suggestions are made in respect to the reported results using the available primary data from survey respondents. As referred in Chapter 1, the study aims to address three key questions:

1. How much influence does the demographics have in relation with the new information system in place?

2. How much influence does the demographics have in relation with the old system quality in place?

3. How much the old system quality has in relation with the employee's performance?

4. How much the new information system has in relation with the employee's performance?

Based on the research findings all of the research's data were analyzed, and it was shown that demographics had little impact on the significance value of both the new and the old systems. Age, gender, and education are among the demographics has a low substantial impact on system and information quality. The System Quality or the Old System are also not significantly correlated with employee performance.

The majority of the correspondents in terms of education demography have completed a higher education background, which may be a contributing element to this finding. Therefore, switching to a new digital system and learning a new system

shouldn't be too difficult for the employees. 96.3 percent of the correspondents have completed their undergraduate degrees, making them qualified to address the fundamental problems of rapidly evolving technology. It isn't in the notion that they are smarter than some others, but a greater education may provide them access to information that others do not. The ability to conduct smart work is made possible by higher education, which has value in and of itself.

The study also revealed that there has been little significant variance in how people of different ages and genders utilise the new and old systems. Especially in the current era like today, technophobia is steadily eroding in the industry. the notion that older workers are more technophobic and don't want to deal with new technology advancements. The social environment may have an impact on how people perceive their own learning abilities. Because the company workplace may offer a comfortable setting for employees to work in when coping with technological advancements (Fitzgerald, Bonnet, & Welch, 2013).

Table 24 Demographic Regression Weight

			Estimate
SQ	<---	DEMO	1.00
IQ	<---	DEMO	1.00

Source: AMOS

According to the AMOS results, the influence of the old system or system quality has a minimum significant impact on employee performance, which indicates that the performance variable is skewed more in favor of the new system. This indicates that compared to the system quality old system, using the new information system for E-packing has a greater significant in relation. This indicates that it has a bigger effect on employees' performance as a whole.

Table 25 Systems Regression Weight

			Estimate
EP	<---	SQ	0.272
EP	<---	IQ	0.878

Source: AMOS

5.2. RECOMMENDATIONS

As a result of the research's numerous shortcomings, several suggestions might be made to enhance it for usage in the future. The results of this survey were limited to a certain section, therefore the only respondents we could find were from Indonesia and were employed by a single department. The results can also be skewed as a result of the small number of participants. As an outcome, the following suggestions for further research:

1. Owing to the small sample size used in this study, it is advised to expand the representative sample for data collection and maybe invest in a wider aspect of the industry rather than just one specific environment.

2. It is advised to conduct further research into additional variables, such as organizational practices and procedures that should be taken into account as attributes of employee's performance from use of the new system, since these factors are important to take into account during the digitalization process, to more thoroughly evaluate the impact of organizational changes made through the implementation of a new technology in the company.

3. Instead of waiting for the best results from the previous years' time first, the adoption of the new system might be understood if there is a clear trail of method that the organization has developed.

The following advice for management applications is possible:

1. Based on the current research's findings, it is possible to draw the conclusion that the impact of the new system's implementation on employees' performance is significantly more substantial than that of the old system. Even though the demographics variable does not significantly affect either system, its low significance suggests that things that could relate to additional costs, such as more training for older personnel are unnecessary.

2. It has been demonstrated that new information systems have a bigger impact on performance, hence increasing the company's technology investment is advantageous to pursuing higher employee performance. Especially, considering all sizes of businesses may increase efficiency with the use of information technology. Additionally, it might lower expenses and increase profitability. It is businesses may reach a wider audience by investing in technology than was previously feasible. Productivity and efficiency are the cornerstones to success in company since they can be increased. This entails automating procedures or jobs that many businesses could normally carry out by hand. Technology may assist in automating these procedures so that your staff members spend less time performing monotonous tasks and more time coming up with fresh concepts for expanding your business.

3. The demographics factors demonstrate that age and gender do not affect how each system evaluates the significance of its employees in a different way. It may not be essential to provide additional training for a particular population. Productivity and efficiency are the cornerstones to success in company since they can be increased. This entails automating procedures or jobs that many businesses could normally carry out by hand. Technology may assist in automating these procedures so that your staff members spend less time performing monotonous tasks and more time coming up with fresh

concepts for expanding your business. Employees may get bored and lose interest in what they are learning throughout lengthy training sessions. Much of the knowledge being taught will not be retained after an employee loses interest. Continuous training is often a good idea since it keeps staff members informed about current trends and informed about their specific line of work. However, some businesses go too far by mandating that their staff members complete an excessively high number of hours of continual training. Over time, an employee may experience severe stress because of this amount of overtraining. Additionally, stressed out people perform worse at work.

4. In addition to the relocation division, other departments might utilize the E-packing method. If the structure is implemented effectively, other departments should be able to easily follow it as it seems the degree of difficulty is not too severe. The use of technology can improve business processes. Technology has a significant impact on the creation of effective processes. By automating processes, it can assist the business in minimizing or eliminating repetitions, mistakes, and delays in the workflow and assist the staff in working more quickly. A larger worldwide market reach was made feasible by the business technology. The miracles of technology have made globalization possible. In the modern world, anyone may do business anywhere. Business owners can handle more manufacturing, distribution, and commercialization activities thanks to warehouse inventory systems.

5. According to the data interpreted by AMOS, the new information system of E-packing method has a greater impact on staff performance than the former system. It would be ideal if the E-packing technology could also be used for domestic moves inside the city. The pricing competition with local movers who can offer less expensive solutions, according to PT Crown Indonesia, is

one of the difficulties in competing in the local domestic market inside the city. However, these local movers run their own small enterprises and sole proprietorships business activities with the lack of technology and trust that PT Crown Indonesia able to provide. In opposed to local moving companies, the firm is now able to provide its customers a more secure and safe moving service thanks to the use of this new technology. Therefore, undertaking the relocation projects within the city ought to be advised, and using the information system is required to achieve so.

6. Making the user interface appear a specific way or share a similar style while keeping excellent functioning is important and by ensuring the application's user interface is regularly updated in order for the users—the employees—to be able to carry out company operations activities more effectively. Sometimes businesses' systems are not updated for an extended period of time; this should not happen since the latency it causes reduces performance.

Bibliography

Adamik, A. (2019). Creating a Competitive Advantage in the Age of Industry 4.0. *Problemy Zarządzania*, 13-31.

Agahari, W. (2018, October 18). *Digital Innovation In Indonesia: Inequalities Between The East And The West*. Retrieved from The Conversation: https://theconversation.com/digital-innovation-in-indonesia-inequalities-between-the-east-and-the-west-95218

Ali Soomro, B., A Abdelmegeed Abdelwahed, N., & Shah, N. (2019). The Influence of Demographic Factors on the Business Success of Entrepreneurs: An Empirical Study from the Small and Medium- Sized Enterprises Context of Pakistan. *International Journal of Entrepreneurship*.

Ali, B. M., & Younes, B. (2013). The Impact of Information Systems on user performance: An Exploratory Study. *Journal of Knowledge Management, Economics and Information Technology*.

Alkhateeb, A. N., Mahdi, O. R., & Almsafr, M. K. (2012). Relationship between Time Management and Job Performance Empirical Study in Malaysia Privet University Article Info. *Journal of Advanced Social Research, 2*(10), 427-438. Retrieved June 23, 2022, from https://www.researchgate.net/publication/324122414_Relationship_between_Time_Management_and_Job_Performance_Empirical_Study_in_Malaysia_Privet_University_Article_Info

Almahamid, S., Sleihat, N., & Abbady, H. (2012). The Impact of E-Business Systems Quality on its Actual Usage. *Jordan Journal of Business Administration: An International Refereed Research Journal, 4*(8), 762-787. Retrieved June 22, 2022, from https://journals.ju.edu.jo/JJBA/article/view/3425/2956

Al-Mamary, Y. H., Shamsuddin, A., & Aziati, N. (2014). The Relationship between System Quality, Information Quality, and Organizational Performance. *International Journal of Knowledge and Research in Management & E-Commerce, 4*(3), 7-10. Retrieved June 22, 2022, from

https://www.researchgate.net/publication/269463861_The_Relationship_between_System_Quality_Information_Quality_and_Organizational_Performance

Anantadjaya, S. P., & Nawangwulan, I. M. (2018). *Simple Steps for Your Business Research.* Tangerang Selatan: Kang Guru Beruang.

Antara. (2009, May 13). *Crown Indonesia Buka Kantor dan Gudang Barunya*. Retrieved from Antaranews: https://www.antaranews.com/berita/140843/crown-indonesia-buka-kantor-dan-gudang-barunya

AppAdvice. (2021). *Crown ePacking*. Retrieved from AppAdvice: https://appadvice.com/app/crown-epacking/1356418210

Athuman, J. J. (2018). Correlating Students' Knowledge Levels of Science Process Skills with their Conceptual Understanding of Biology and Intrinsic Motivation Levels: A Case Study of Morogoro High School Students in Tanzania. *International Journal of Education and Social Science Research, 1*(4), 24-36. Retrieved March 9, 2022, from https://ijessr.com/uploads/ijessr_01_46.pdf

Atomiye. (2017, 8). *Atomiye*. Retrieved June 30, 2022, from Atomiye: https://en.atomiyme.com/the-completeness-of-the-information-is-what-does-it-mean/

Attaran, M. (2003). Exploring the relationship between information technology and business process reengineering. *Science Direct*, 585-590.

Azanella, L. A. (2020, December 7). *Diperpanjang Lagi, Berikut Perjalanan PSBB di Jakarta*. Retrieved from Kompas: https://www.kompas.com/tren/read/2020/12/07/190200765/diperpanjang-lagi-berikut-perjalanan-psbb-di-jakarta?page=all

Bahari, A., & Mahmud, R. (2010). Impact of System Quality, Information Quality and Service Quality on Performance. *ICBE 2010*, 1-6. doi:http://repo.unand.ac.id/5029/

Bansal, S. (2021, November 23). *How does Technology Affect the Future of Customer Service and Support?* Retrieved from Ameyo: https://www.ameyo.com/blog/technology-affects-customer-service-support/

Barnard, Y., Bradley, M. D., Hodgson, F., & Lloyd, A. D. (2013). Learning to use new technologies by older adults: Perceived difficulties,experimentation behaviour and usability. *Computers in Human Behavior*, 1715-1724.

Bhimani, S. (2022). *Daily Work Schedule Template*. Retrieved from ExcelDataPro: https://exceldatapro.com/daily-work-schedule-template/

Blanca, M. J., Arnau, J., López-Montiel, D., Bono, R., & Bendayan, R. (2013). Skewness and Kurtosis in Real Data Samples. *Methodology*, 78-84.

Bouwman, H. N., & Molina-Castillo, F. D. (2018). The Impact of Digitalization on Business Models. *Digital Policy, Regulation and Governance*, 105-123.

Bowman, C. P. (2022, March 11). *Coronavirus Moving Study: People Left Big Cities, Temporary Moves Spiked In First 6 Months of COVID-19 Pandemic*. Retrieved from Mymove: https://www.mymove.com/moving/coronavirus-moving-trends/

Brooks, C. (2022, June 29). *What Is Statistical Analysis*. Retrieved from Business News Daily: https://www.businessnewsdaily.com/6000-statistical-analysis.html

Brynjolfsson, E., & Yang, S. (1996). Information Technology and Productivity: A Review of the Literature. *Adavances in Computers*, 179-214.

Budiman, A., Anantadjaya, S., & Prasetyawati, D. (2014, March 11). Does Job Satisfaction Influence Organizational Citizenship Behavior? An Empirical Study In Selected 4-Star Hotels In Jakarta, Indonesia. *RIBER: Review of Integrated Business and Economics Research, 3*(1), 130-149. Retrieved March 4, 2022, from SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2406800

Byjus. (2022). *P-value*. Retrieved from Byju: https://byjus.com/maths/p-value/

Chan, L. L., & Noraini, I. (2017). Validity and Reliability of The Instrument Using Exploratory Factor Analysis and Cronbach's Alpha. *International Journal of Academic Research in Business and Social Sciences, 7*(10), 400-410. doi:10.6007/IJARBSS/v7-i10/3387

Chazan, B. (2022). What Is "Education"? In B. Chazan, *Principles and Pedagogies in Jewish Educatio* (pp. 13-22). palgrave macmillan.

Cheburet, S. K., & Odhiambo-Otieno, G. W. (2016, July). Socio-demographic factors affecting data quality of routine health management information system (RHIS): Case of Uasin Gishu County referral hospital, Kenya. *International Research Journal of Public and Environmental Health, 3*(7), 151-161. doi:http://dx.doi.org/10.15739/irjpeh.16.020

Ciner, L. (2019, October 31). *Setup For Success: How To Improve Employee Performance*. Retrieved from Walkme: https://www.walkme.com/blog/how-to-improve-employee-performance/#:~:text=employees%20to%20succeed%3F-,What%20does%20employee%20performance%20mean%3F,employee%20is%20to%20the%20organization.

Cozzolino, A., Verona, G., & Rothaermel, F. T. (2017). Unpacking the Disruption Process: New Technology, Business Models, and Incumbent Adaptation . *Journal of Management Studies ('Accepted Article')*, 17-20.

Crown Records Management. (2021). *CrownRMS - About*. Retrieved from https://www.crownrms.com/locations/jakarta-office/

Crown Worldwide Group App. (2021). Retrieved from Crowded Studios: https://crowdedstudios.myportfolio.com/crown-worldwide-group-app

Crown, P. (2021). *Indonesia Kantor - Jakarta*. Retrieved from Crownrms: https://www.crownrms.com/id/locations/jakarta-office/

Dahawy, K., & Kamel, S. (2005). Perception and/or Individual Difference: What Affects the Acceptance of New Technology? *Internet and Information Technology in Modern Organizations: Challenges & Answers* , 725-736.

de Boer, E., Friligos, Y., Giraud, Y., Liang, D., Malik, Y., Mellors, N., . . . Wallace, J. (2022, June 27). *Transforming advanced manufacturing through Industry 4.0*. Retrieved June 29, 2022, from McKinsey & Company: https://www.mckinsey.com/business-functions/operations/our-insights/transforming-advanced-manufacturing-through-industry-4-0

Delone, W. H., & Mclean, E. R. (2003). The DeLone and McLean Model of Information Systems Success: A Ten-Year Update. *Journal of Management Information*, 9-30.

Familusi, E. B., & Ajayi, N. A. (2015). Information Accessibility and Utilization: The Panacea to Job Performance and Productivity of Academic StaffIn the Faculties of Agricultural Sciences: A Case Study. *International Journal of Intelligent Information Systems, 4*(6), 95-100. doi: 10.11648/j.ijiis.20150406.11

Faruk, U. (2018, February). The Effect of Education and Training to Employee Performance Through Leadership as Intervening Variables at PT. Hutama Agung Jakarta Indonesia. *International Journal of Business and Applied Social Science (IJBASS), 4*(2), 71-97. Retrieved June 22, 2022, from https://www.ssoar.info/ssoar/bitstream/handle/document/56179/ssoar-ijbass-2018-2-frauk-The_Effect_of_Education_and.pdf?sequence=1&isAllowed=y&lnkname=ssoar-ijbass-2018-2-frauk-The_Effect_of_Education_and.pdf

Fitzgerald, M. K., Bonnet, D., & Welch, M. (2013). Embracing Digital Technology. *MIT Sloan Management Review*, 1-16.

Formplus. (2021, Nov). *Cluster Sampling Guide: Types, Methods, Examples & Uses*. Retrieved from Formplus: https://www.formpl.us/blog/cluster-sampling

Frost, J. (2021). *Can High P-values Be Meaningful?* Retrieved from Statistics By Jim: https://statisticsbyjim.com/hypothesis-testing/high-p-values/#:~:text=High%20p%2Dvalues%20indicate%20that,hypothesis%20test%20to%20detect%20it.

Ghozali, I. (2004). *Model Persamaan Struktural: Konsep dan Aplikasi dengan program AMOS.* Semarang, Indonesia: Badan Penerbit Universitas Diponegoro. Retrieved March 5, 2022

Hair, J. F., Black, W., & Babin, B. J. (2010). *Multivariate Data Analysis: A Global Perspective* (7th ed.). New Jersery, USA: Pearson Prentice Hall. Retrieved February 19, 2022

Hamzah, A. I., Reni, A., & Damang, K. (2021). Optimization of Employee Performance and Quality Service with Smart Office Implementation: The Case of Secretariat

Office of South Sulawesi Province. *Hasanuddin Journal of Business Strategy, 3*(2). doi:https://doi.org/10.26487/hjbs.v3i2.451

Harapko, S. (2021, February 18). *How COVID-19 impacted supply chains and what comes next*. Retrieved from EY Americas Supply Chain: https://www.ey.com/en_id/supply-chain/how-covid-19-impacted-supply-chains-and-what-comes-next

Hashim, M. Z., Azib, W. N., Mansor, F. A., Muhammad, N., & Estiar, N. H. (2017). Investigating the Relationship between Information System Usage and Employee Job Performance Among Staff at a Local Government Office in Malaysia. *Science and Technology Publications*, 447-450.

Hikmawan, T., & Santoso, B. (2020). Human Resources Information System to Improve Employee Performance. *Dinasti International Journal of Management Science, 1*(4), 578-584. doi:https://doi.org/10.31933/dijms.v1i4.194

Hinkle, D. E., Wiersma, W., & Jurs, S. G. (2003). *Applied Statistics for the Behavioral Sciences* (5th ed.). Belmont, California, USA: Wadsworth Cengage Learning. Retrieved March 9, 2022

Hossen, R. (2016). Role of Digitalization of Business Messages. 1-18.

Huang, S. Y., Lee, C.-H., Chiu, A.-A., & Yen, D. C. (2014). How bBusiness Process Reengineering Affects Information Technology Investment And Employee Performance Under Different Performance Measurement. *Springer Science+Business Media New York*.

IBM. (2021, March 22). *Reliability Analysis*. Retrieved from IBM: https://www.ibm.com/docs/en/spss-statistics/25.0.0?topic=features-reliability-analysis

Istami. (2021). Manager. (M. Iqbal, Interviewer)

Jaadi, Z. (2019, October 15). *Everything You Need to Know About Interpreting Correlations*. Retrieved April 2, 2022, from Towards Data Science: https://towardsdatascience.com/eveything-you-need-to-know-about-interpreting-correlations-2c485841c0b8

Johanim, J., & Yahya, K. (2012). An Assessment of the Reliability and Validity of Job Performance Measurement (Satu Penilaian terhadap Kebolehpercayaan dan Kesahan Pengukuran Prestasi Kerja). *Jurnal Pengurusan, 36*, 17-31. Retrieved June 23, 2022, from https://www.researchgate.net/publication/281190501_An_Assessment_of_the_Reliability_and_Validity_of_Job_Performance_Measurement_Satu_Penilaian_terhadap_Kebolehpercayaan_dan_Kesahan_Pengukuran_Prestasi_Kerja

Joseph, R. (2021, August 9). *Correlation and P value*. Retrieved from Dataschool: https://dataschool.com/fundamentals-of-analysis/correlation-and-p-value/#:~:text=The%20two%20most%20commonly%20used,an%20experiment%20is%20statistically%20significant.

Kenton, W. (2021, May 28). *Goodnes of Fit*. Retrieved from Investopedia: https://www.investopedia.com/terms/g/goodness-of-fit.asp

Kenton, W. (2021, May 28). *Goodness-of-Fit*. Retrieved from Investopedia: https://www.investopedia.com/terms/g/goodness-of-fit.asp

Kholik, K. (2017). The Effect Of Occupational Safety And Health On Work Productivity Of Employees And Its Impact On Employee Performance At Pt. Alfo Citra Abadi Medan. *The 1st Unimed International Conference On Economics And Business 2017 (UNICEB)*, 1-25. Retrieved June 23, 2022, from http://digilib.unimed.ac.id/28247/

Klimova, B., Simonova, I., Poulova, P., Truhlarova, Z., & Kuca, K. (2016). Older People And Their Attitude To The Use Of Information And Communication Technologies – A Review Study With Special Focus On The Czech Republic (Older People And Their Attitude To ICT). *Educational Gerontology*, 361-369.

Kunze, F., Boehm, S., & Bruch, H. (2013). Age, Resistance to Change, and Job Performance. *Journal of Managerial Psychology, 7*(8), 741-760. doi:http://dx.doi.org/10.1108/JMP-06-2013-0194

Lee, J., Lim, S., & Oah, S. (2020). Effects of Accurate and Inaccurate Feedback on Work Performance: The Role of the Awareness of Inaccuracy. *Journal of Organizational*

Behavior Management, 40(1-2). doi:https://doi.org/10.1080/01608061.2020.1746472

Lehtonen, K. (2018, December 7). *What is System Integration?* Retrieved June 30, 2022, from YourEdi: https://www.youredi.com/blog/what-is-system-integration

Loshin, D. (2009). Data Quality and MDM. *Master Data Management*, 87-103. doi:https://doi.org/10.1016/B978-0-12-374225-4.00005-9

Makau, S., Lagat, C., & Bonuke, R. (2017). The Role of Information Quality on the Performance of Hotel Industry in Kenya. *European Scientific Journal, 13*(20), 169-184. Retrieved July 22, 2022, from https://eujournal.org/index.php/esj/article/viewFile/9654/9142

MasterClass staff. (2020, November 8). *Understanding Taylorism: The History of Scientific Management Theory*. Retrieved from masterclass: https://www.masterclass.com/articles/understanding-taylorism-the-history-of-scientific-management-theory

Matagi, L., Baguma, P., Rutanga, M., & Baluku, M. (2020). Gender, Organizational Commitment and Job Performance in the Ugandan Local Government. *European Journal of Business and Management, 12*(14), 24-36. Retrieved June 22, 2022, from https://core.ac.uk/download/pdf/327151323.pdf

McLeod, S. (2019, May 20). *What a p-value tells you about statistical significance*. Retrieved March 9, 2022, from Simply Psychology: https://www.simplypsychology.org/p-value.html

Middleton, F. (2019, July 3). *Reliability vs validity: what's the difference?* Retrieved from Scribbr: https://www.scribbr.com/methodology/reliability-vs-validity/

Monica Franzese, A. I. (2019). Correlation Analysis. *Encyclopedia of Bioinformatics and Computational Biology: ABC of Bioinformatics*.

Monika Gadre, A. D. (2020). Industry 4.0 -Digital Transformation, Challenges and Benefits. *International Journal of Future Generation Communication and Networking*, 139.

Morris, M. G., Venkatesh, V., & Ackerman, P. L. (2005). GENDER AND AGE DIFFERENCES IN EMPLOYEE DECISIONS ABOUT NEW TECHNOLOGY: AN EXTENSION TO THE THEORY OF PLANNED BEHAVIOR. *IEEE Transactions on Engineering Management*, 69-84.

Morris, M. G., Venkatesh, V., & Ackerman, P. L. (2005). GENDER AND AGE DIFFERENCES IN EMPLOYEE DECISIONS ABOUT NEW TECHNOLOGY: AN EXTENSION TO THE THEORY OF PLANNED BEHAVIOR. *IEEE Transactions on Engineering Management*, 29-30.

Mrugalska, B., & Tytyk, E. (2015). Quality control methods for product reliability and safety. *Procedia Manufacturing, 5*, 2730 – 2737. Retrieved June 30, 2022, from https://pdf.sciencedirectassets.com/306234/1-s2.0-S2351978915X00047/1-s2.0-S2351978915006848/main.pdf?X-Amz-Security-Token=IQoJb3JpZ2luX2VjEAUaCXVzLWVhc3QtMSJHMEUCIQDSKfScdO7XVyLaTij5XpBDi97cUzEqa2EojMlvWKXe4gIgKk8W%2BjlEzaPCtHEQYCESAmIHflJ8LassygzF%2FbQq

Nengsih, N., Tamsah, H., Farida, U., Retnowati, E., Yusriadi, Y., Kurniawan, R., & Ivana. (2021). Influence of the Leadership Style on Information Transfer and Corporate Culture to Boost Employee Efficiency in Bantaeng Regency. *Proceedings of the 11th Annual International Conference on Industrial Engineering and Operations Management*, 7277-7285. Retrieved June 23, 2022, from http://www.ieomsociety.org/singapore2021/papers/1271.pdf

Ngwenya, L., & Aigbavboa, C. (2016, July). Improvement of Productivity and Employee Performance Through an Efficient Human Resource Management Practices. *Advances in Human Factors, Business Management, Training and Education*, 727-737. doi:10.1007/978-3-319-42070-7_67

Ohme, M., & Zacher, H. (2015, April). Job performance ratings: The relative importance of mental ability, conscientiousness, and career adaptability. *Journal of Vocational Behavior, 87*, 161-170. doi:https://doi.org/10.1016/j.jvb.2015.01.003

Pang, M., Suh, W., Hong, J., Kim, J., & Lee, H. (2010). A New Web Site Quality Assessment Model for the Web 2.0 Era. *IGI Global*, 1-24. doi:https://doi.org/10.4018/978-1-60566-384-5.CH022

Patrizio, A. (2022). *Digital Accessibility*. Retrieved June 30, 2022, from TechTarget: https://www.techtarget.com/whatis/definition/digital-accessibility

Prasad, K. D. (2021, December). A New-Age Integrated Performance Management Framework to Measure the Employee Performance Concerning Post-Covid19 Era. *Indian Journal of Economics and Business, 20*(3), 557-573. Retrieved June 23, 2022, from http://www.ashwinanokha.com/resources/v20-3-32%20Kdv%20prasad.pdf

Rabindarang, S., Khuan, W. B., & Khoo, Y. Y. (2014). The Impact of Demographic Factors on Organizational Commitment in Technical and Vocational Education. *Malaysian Journal of Research - MJR, 2*(1), 56-61. Retrieved February 2, 2022, from https://www.researchgate.net/publication/283089130_The_Impact_of_Demographic_Factors_on_Organizational_Commitment_in_Technical_and_Vocational_Education

Raosoft. (2022). *Sample Size Calculator*. Retrieved from Raosoft: http://www.raosoft.com/samplesize.html

Reb, J., & Greguras, G. J. (2010). Understanding Performance Ratings: Dynamic Performance, Attributions, and Rating Purpose. *Journal of Applied Psychology, 95*(1), 213-220. doi:http://dx.doi.org/10.1037/a0017237

Rhoades, A. (2022). *Efficiency and Effectiveness at Work: What is the Difference?* Retrieved June 30, 2022, from Innential: https://innential.com/blog/efficiency-and-effectiveness-at-work-what-is-the-difference

RN, M. J., & RN, A. P. (2009). Understanding descriptive statistics. *Australian Critical Care* , 93-97.

Rokima, M., & Tentama, F. (2020). The Employee's Performance: A Study of Construct Validity and Reliability. *American Academic Scientific Research Journal for*

Engineering, Technology, and Sciences, 72(1), 90-101. Retrieved June 23, 2022, from https://asrjetsjournal.org/index.php/American_Scientific_Journal/article/view/6183

Ruiz-Mercader, J., Sabater-Sánchez, R., & Merono-Cerdan, A. L. (2006). Information Technology and Learning: Their Relationship and Impact on Organisational Performance in Small Businesses. *International Journal of Information Management* , 16-29.

Sandelowski, M., Barroso, J., & Voils, C. I. (2007). Using Qualitative Metasummary to Synthesize Qualitative and Quantitative Descriptive Findings. *Research in Nursing & Health*, 100-106.

Santoso, S. (2018). *Konsep Dasar Dan Aplikasi SEM Dengan AMOS 24.* Jakarta, Jakarta, Indonesia: PT Elex Media Komputindo. Retrieved March 5, 2022

Sari, C. T., Nindita, Y., Pahlawi, L. A., & Ayu, S. (2020). Gender Analysis in Moderating Motivation and Intensivity Towards Gojek Driver Performance. *International Journal of Economics, Business and Accounting Research (IJEBAR), 4*(4), 1121-1127. Retrieved June 22, 2022, from https://jurnal.stie-aas.ac.id/index.php/IJEBAR/article/download/1538/846

Schumacker, R. E., & Lomax, R. G. (2010). *A Beginner's Guide to Structural Equation Modeling (Third Edition).* New York, New York, USA: Taylor and Francis Group, LLC.

SEM, Konsep dan Aplikasinya pada AMOS. (2009). Jakarta, Jakarta, Indonesia: PT Elex. Retrieved March 5, 2022

Setyaningsih, S. (2012). Using Cluster Analysis Study to Examine the Successful Performance Entrepreneur in Indonesia . *Elsevier Ltd.*, 285-290.

Singla, B. S., & Aggarwal, H. (2018, January 8). Evaluation of Indian universities' websites in terms of information quality: differences in the perspectives of end users segments based on their socio-demographic characteristics. *International Journal of Business Information Systems, 27*(2), 135-176. Retrieved June 22,

2022, from https://www.inderscienceonline.com/doi/abs/10.1504/IJBIS.2018.089110

Skapinyecz, R., Illés, B., & Bányai, Á. (2018). Logistic aspects of Industry 4.0. *IOP Publishing*, 8-12.

Sukmawan, A. D., & Wahdiniwaty, R. (2019). The Effect of Information System on Employee Performance. *Advances in Economics, Business and Management Research, 112*, 112-124. Retrieved June 29, 2022, from https://www.atlantis-press.com/article/125931983.pdf

Sweeney, E. (2022, January 19). *The big challenges for supply chains in 2022*. Retrieved June 29, 2022, from World Economic Forum: https://www.weforum.org/agenda/2022/01/challenges-supply-chains-covid19-2022

Sykes, T. A., Venkatesh, V., & Johnson, J. L. (2014). Enterprise System Implementation and Employee Job Performance. *MIS Quarterly, 38*(1), 51-72. Retrieved June 23, 2022, from https://www.jstor.org/stable/26554868

T. Kidd, T., & Song, H. (2008). *Handbook of Research on Instructional Systems and Technology*.

Taber, K. S. (2018). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research Science Education, 48*, 1273-1296. doi:10.1007/s11165-016-9602-2

Taber, K. S. (2018). *The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education.* Research in Science Education.

Tech Target. (2020, September). *Statistical Analysis*. Retrieved from Tech Target: https://www.techtarget.com/whatis/definition/statistical-analysis

Them You & Me. (2018, April 19). *Top 5 Reasons Why Technology Is Important In Business*. Retrieved from themyouandme: https://themyouandme.com/blog/top-5-reasons-why-technology-is-important-in-

business#:~:text=Technology%20helps%20increase%20the%20efficiency,the%20business%20to%20grow%20rapidly.

Themanson, J. R., & Rosen, P. J. (2015, May). Examining the relationships between self-efficacy, task-relevant attentional control , and task performance: Evidence from event-related brain potentials. *Br J Psychol., 106*(2), 253-71. doi:https://doi.org/10.1111/bjop.12091

Triskele Logistics. (2022). *Change Management Strategies for Cost Reduction*. Retrieved from Triskelogi: http://triskelogi.com/change-management-strategies-for-cost-reduction/

Vallabh, D., & Mhlanga, O. (2015). Influence of demographic factors on business performance in small to medium tourism enterprises (SMTEs). *African Journal of Hospitality, Tourism and Leisure*, 1-9.

Van Waes, J., Vermeersch, J., Peuteman, J., Vankeirsbilck, J., Daems, W., Hellinckx, P., . . . Boydens, J. (2019, January). Demographic Impact on the Quality Management System: European Guidelines in a South African Context. *Conference: 8th Teaching & Education Conference, Vienna*, 1-10. doi:http://dx.doi.org/10.20472/TEC.2019.008.028

Vidas Bubanja, M., & Bubanja, I. (2017). The Challenge of Going Digital. *Journal of Engineering Management and Competitiveness*, 126-136.

Vitasek, K. (2013, August). *Supply Chain Management Terms and Glossary* . Retrieved from Arquivo.PT: https://arquivo.pt/wayback/20160522172303/http://cscmp.org/sites/default/files/user_uploads/resources/downloads/glossary-2013.pdf

Weir, T. (2018, April 16). *Never get confused between performance and productivity*. Retrieved June 30, 2022, from Gulf News: https://gulfnews.com/business/analysis/never-get-confused-between-performance-and-productivity-1.2206168#:~:text=The%20understanding%20of%20productivity%20is,in%20exchange%20for%20your%20time.

White Baker, E., Al Gahtani, S. S., & Hubona, G. S. (2007, November 20). The effects of gender and age on new technology implementation in a developing country: Testing the theory of planned behavior (TPB). *Information Technology & People*, 352-375.

Wijaya, T. (2009). Analisis Structural Equation Modeling Menggunakan AMOS. Yogyakarta, Indonesia: Universitas Atma Jaya. Retrieved March 5, 2022, from http://202.162.35.204:8191/opac/DetailOpacBlank.aspx?id=4155

Wilburn, K. M., & Wilburn, H. R. (2018). The Impact Of Technology On Business And Society . *Global Journal of Business Research*, 23-39.

William, K. (2022, January 25). *What is SPSS? Definition, Features, Types, and Use Cases*. Retrieved from SurveySparrow: https://surveysparrow.com/blog/what-is-spss/#section1

Wilson, M. (2015). Quality Matters: Correctness, Robustness and Reliability. *Overload, 17*(93). Retrieved June 30, 2022, from https://accu.org/journals/overload/17/93/wilson_1585/#:~:text=Correctness%20%3A%20The%20ability%20of%20software,concern%20encompassing%20correctness%20and%20robustness.

Wong, S. L., & Hanafi, A. (2007). Gender Differences in Attitudes towards Information Technology among Malaysian Student Teachers: A Case Study at Universiti Putra Malaysia. *Educational Technology and Society*, 158-169.

Wulandari, R., Djawoto, D., & Prijati, P. (2021). The Influence of Delegative Leadership Style, Motivation, Work Environment on Employee Performance in Self-Efficiency Mediation in SNVT Housing Provision of East Java Province. *Budapest International Research and Critics Institute (BIRCI-Journal): Humanities, 4*(3), 3294-3311. Retrieved June 23, 2022, from https://www.bircu-journal.com/index.php/birci/article/view/2097

Yannie, M. (2000). Technology Is Us: Do We Have Time To Learn? *TechTrends*, 42-43.

APPENDICES

APPENDIX A – SPSS OUTPUT

Case Processing Summary

		N	%
Cases	Valid	108	100.0
	Excluded[a]	0	0.0
	Total	108	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.580	0.552	13

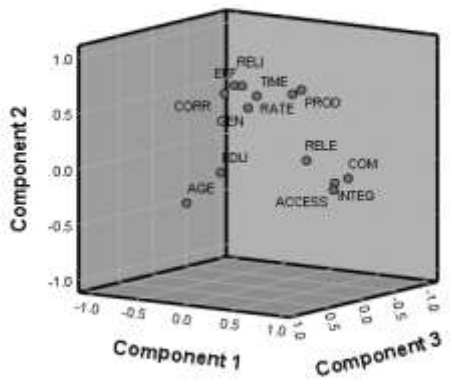
Item Statistics

	Mean	Std. Deviation	N
GEN	1.42	0.514	108
AGE	3.07	0.770	108
EDU	2.58	0.613	108
RELE	4.05	0.481	108
COM	3.86	0.791	108
TIME	2.50	0.649	108
RELI	2.94	0.878	108
ACCESS	3.84	0.658	108
CORR	3.22	0.674	108
INTEG	3.65	0.765	108
PROD	3.03	1.000	108
EFF	3.41	1.005	108
RATE	3.26	0.790	108

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.711
Bartlett's Test of Sphericity	Approx. Chi-Square	461.303
	df	78
	Sig.	0.000

Communalities		
	Initial	Extraction
GEN	1.000	0.542
AGE	1.000	0.539
EDU	1.000	0.874
RELE	1.000	0.488
COM	1.000	0.716
TIME	1.000	0.656
RELI	1.000	0.801
ACCESS	1.000	0.776
CORR	1.000	0.593
INTEG	1.000	0.613
PROD	1.000	0.575
EFF	1.000	0.801
RATE	1.000	0.439
Extraction Method: Principal Component Analysis.		

Component Plot



Descriptive Statistics

	N	Range	Minimum	Maximum	Sum	Mean		Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
GEN	108	2	1	3	153	1.42	0.049	0.514	0.264	0.553	0.233	-1.215	0.461
AGE	108	2	2	4	332	3.07	0.074	0.770	0.593	-0.128	0.233	-1.292	0.461
EDU	108	3	1	4	279	2.58	0.059	0.613	0.376	-0.449	0.233	-0.034	0.461
RELE	108	3	2	5	437	4.05	0.046	0.481	0.231	-0.381	0.233	3.833	0.461
COM	108	3	2	5	417	3.86	0.076	0.791	0.625	-1.017	0.233	1.056	0.461
TIME	108	3	1	4	270	2.50	0.062	0.649	0.421	-0.105	0.233	-0.194	0.461
RELI	108	3	2	5	317	2.94	0.085	0.878	0.771	0.296	0.233	-1.253	0.461
ACCESS	108	3	2	5	415	3.84	0.063	0.658	0.433	-0.826	0.233	1.476	0.461
CORR	108	3	2	5	348	3.22	0.065	0.674	0.455	0.260	0.233	0.157	0.461
INTEG	108	3	2	5	394	3.65	0.074	0.765	0.585	-0.706	0.233	0.178	0.461
PROD	108	3	2	5	327	3.03	0.096	1.000	0.999	0.287	0.233	-1.352	0.461
EFF	108	3	2	5	368	3.41	0.097	1.005	1.010	0.175	0.233	-1.021	0.461
RATE	108	3	2	5	352	3.26	0.076	0.790	0.624	0.081	0.233	-0.489	0.461
Valid N (listwise)	108												

Inter-Item Correlation Matrix								
	GEN	AGE	EDU	RELE	COM	TIME	RELI	ACC
GEN	1.000	-0.032	-0.156	-0.230	-0.247	0.154	0.143	
AGE	-0.032	1.000	0.066	-0.186	-0.321	-0.318	-0.076	
EDU	-0.156	0.066	1.000	0.066	0.014	0.082	-0.068	
RELE	-0.230	-0.186	0.066	1.000	0.312	0.195	0.007	
COM	-0.247	-0.321	0.014	0.312	1.000	0.191	-0.148	
TIME	0.154	-0.318	0.082	0.195	0.191	1.000	0.222	
RELI	0.143	-0.076	-0.068	0.007	-0.148	0.222	1.000	
ACCESS	-0.329	-0.235	0.068	0.584	0.676	0.077	-0.115	
CORR	0.351	-0.050	0.068	-0.118	-0.327	0.342	0.324	
INTEG	-0.265	-0.209	0.023	0.324	0.598	0.188	-0.132	
PROD	0.141	-0.355	-0.072	0.250	0.218	0.396	0.396	
EFF	0.103	-0.136	0.096	0.193	-0.069	0.387	0.676	
RATE	0.238	-0.139	0.109	0.066	0.058	0.347	0.375	

Inter-Item Covariance Matrix								
	GEN	AGE	EDU	RELE	COM	TIME	RELI	ACC
GEN	0.264	-0.012	-0.049	-0.057	-0.100	0.051	0.065	
AGE	-0.012	0.593	0.031	-0.069	-0.195	-0.159	-0.051	
EDU	-0.049	0.031	0.376	0.019	0.007	0.033	-0.037	
RELE	-0.057	-0.069	0.019	0.231	0.119	0.061	0.003	
COM	-0.100	-0.195	0.007	0.119	0.625	0.098	-0.103	
TIME	0.051	-0.159	0.033	0.061	0.098	0.421	0.126	
RELI	0.065	-0.051	-0.037	0.003	-0.103	0.126	0.771	
ACCESS	-0.111	-0.119	0.027	0.185	0.352	0.033	-0.066	
CORR	0.121	-0.026	0.028	-0.038	-0.174	0.150	0.192	
INTEG	-0.104	-0.123	0.011	0.119	0.362	0.093	-0.088	
PROD	0.072	-0.273	-0.044	0.120	0.172	0.257	0.348	
EFF	0.053	-0.105	0.059	0.093	-0.055	0.252	0.597	
RATE	0.097	-0.085	0.053	0.025	0.036	0.178	0.260	

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.140	1.417	4.046	2.630	2.856	0.494	13
Item Variances	0.568	0.231	1.010	0.779	4.363	0.060	13
Inter-Item Covariances	0.055	-0.273	0.597	0.870	-2.185	0.024	13
Inter-Item Correlations	0.087	-0.355	0.676	1.031	-1.905	0.065	13

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
40.82	15.903	3.988	13

Hotelling's T-Squared Test

Hotelling's T-Squared	F	df1	df2	Sig
2303.796	172.246	12	96	0.000

ANOVA with Tukey's Test for Nonadditivity

			Sum of Squares	df	Mean Square	F	Sig
Between People			130.897	107	1.223		
Within People	Between Items		640.868	12	53.406	103.962	0.000
	Residual	Nonadditivity	2.104[a]	1	2.104	4.106	0.043
		Balance	657.490	1283	0.512		
		Total	659.594	1284	0.514		
	Total		1300.462	1296	1.003		
Total			1431.358	1403	1.020		

Grand Mean = 3.14

a. Tukey's estimate of power to which observations must be raised to achieve additivity = .411.

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
GEN	39.41	15.589	0.012	0.271	0.592
AGE	37.75	17.685	-0.367	0.228	0.672
EDU	38.24	15.250	0.058	0.118	0.589
RELE	36.78	14.511	0.317	0.448	0.553
COM	36.96	14.242	0.174	0.617	0.573
TIME	38.32	13.137	0.499	0.406	0.512
RELI	37.89	12.642	0.399	0.552	0.520
ACCESS	36.98	14.448	0.204	0.697	0.566
CORR	37.60	14.690	0.147	0.403	0.576
INTEG	37.18	14.315	0.173	0.473	0.572
PROD	37.80	11.827	0.448	0.417	0.502
EFF	37.42	11.217	0.546	0.592	0.471
RATE	37.56	12.771	0.444	0.343	0.513

Correlation Matrix[a]

		GEN	AGE	EDU	RELE	COM	TIME	RELI	ACCESS	CORR	INTEG	PROD	EFF	RATE
Correlation	GEN	1.000	-0.032	-0.156	-0.230	-0.247	0.154	0.143	-0.329	0.351	-0.265	0.141	0.103	0.238
	AGE	-0.032	1.000	0.066	-0.186	-0.321	-0.318	-0.076	-0.235	-0.050	-0.209	-0.355	-0.136	-0.139

Correlation Matrix[a]

		GEN	AGE	EDU	RELE	COM	TIME	RELI	ACCESS	CORR	INTEG	PROD	EFF	RATE
	EDU	-0.156	0.066	1.000	0.066	0.014	0.082	-0.068	0.068	0.068	0.023	-0.072	0.096	0.109
	RELE	-0.230	-0.186	0.066	1.000	0.312	0.195	0.007	0.584	-0.118	0.324	0.250	0.193	0.066
	COM	-0.247	-0.321	0.014	0.312	1.000	0.191	-0.148	0.676	-0.327	0.598	0.218	-0.069	0.058
	TIME	0.154	-0.318	0.082	0.195	0.191	1.000	0.222	0.077	0.342	0.188	0.396	0.387	0.347
	RELI	0.143	-0.076	-0.068	0.007	-0.148	0.222	1.000	-0.115	0.324	-0.132	0.396	0.676	0.375
	ACCESS	-0.329	-0.235	0.068	0.584	0.676	0.077	-0.115	1.000	-0.342	0.613	0.064	0.055	-0.047
	CORR	0.351	-0.050	0.068	-0.118	-0.327	0.342	0.324	-0.342	1.000	-0.318	0.254	0.293	0.136
	INTEG	-0.265	-0.209	0.023	0.324	0.598	0.188	-0.132	0.613	-0.318	1.000	0.098	-0.006	0.029
	PROD	0.141	-0.355	-0.072	0.250	0.218	0.396	0.396	0.064	0.254	0.098	1.000	0.342	0.322
	EFF	0.103	-0.136	0.096	0.193	-0.069	0.387	0.676	0.055	0.293	-0.006	0.342	1.000	0.466
	RATE	0.238	-0.139	0.109	0.066	0.058	0.347	0.375	-0.047	0.136	0.029	0.322	0.466	1.000
Sig. (1-tailed)	GEN		0.373	0.054	0.008	0.005	0.055	0.070	0.000	0.000	0.003	0.073	0.145	0.007
	AGE	0.373		0.249	0.027	0.000	0.000	0.218	0.007	0.304	0.015	0.000	0.080	0.075
	EDU	0.054	0.249		0.249	0.441	0.199	0.242	0.244	0.243	0.406	0.228	0.161	0.130
	RELE	0.008	0.027	0.249		0.001	0.022	0.471	0.000	0.111	0.000	0.005	0.023	0.247
	COM	0.005	0.000	0.441	0.001		0.024	0.064	0.000	0.000	0.000	0.012	0.238	0.275
	TIME	0.055	0.000	0.199	0.022	0.024		0.011	0.215	0.000	0.025	0.000	0.000	0.000
	RELI	0.070	0.218	0.242	0.471	0.064	0.011		0.118	0.000	0.087	0.000	0.000	0.000
	ACCESS	0.000	0.007	0.244	0.000	0.000	0.215	0.118		0.000	0.000	0.257	0.284	0.316
	CORR	0.000	0.304	0.243	0.111	0.000	0.000	0.000	0.000		0.000	0.004	0.001	0.080

Correlation Matrix[a]

		GEN	AGE	EDU	RELE	COM	TIME	RELI	ACCESS	CORR	INTEG	PROD	EFF	RATE
	INTEG	0.003	0.015	0.406	0.000	0.000	0.025	0.087	0.000	0.000		0.155	0.474	0.384
	PROD	0.073	0.000	0.228	0.005	0.012	0.000	0.000	0.257	0.004	0.155		0.000	0.000
	EFF	0.145	0.080	0.161	0.023	0.238	0.000	0.000	0.284	0.001	0.474	0.000		0.000
	RATE	0.007	0.075	0.130	0.247	0.275	0.000	0.000	0.316	0.080	0.384	0.000	0.000	

a. Determinant = .011

Inverse of Correlation Matrix

	GEN	AGE	EDU	RELE	COM	TIME	RELI	ACCESS	CORR	INTEG	PROD	EFF	RATE
GEN	1.372	0.038	0.252	0.216	0.158	-0.105	0.126	0.029	-0.311	0.141	-0.104	0.045	-0.331
AGE	0.038	1.296	-0.100	-0.030	0.224	0.234	-0.077	0.161	0.033	-0.014	0.312	0.037	0.005
EDU	0.252	-0.100	1.134	0.014	0.013	-0.063	0.266	-0.101	-0.193	0.049	0.104	-0.183	-0.205
RELE	0.216	-0.030	0.014	1.810	0.462	-0.199	0.262	-1.264	0.058	0.100	-0.475	-0.201	-0.056
COM	0.158	0.224	0.013	0.462	2.611	-0.352	0.130	-1.501	0.331	-0.449	-0.554	0.441	-0.247
TIME	-0.105	0.234	-0.063	-0.199	-0.352	1.684	0.215	0.330	-0.526	-0.341	-0.167	-0.448	-0.207
RELI	0.126	-0.077	0.266	0.262	0.130	0.215	2.234	-0.030	-0.215	0.100	-0.520	-1.356	-0.182
ACCESS	0.029	0.161	-0.101	-1.264	-1.501	0.330	-0.030	3.295	0.124	-0.752	0.460	-0.472	0.325
CORR	-0.311	0.033	-0.193	0.058	0.331	-0.526	-0.215	0.124	1.674	0.256	-0.251	-0.105	0.239
INTEG	0.141	-0.014	0.049	0.100	-0.449	-0.341	0.100	-0.752	0.256	1.896	-0.043	0.013	-0.057
PROD	-0.104	0.312	0.104	-0.475	-0.554	-0.167	-0.520	0.460	-0.251	-0.043	1.715	0.039	-0.140

Inverse of Correlation Matrix

	GEN	AGE	EDU	RELE	COM	TIME	RELI	ACCESS	CORR	INTEG	PROD	EFF	RATE
EFF	0.045	0.037	-0.183	-0.201	0.441	-0.448	-1.356	-0.472	-0.105	0.013	0.039	2.454	-0.499
RATE	-0.331	0.005	-0.205	-0.056	-0.247	-0.207	-0.182	0.325	0.239	-0.057	-0.140	-0.499	1.522

Anti-image Matrices

		GEN	AGE	EDU	RELE	COM	TIME	RELI	ACCESS	CORR	INTEG	PROD	EFF	RATE
Anti-image Covariance	GEN	0.729	0.021	0.162	0.087	0.044	-0.045	0.041	0.006	-0.135	0.054	-0.044	0.013	-0.159
	AGE	0.021	0.772	-0.068	-0.013	0.066	0.107	-0.027	0.038	0.015	-0.006	0.141	0.012	0.003
	EDU	0.162	-0.068	0.882	0.007	0.004	-0.033	0.105	-0.027	-0.101	0.023	0.053	-0.066	-0.119
	RELE	0.087	-0.013	0.007	0.552	0.098	-0.065	0.065	-0.212	0.019	0.029	-0.153	-0.045	-0.020
	COM	0.044	0.066	0.004	0.098	0.383	-0.080	0.022	-0.175	0.076	-0.091	-0.124	0.069	-0.062
	TIME	-0.045	0.107	-0.033	-0.065	-0.080	0.594	0.057	0.059	-0.186	-0.107	-0.058	-0.108	-0.081
	RELI	0.041	-0.027	0.105	0.065	0.022	0.057	0.448	-0.004	-0.058	0.024	-0.136	-0.247	-0.053
	ACCESS	0.006	0.038	-0.027	-0.212	-0.175	0.059	-0.004	0.303	0.023	-0.120	0.081	-0.058	0.065
	CORR	-0.135	0.015	-0.101	0.019	0.076	-0.186	-0.058	0.023	0.597	0.081	-0.087	-0.026	0.094
	INTEG	0.054	-0.006	0.023	0.029	-0.091	-0.107	0.024	-0.120	0.081	0.527	-0.013	0.003	-0.020
	PROD	-0.044	0.141	0.053	-0.153	-0.124	-0.058	-0.136	0.081	-0.087	-0.013	0.583	0.009	-0.054
	EFF	0.013	0.012	-0.066	-0.045	0.069	-0.108	-0.247	-0.058	-0.026	0.003	0.009	0.408	-0.134
	RATE	-0.159	0.003	-0.119	-0.020	-0.062	-0.081	-0.053	0.065	0.094	-0.020	-0.054	-0.134	0.657
	GEN	.756[a]	0.028	0.202	0.137	0.084	-0.069	0.072	0.014	-0.205	0.088	-0.068	0.025	-0.229

Anti-image Matrices

		GEN	AGE	EDU	RELE	COM	TIME	RELI	ACCESS	CORR	INTEG	PROD	EFF	RATE
Anti-image Correlation	AGE	0.028	.836[a]	-0.082	-0.019	0.122	0.158	-0.045	0.078	0.022	-0.009	0.210	0.021	0.004
	EDU	0.202	-0.082	.360[a]	0.010	0.008	-0.045	0.167	-0.052	-0.140	0.033	0.074	-0.110	-0.156
	RELE	0.137	-0.019	0.010	.638[a]	0.213	-0.114	0.130	-0.518	0.033	0.054	-0.270	-0.096	-0.034
	COM	0.084	0.122	0.008	0.213	.706[a]	-0.168	0.054	-0.512	0.158	-0.202	-0.262	0.174	-0.124
	TIME	-0.069	0.158	-0.045	-0.114	-0.168	.728[a]	0.111	0.140	-0.313	-0.191	-0.098	-0.220	-0.129
	RELI	0.072	-0.045	0.167	0.130	0.054	0.111	.666[a]	-0.011	-0.111	0.049	-0.265	-0.579	-0.099
	ACCESS	0.014	0.078	-0.052	-0.518	-0.512	0.140	-0.011	.668[a]	0.053	-0.301	0.193	-0.166	0.145
	CORR	-0.205	0.022	-0.140	0.033	0.158	-0.313	-0.111	0.053	.762[a]	0.144	-0.148	-0.052	0.150
	INTEG	0.088	-0.009	0.033	0.054	-0.202	-0.191	0.049	-0.301	0.144	.845[a]	-0.024	0.006	-0.034
	PROD	-0.068	0.210	0.074	-0.270	-0.262	-0.098	-0.265	0.193	-0.148	-0.024	.718[a]	0.019	-0.087
	EFF	0.025	0.021	-0.110	-0.096	0.174	-0.220	-0.579	-0.166	-0.052	0.006	0.019	.675[a]	-0.258
	RATE	-0.229	0.004	-0.156	-0.034	-0.124	-0.129	-0.099	0.145	0.150	-0.034	-0.087	-0.258	.746[a]

a. Measures of Sampling Adequacy(MSA)

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.129	24.071	24.071	3.129	24.071	24.071
2	3.018	23.218	47.288	3.018	23.218	47.288
3	1.233	9.484	56.772	1.233	9.484	56.772
4	1.033	7.947	64.719	1.033	7.947	64.719
5	0.872	6.711	71.430			
6	0.726	5.585	77.015			
7	0.656	5.044	82.060			
8	0.585	4.498	86.557			
9	0.542	4.170	90.727			
10	0.394	3.027	93.754			
11	0.380	2.922	96.676			
12	0.250	1.923	98.599			
13	0.182	1.401	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component			
	1	2	3	4
GEN	-0.411	0.396	-0.438	0.155
AGE	-0.431	-0.331	0.461	-0.174
EDU	0.079	0.025	0.673	0.643
RELE	0.650	0.123	0.199	-0.105
COM	0.819	-0.077	-0.186	0.074
TIME	0.282	0.637	-0.115	0.397
RELI	-0.095	0.728	0.221	-0.463
ACCESS	0.861	-0.136	0.095	-0.082
CORR	-0.387	0.584	-0.048	0.315
INTEG	0.774	-0.103	-0.049	0.031
PROD	0.281	0.656	-0.248	-0.064
EFF	0.096	0.764	0.377	-0.256
RATE	0.089	0.640	0.146	0.020

Extraction Method: Principal Component Analysis.

a. 4 components extracted.

Reproduced Correlations

		GEN	AGE	EDU	RELE	COM	TIME	RELI	ACCESS	CORR	INTEG	PROD	EFF	RATE
Reproduced Correlation	GEN	.542[a]	-0.183	-0.217	-0.322	-0.274	0.249	0.159	-0.462	0.461	-0.333	0.243	0.059	0.157
	AGE	-0.183	.539[a]	0.156	-0.211	-0.426	-0.455	-0.017	-0.268	-0.103	-0.327	-0.442	-0.076	-0.186
	EDU	-0.217	0.156	.874[a]	0.121	-0.015	0.216	-0.138	0.076	0.155	0.046	-0.170	0.116	0.134
	RELE	-0.322	-0.211	0.121	.488[a]	0.478	0.197	0.121	0.571	-0.223	0.477	0.221	0.259	0.163
	COM	-0.274	-0.426	-0.015	0.478	.716[a]	0.233	-0.210	0.692	-0.330	0.653	0.221	-0.070	-0.003
	TIME	0.249	-0.455	0.216	0.197	0.233	.656[a]	0.228	0.113	0.393	0.170	0.500	0.369	0.424
	RELI	0.159	-0.017	-0.138	0.121	-0.210	0.228	.801[a]	-0.122	0.305	-0.174	0.425	0.749	0.480
	ACCESS	-0.462	-0.268	0.076	0.571	0.692	0.113	-0.122	.776[a]	-0.444	0.673	0.134	0.036	0.001
	CORR	0.461	-0.103	0.155	-0.223	-0.330	0.393	0.305	-0.444	.593[a]	-0.348	0.266	0.311	0.339
	INTEG	-0.333	-0.327	0.046	0.477	0.653	0.170	-0.174	0.673	-0.348	.613[a]	0.160	-0.031	-0.004
	PROD	0.243	-0.442	-0.170	0.221	0.221	0.500	0.425	0.134	0.266	0.160	.575[a]	0.451	0.407
	EFF	0.059	-0.076	0.116	0.259	-0.070	0.369	0.749	0.036	0.311	-0.031	0.451	.801[a]	0.547
	RATE	0.157	-0.186	0.134	0.163	-0.003	0.424	0.480	0.001	0.339	-0.004	0.407	0.547	.439[a]
Residual[b]	GEN		0.152	0.062	0.092	0.027	-0.094	-0.016	0.133	-0.110	0.067	-0.102	0.044	0.081
	AGE	0.152		-0.090	0.025	0.105	0.137	-0.058	0.033	0.053	0.118	0.087	-0.060	0.047
	EDU	0.062	-0.090		-0.055	0.029	-0.134	0.070	-0.008	-0.087	-0.022	0.098	-0.020	-0.025
	RELE	0.092	0.025	-0.055		-0.166	-0.003	-0.113	0.014	0.104	-0.153	0.029	-0.066	-0.097
	COM	0.027	0.105	0.029	-0.166		-0.041	0.062	-0.016	0.003	-0.055	-0.003	0.001	0.061

Reproduced Correlations

		GEN	AGE	EDU	RELE	COM	TIME	RELI	ACCESS	CORR	INTEG	PROD	EFF	RATE
	TIME	-0.094	0.137	-0.134	-0.003	-0.041		-0.007	-0.036	-0.051	0.018	-0.104	0.018	-0.077
	RELI	-0.016	-0.058	0.070	-0.113	0.062	-0.007		0.007	0.019	0.042	-0.029	-0.073	-0.105
	ACCESS	0.133	0.033	-0.008	0.014	-0.016	-0.036	0.007		0.102	-0.060	-0.071	0.020	-0.048
	CORR	-0.110	0.053	-0.087	0.104	0.003	-0.051	0.019	0.102		0.030	-0.012	-0.018	-0.202
	INTEG	0.067	0.118	-0.022	-0.153	-0.055	0.018	0.042	-0.060	0.030		-0.061	0.025	0.033
	PROD	-0.102	0.087	0.098	0.029	-0.003	-0.104	-0.029	-0.071	-0.012	-0.061		-0.109	-0.085
	EFF	0.044	-0.060	-0.020	-0.066	0.001	0.018	-0.073	0.020	-0.018	0.025	-0.109		-0.081
	RATE	0.081	0.047	-0.025	-0.097	0.061	-0.077	-0.105	-0.048	-0.202	0.033	-0.085	-0.081	

Extraction Method: Principal Component Analysis.

a. Reproduced communalities

b. Residuals are computed between observed and reproduced correlations. There are 44 (56.0%) nonredundant residuals with absolute values greater than 0.05.

APPENDIX B – AMOS OUTPUT

Parameter Summary (Group number 1)

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	20	0	0	15	3	38
Labeled	0	0	0	0	0	0
Unlabeled	11	0	15	0	13	39
Total	31	0	15	15	16	77

Assessment of normality (Group number 1)

Variable	min	max	skew	c.r.	kurtosis	c.r.
CORR	2	5	0.256	1.087	0.095	0.202
RELI	2	5	0.292	1.239	-1.25	-2.653
INTEG	2	5	-0.696	-2.952	0.115	0.243
RATE	2	5	0.08	0.34	-0.521	-1.106
EFF	2	5	0.172	0.73	-1.03	-2.185
PROD	2	5	0.283	1.2	-1.345	-2.853
RELE	2	5	-0.375	-1.592	3.603	7.642
COM	2	5	-1.003	-4.255	0.952	2.02
ACCESS	2	5	-0.814	-3.455	1.353	2.87
TIME	1	4	-0.103	-0.438	-0.24	-0.509
AGE	2	4	-0.126	-0.536	-1.288	-2.733
EDU	1	4	-0.443	-1.878	-0.087	-0.185
GEN	1	3	0.545	2.312	-1.215	-2.577

Variable	min	max	skew	c.r.	kurtosis	c.r.
Multivariate					14.775	3.888

Sample Covariances (Group number 1)

	CORR	RELI	INTEG	RATE	EFF	PROD	RELE	COM	ACCESS	TIME	AGE	EDU	GEN
CORR	0.451												
RELI	0.19	0.764											
INTEG	-0.163	-0.088	0.58										
RATE	0.072	0.258	0.017	0.618									
EFF	0.197	0.591	-0.005	0.367	1.001								
PROD	0.17	0.344	0.075	0.252	0.341	0.99							
RELE	-0.038	0.003	0.118	0.025	0.092	0.119	0.229						
COM	-0.173	-0.102	0.359	0.036	-0.055	0.171	0.118	0.62					
ACCESS	-0.15	-0.066	0.306	-0.024	0.036	0.041	0.183	0.349	0.429				
TIME	0.148	0.125	0.093	0.176	0.25	0.255	0.06	0.097	0.032	0.417			
AGE	-0.026	-0.051	-0.122	-0.084	-0.104	-0.271	-0.068	-0.193	-0.118	-0.157	0.587		
EDU	0.028	-0.036	0.011	0.052	0.059	-0.044	0.019	0.007	0.027	0.032	0.031	0.373	
GEN	0.12	0.064	-0.103	0.096	0.052	0.072	-0.056	-0.1	-0.11	0.051	-0.012	-0.049	0.262

Condition number = 29.797

Eigenvalues

2.220 1.564 .758 .503 .440 .410 .331 .258 .231 .199 .181 .152 .075

Determinant of sample covariance matrix = .000

Sample Correlations (Group number 1)

	CORR	RELI	INTEG	RATE	EFF	PROD	RELE	COM	ACCESS	TIME	AGE	EDU	GEN
CORR	1												
RELI	0.324	1											
INTEG	-0.318	-0.132	1										
RATE	0.136	0.375	0.029	1									
EFF	0.293	0.676	-0.006	0.466	1								
PROD	0.254	0.396	0.098	0.322	0.342	1							
RELE	-0.118	0.007	0.324	0.066	0.193	0.25	1						
COM	-0.327	-0.148	0.598	0.058	-0.069	0.218	0.312	1					
ACCESS	-0.342	-0.115	0.613	-0.047	0.055	0.064	0.584	0.676	1				
TIME	0.342	0.222	0.188	0.347	0.387	0.396	0.195	0.191	0.077	1			
AGE	-0.05	-0.076	-0.209	-0.139	-0.136	-0.355	-0.186	-0.321	-0.235	-0.318	1		
EDU	0.068	-0.068	0.023	0.109	0.096	-0.072	0.066	0.014	0.068	0.082	0.066	1	
GEN	0.351	0.143	-0.265	0.238	0.103	0.141	-0.23	-0.247	-0.329	0.154	-0.032	-0.156	1

Condition number = 17.175

Eigenvalues

3.129 3.018 1.233 1.033 .872 .726 .656 .585 .542 .394 .380 .250 .182

Sample Means (Group number 1)

	CORR	RELI	INTEG	RATE	EFF	PROD	RELE	COM	ACCESS	TIME	AGE	EDU	GEN
	3.222	2.935	3.648	3.259	3.407	3.028	4.046	3.861	3.843	2.5	3.074	2.583	1.417

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
SQ	<---	DEMO	0.349	0.845	0.413	0.679	par_9
IQ	<---	DEMO	3.45	1.993	1.731	0.084	par_10
EP	<---	IQ	1.768	0.671	2.635	0.008	par_11
EP	<---	SQ	14.26	33.775	0.422	0.673	par_12
GEN	<---	DEMO	1				
EDU	<---	DEMO	0.533	0.735	0.725	0.468	par_1
AGE	<---	DEMO	-2.071	1.395	-1.485	0.138	par_2
TIME	<---	IQ	1				
ACCESS	<---	IQ	0.107	0.207	0.515	0.607	par_3
COM	<---	IQ	0.123	0.256	0.479	0.632	par_4
RELE	<---	IQ	0.374	0.166	2.257	0.024	par_5
PROD	<---	EP	1				
EFF	<---	EP	1.301	0.24	5.417	***	par_6
RATE	<---	EP	0.689	0.165	4.176	***	par_7
INTEG	<---	SQ	1				
RELI	<---	SQ	19.281	45.678	0.422	0.673	par_8
CORR	<---	SQ	1				

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
SQ	<---	DEMO	1
IQ	<---	DEMO	1
EP	<---	IQ	0.878
EP	<---	SQ	0.272
GEN	<---	DEMO	0.184
EDU	<---	DEMO	0.075
AGE	<---	DEMO	-0.232
TIME	<---	IQ	0.548
ACCESS	<---	IQ	0.037
COM	<---	IQ	0.014
RELE	<---	IQ	0.21
PROD	<---	EP	0.446
EFF	<---	EP	0.783
RATE	<---	EP	0.541
INTEG	<---	SQ	0.148
RELI	<---	SQ	0.702
CORR	<---	SQ	0.338

Intercepts: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
GEN	1.417	0.049	28.652	***	par_12
EDU	2.583	0.059	43.772	***	par_13
AGE	3.074	0.074	41.5	***	par_14
TIME	2.5	0.065	38.378	***	par_15
ACCESS	3.843	0.063	60.691	***	par_16
COM	3.861	0.076	50.74	***	par_17
RELE	4.046	0.046	87.4	***	par_18
PROD	3.028	0.091	33.217	***	par_19
EFF	3.407	0.098	34.69	***	par_20
RATE	3.259	0.077	42.572	***	par_21
INTEG	3.648	0.075	48.662	***	par_22
RELI	2.935	0.085	34.729	***	par_23
CORR	3.222	0.065	49.653	***	par_24

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
DEMO	0.009	0.01	0.903	0.366	par_25
e14	-0.057	0.034	-1.699	0.089	par_26
e1	0.253	0.035	7.282	***	par_27
e2	0.371	0.051	7.31	***	par_28
e3	0.555	0.077	7.239	***	par_29
e4	0.318	0.047	6.699	***	par_30
e5	0.428	0.059	7.313	***	par_31
e6	0.619	0.085	7.314	***	par_32
e7	0.219	0.03	7.279	***	par_33
e8	0.712	0.107	6.684	***	par_34
e9	0.399	0.096	4.14	***	par_35
e10	0.443	0.068	6.518	***	par_36
e11	0.588	0.081	7.229	***	par_37
e12	0.387	0.061	6.329	***	par_38
e13	0.399	0.056	7.081	***	par_39

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
EP	1.324
CORR	0.115
RELI	0.493
INTEG	0.022
RATE	0.293
EFF	0.614
PROD	0.199
RELE	0.044
COM	0
ACCESS	0.001
TIME	0.301
AGE	0.054
EDU	0.006
GEN	0.034

Implied (for all variables) Covariances (Group number 1 - Default model)

	DEMO	SQ	IQ	EP	CORR	RELI	INTEG	RATE	EFF	PROD
DEMO	0.009									
SQ	0.011	0.013								
IQ	0.035	0.042	0.137							
EP	0.046	0.055	0.179	0.177						
CORR	0.021	0.026	0.084	0.11	0.451					
RELI	0.058	0.07	0.227	0.297	0.139	0.764				
INTEG	0.011	0.013	0.042	0.055	0.026	0.07	0.601			
RATE	0.046	0.057	0.182	0.18	0.112	0.303	0.057	0.627		
EFF	0.086	0.105	0.338	0.335	0.208	0.562	0.105	0.341	1.032	
PROD	0.046	0.055	0.179	0.177	0.11	0.297	0.055	0.18	0.335	0.889
RELE	0.009	0.012	0.037	0.049	0.023	0.062	0.012	0.05	0.092	0.049
COM	0.001	0.001	0.004	0.005	0.002	0.007	0.001	0.005	0.01	0.005
ACCESS	0.002	0.003	0.009	0.012	0.006	0.015	0.003	0.012	0.022	0.012
TIME	0.035	0.042	0.137	0.179	0.084	0.227	0.042	0.182	0.338	0.179
AGE	-0.017	-0.02	-0.066	-0.086	-0.04	-0.109	-0.02	-0.088	-0.163	-0.086
EDU	0.004	0.005	0.017	0.022	0.01	0.028	0.005	0.023	0.042	0.022
GEN	0.009	0.011	0.035	0.046	0.021	0.058	0.011	0.046	0.086	0.046

Implied (for all variables) Covariances (Group number 1 - Default model)

	RELE	COM	ACCESS	TIME	AGE	EDU	GEN
DEMO							
SQ							
IQ							
EP							
CORR							
RELI							
INTEG							
RATE							
EFF							
PROD							
RELE	0.229						
COM	0.001	0.62					
ACCESS	0.002	0	0.429				
TIME	0.037	0.004	0.009	0.454			
AGE	-0.018	-0.002	-0.004	-0.066	0.587		
EDU	0.005	0	0.001	0.017	-0.008	0.373	
GEN	0.009	0.001	0.002	0.035	-0.017	0.004	0.262

Implied (for all variables) Correlations (Group number 1 - Default model)

	DEMO	SQ	IQ	EP	CORR	RELI	INTEG	RATE	EFF	PROD
DEMO	1									
SQ	1	1								
IQ	1	1	1							
EP	1.151	1.151	1.151	1						
CORR	0.338	0.338	0.338	0.389	1					
RELI	0.702	0.702	0.702	0.808	0.238	1				
INTEG	0.148	0.148	0.148	0.17	0.05	0.104	1			
RATE	0.623	0.623	0.623	0.541	0.211	0.437	0.092	1		
EFF	0.901	0.901	0.901	0.783	0.305	0.633	0.133	0.424	1	
PROD	0.513	0.513	0.513	0.446	0.174	0.361	0.076	0.242	0.35	1
RELE	0.21	0.21	0.21	0.242	0.071	0.148	0.031	0.131	0.19	0.108
COM	0.014	0.014	0.014	0.016	0.005	0.01	0.002	0.009	0.012	0.007
ACCESS	0.037	0.037	0.037	0.043	0.013	0.026	0.006	0.023	0.034	0.019
TIME	0.548	0.548	0.548	0.631	0.186	0.385	0.081	0.342	0.494	0.282
AGE	-0.232	-0.232	-0.232	-0.267	-0.079	-0.163	-0.034	-0.145	-0.209	-0.119
EDU	0.075	0.075	0.075	0.087	0.025	0.053	0.011	0.047	0.068	0.039
GEN	0.184	0.184	0.184	0.212	0.062	0.129	0.027	0.115	0.166	0.094

Implied (for all variables) Correlations (Group number 1 - Default model)

	RELE	COM	ACCESS	TIME	AGE	EDU	GEN
DEMO							
SQ							
IQ							
EP							
CORR							
RELI							
INTEG							
RATE							
EFF							
PROD							
RELE	1						
COM	0.003	1					
ACCESS	0.008	0.001	1				
TIME	0.115	0.008	0.021	1			
AGE	-0.049	-0.003	-0.009	-0.127	1		
EDU	0.016	0.001	0.003	0.041	-0.017	1	
GEN	0.039	0.003	0.007	0.101	-0.043	0.014	1

Implied (for all variables) Means (Group number 1 - Default model)

DEMO	SQ	IQ	EP	CORR	RELI	INTEG	RATE	EFF	PROD	RELE	COM	ACCESS	TIME	AGE	EDU	GEN
0	0	0	0	3.222	2.935	3.648	3.259	3.407	3.028	4.046	3.861	3.843	2.5	3.074	2.583	1.417

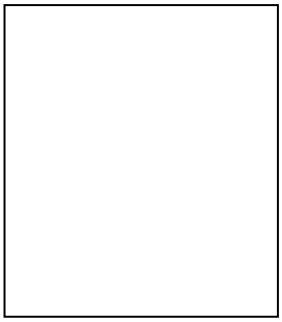
Observations farthest from the centroid (Mahalanobis distance) (Group number 1)

Observation number	Mahalanobis d-squared	p1	p2
30	35.753	0.001	0.068
37	30.565	0.004	0.067
29	29.348	0.006	0.026
39	26.627	0.014	0.066
82	26.178	0.016	0.031
38	24.889	0.024	0.045
54	24.879	0.024	0.015
26	24.693	0.025	0.006
53	23.252	0.039	0.025
76	22.267	0.051	0.051
23	20.907	0.075	0.184
84	20.546	0.082	0.179
50	20.341	0.087	0.145
41	20.276	0.089	0.096
27	19.872	0.098	0.109
31	19.295	0.114	0.168
51	19.254	0.115	0.115
87	19.225	0.116	0.074
49	18.836	0.128	0.094
83	18.635	0.135	0.086
80	18.152	0.152	0.137
36	17.951	0.159	0.131
1	17.311	0.185	0.265
2	16.827	0.207	0.388
97	16.2	0.239	0.605
81	15.887	0.255	0.671
89	15.574	0.273	0.736
47	15.123	0.3	0.847
52	14.998	0.307	0.837
63	14.97	0.309	0.79
85	14.798	0.32	0.799
77	14.225	0.358	0.927
98	14.224	0.358	0.894
48	14.22	0.359	0.853
55	14.103	0.367	0.846
9	13.957	0.377	0.849
42	13.75	0.392	0.874
104	13.749	0.392	0.828
91	13.716	0.394	0.788
7	13.645	0.399	0.761

Observation number	Mahalanobis d-squared	p1	p2
5	13.602	0.402	0.718
28	13.517	0.409	0.696
10	13.491	0.411	0.639
32	13.371	0.42	0.636
95	13.027	0.446	0.759
96	12.863	0.458	0.78
100	12.69	0.472	0.806
67	12.447	0.491	0.858
70	12.447	0.491	0.81
78	12.246	0.508	0.847
61	12.193	0.512	0.821
79	12.185	0.513	0.771
3	12.146	0.516	0.731
14	12.142	0.516	0.667
18	12.058	0.523	0.648
72	12.034	0.525	0.591
73	11.938	0.533	0.58
60	11.884	0.537	0.54
46	11.874	0.538	0.471
34	11.804	0.544	0.442
88	11.586	0.562	0.515
25	11.459	0.572	0.527
105	10.908	0.618	0.803
75	10.768	0.63	0.819
21	10.423	0.659	0.911
4	10.407	0.66	0.881
8	10.364	0.664	0.855
56	9.992	0.695	0.94
93	9.772	0.712	0.961
40	9.702	0.718	0.955
16	9.693	0.719	0.934
74	9.399	0.742	0.969
17	9.102	0.765	0.987
108	9.032	0.771	0.984
59	8.941	0.777	0.983
20	8.919	0.779	0.974
101	8.576	0.804	0.992
44	8.373	0.818	0.995
13	8.37	0.819	0.991
65	8.31	0.823	0.988
33	8.306	0.823	0.979

Observation number	Mahalanobis d-squared	p1	p2
99	8.25	0.827	0.973
35	8.202	0.83	0.963
43	8.189	0.831	0.942
15	8.148	0.834	0.921
68	8.127	0.835	0.887
6	8.103	0.837	0.844
103	7.98	0.845	0.841
24	7.749	0.86	0.883
107	7.723	0.861	0.836
45	7.647	0.866	0.805
90	7.471	0.876	0.822
71	7.313	0.885	0.828
92	6.757	0.914	0.957
19	6.682	0.918	0.94
64	6.567	0.923	0.928
66	6.491	0.926	0.9
69	6.491	0.926	0.829
86	6.491	0.926	0.729
94	6.236	0.937	0.761

CURRICULUM VITAE



Name :

Place of Birth :

Date of Birth :

Education :

Work Experience :