Building Conditions and Facilities Improve Customer Satisfaction?
An Evidence of Consumer Behaviors in Office Buildings

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Abstract

Products and services are two common categories in analyzing competition, particularly in the field of marketing (Kotler and Keller, 2012; Kotler and Armstrong, 2004; Peter and Olson, 2010). In much greater definitions related to products and services, nonetheless, the general conditions of the building and all forms of facilities, which are available in the building, may become interesting combinations to represent product or services for a particular building. It is, undoubtedly, perceived that the conditions of the building and all forms of available facilities in a building have potential to be considered as contributing factors toward customer satisfaction (Baucell, et al, 2007).

The focus of this research is to study the existence of buildings, particularly noting the general conditions of the building as well as the available facilities inside a building (Agustina, et al, 2007). Variables used to study the conditions of the building are; location of the building, building design, numbers of floors, use/patterns of ceramic tiles, colors of paint, decoration, and layouts. Variables used to study the available facilities inside a building include; lobby waiting lounge, convenient stores, elevators, lifts, toilets, cafeterias, food courts, windows, sound systems, emergency exits, stairs, parking, security, and access to public transportation. Data analysis will incorporate the use of statistical software packages to show any significance. It is expected that the conditions of buildings and facilities would likely to improve the customer satisfaction, particularly for tenants and visitors.

This research will take on the perspective of consumer behaviors, by utilizing the Fishbein theory as well as the theory of reasoned actions, as the foundation, to note the impact of buildings' conditions and facilities (Anantadjaya, et al, 2007; Nawangwulan, et al, 2007; Peter and Olson, 2010). This research may concentrate in Bandung, a capital city of the province of West Java. The city of Bandung is chosen for its easily accessible weekend-getaway from hectic activities in Jakarta since it lies a mere 3 hours eastward from Jakarta.

Today, Bandung has become a popular spot for shopping, studying, retreating for the weekends, and countless of dining/culinary experience.

Keywords: consumer behaviors, building conditions, building facilities, customer satisfaction, products and services

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I.   INTRODUCTION

As time passes, the level of competition increases. In good old days, simple product offerings were acceptable, as choices were not abundantly available. Later, simple forms of services were also acceptable, as substitutes were scarce. Today, products and services cannot be as simple anymore to win the heart and excitement of consumer. Studies in analyzing both products and services have been enormous. The existence of buildings and their available facilities in major cities has constantly growing in numbers. Buildings have appeared to be up for competition by themselves. Designs are just one obvious competitive factor to boost occupancy rate, as well as traffic flow into the buildings.

In the past 5 years, Bandung has experienced significant growth in tourism industry. Local and foreign visitors have visited this city. Major airlines from neighboring countries have landed in Bandung and brought visitors to spend nights in this city for shopping, dining and sightseeing. This forces some building management of shopping malls, hotels, restaurants or cafes, to have complete make-over to their properties. One way to do this is by paying more attention to their retail themes and atmospheric conditions. Marketers, property management, and business owners, for instance, need to review how their buildings look from the inside-out, as well as outside-in. Store fronts, window displays, merchandise displays, music and smells, may play important roles in attracting traffic.

The atmosphere of a particular building has a huge influence on purchasing behaviors (Agustina, et al, 2007; Broers, 2008). In fact, a recent study in America indicated that over 70% of the in-store purchase decisions were made inside the stores at the time of purchase (Broers, 2008). Gilboa and Rafaeli (2003) stated that designers are fully aware on the influential power of physical surroundings, or referred to as "atmospheric" or "servicecape", toward people's sentiments. Turley and Milliman (2000) stated that servicescape represents the environment in which the service was delivered and where the company and the customer interacted each other. Servicescapes include elements of the building's interior and exterior. Bitner (1990; 1992) added that places like banks, retailers, hotels, offices, restaurants, and even hospitals these days, may depend on the physical environment to lure people's behaviors and shape particular images. Amazingly enough, this physical setting has the power to induce customer satisfaction with superb service (Bitner, 1990; 1992). Building management needs to comprehend the overall service concepts which lead to customer satisfaction. The resulting atmosphere, according to Davies and Ward (2002), stimulates positive or negative mood, which is going to be interpreted as good or bad by people. For instance, carefully designed servicescapes can have a positive influence on customers' purchase decisions, their evaluations of service quality, and their ultimate satisfaction with the service (Keng, et al., 2007; Kenningham, et al 2006). Such servicescapes can also create emotions ranging from pleasant to unpleasant, and from stimulating to boring situations (Sit, et al, 2003; Srimanothip, 2007).

Though the atmospheres play important role in today's property and retail world, there has been a limited number of research on consumer behaviors pertinent to environment. This

paper seeks to find out whether the building conditions and facilities have influential factors on customer satisfaction, both tenants and visitors.

II. LITERATURE REVIEW
II.1. CONSUMER BEHAVIORS AND CUSTOMER SATISFACTION

The American Association defines consumer behavior as "*the dynamic interaction of affect and cognition, behavior and the environment by which human beings conducts the exchange aspects of their lives*". Affect refers to consumer feeling about stimuli and events, and cognition refers to thinking. In a much broader sense, affect illustrates "feeling" responses where people can experience four broad types of affective responses; emotions, moods and evaluation. Each type of affection involves both positive and negative responses. Likewise, cognition consists of mental stage or thinking responses, which commonly include; understanding, evaluation, planning, and making decision. Additional elements to be considered in consumer behavior that lead to intention to buy include the following pairs of product knowledge and involvement, attention and comprehension, and attitudes and intentions (Baucell, et al, 2007; Peter and Olson, 2010; Walidin, 2007).

Consumer behavior tries to define clear purchasing/procurement objectives along with the adherent requirements to numerous factors. Though the intention is crisp, customers often face difficulties in making robust decisions, particularly when qualitative dimensions are involved in the decision making processes. The use of multi-attribute model may increase the preciseness of approximation of decision making process under uncertainties. At least, this model is considered common in consumer research since 1970s. Nevertheless, despite the degree of uncertainties, product purchases process is usually conceptualized in 4 steps; need recognition, information search/processing, alternative evaluation, and product choices (Solak, et al, 2006). It is expected that the each of the stages may be emphasized to shape the purchase decisions.

There were literatures to study further the building atmospheric influences on consumer behaviors. The physical environment can affect consumer's purchase intentions (Keng, et al.2007). For example, ambient conditions can influence consumer behavior in a positive or negative way. Previous studies actually mentioned that a building, a store, or an office with "*pleasant scents might promote a favorable perception of the service environment* (Morrin and Rateneshwar, 2003; Tsiotsou and Wirtz, 2012), *induce positive mood effect* (Spangenberg, et al, 1996), *and have impact on the time spent at the building or store*" (Spangenberg, et al, 1996). Sherman, et al (1997) confirmed the earlier thought that "[building] *environments were important determinants of consumer purchase behavior*".

Whenever people discuss about consumer behavior, one cannot leave behind the underlying facts of customer satisfaction. The logic is relatively simple. The more satisfied the customers, the more likely they formulate their purchase decisions. One definition about customer satisfaction obtained from Kotler and Keller (20120), and Kotler and Armstrong (2004) states that "*customer satisfaction is … the extent to which a product's perceived performance matches a buyer's expectation*."

As the term customer satisfaction is generally dependent on the product or services, there is another factor that determines the level of customer satisfaction. That is, the expectation of the customer (Yogaswara, et al, 2007). This is to say that the higher the customers' expectations, the harder those expectations are satisfied through any products and services. Thus, customer satisfaction attempts to match the level of expectation and perception of

customers. However, it is essential to note that the degree of expectation of any customers will depend on their own behaviors (Anantadjaya, et al, 2007, Jauhari, et al, 2007; Walidin, 2007; Waskita, 2007; Yogaswara, et al, 2007).

One popular measurement for customer satisfaction is the basic five dimensions of SERVQUAL (Anantadjaya, et al, 2007; 2011; Lovelock and Wright, 2002; Zeithaml, et al, 1990; 2009) of tangibility[1], reliability[2], responsiveness[3]; assurance[4], and empathy[5]. Such a measurement is incorporated in this study to evaluate the level of customer satisfaction.

Customer satisfaction is regarded as the cornerstone of any customer-focused business. For property business and others, it is central to the marketing concepts (Fournier and Mick, 1999). The ability to satisfy customers both internal and external is vital for a number of reasons. One key factor of satisfaction has to do with confirmation or disconfirmation of consumers' expectation (Mattila and Wirtz, 2001). Most customer satisfaction research is based on the expectancy-disconfirmation model satisfaction (Oliver, 2010), which states that the way people evaluate service performance is by making direct comparisons to previous expectation (Lovelock and Wright, 2011; Tsiotsu and Wirtz, 2012). When customers are dissatisfied, in the case of building management, for instance, those unsatisfied tenants tend to complain and resort negative word-of-mouth. Those unsatisfied tenants may persuade other potential tenants to be away from that service provider. On the contrary, when customers are satisfied, positive word of mouth is the outcome. Those satisfied customers may likely tell their colleagues, friends and family members, of any businesses that provide good service. In essence, it lowers cost of attracting new customers. Then, surprisingly enough, the satisfied customers are more likely forgiving for future service failures (Lovelock and Wright, 2011).

Another definition of satisfaction is the pleasant response of customers to products or services which satisfied their needs and wants (Oliver, 2010). This study defines customer satisfaction as customers' overall evaluation on the company after purchasing the products or services. This definition will be used for this study purpose. For tenants, satisfaction includes their feeling toward the overall services of building and building management staff. Tenant satisfaction can have a greater financial impact. When tenants are satisfied with the services provided, those tenants may attract other new tenants to rent the vacant spaces. The building management must understand that there is a sunk cost to tenants' turnover, such as; rental income when the space is unoccupied or maintenance cost to clean and repair the empty space before the new tenant move in.

Previous studies have shown that tenants' satisfaction is more on physical environmental influences (Scarboro, 2010). These environmental influences include building layout, interior architecture and decor, lighting, music, aromas and cleanliness. Wakefield and Baker (1998) categorized the physical environment into three elements; (1) ambient factors, which includes background music, lighting, and temperature, as they may influence mood, which

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[1] Tangibility refers to appearance of physical facilities, equipment, personnel, and communication material (Anantadjaya, et al, 2011; Anantadjaya, et al, 2007; Lovelock and Wright, 2002; Zeithaml, et al, 1990; 2009).

[2] Reliability refers to ability to perform the promised service dependably and accurately (Anantadjaya, et al, 2011; Anantadjaya, et al, 2007; Lovelock and Wright, 2002; Zeithaml, et al, 1990; 2009).

[3] Responsiveness refers to willingness to help customers and provide prompt service (Anantadjaya, et al, 2011; Anantadjaya, et al, 2007; Lovelock and Wright, 2002; Zeithaml, et al, 1990; 2009).

[4] Assurance refers to knowledge and courtesy of employees and their ability to inspire trust and confidence (Anantadjaya, et al, 2011; Anantadjaya, et al, 2007; Lovelock and Wright, 2002; Zeithaml, et al, 1990; 2009).

[5] Empathy refers to caring, and individualized attention the firm provides to its customer (Anantadjaya, et al, 2011; Anantadjaya, et al, 2007; Lovelock and Wright, 2002; Zeithaml, et al, 1990; 2009).

may affect decision making processes (Dube and Menon, 2000; Gardner, 1985; Jiang and Wang, 2006), (2) design factors, including architecture, decor, color, and design (Baharum, 2009), and (3) layout or aesthetics (Baharum, 2009). Based on these findings, it is expected that the better the physical environment of the building, the higher the customer satisfaction would be.

It should also be noted that there are other important factors that may affect customer satisfaction. Previous studies have also indicated that well-mannered customer interactions, knowledgeable and efficient front-liners (Nguyen and Leblanc 2002), effort in improving service perceptions and customer satisfaction (Swan, et al, 1999), and repeat purchases (Reynolds and Arnold 2000), have all shown positive contributions toward pushing the satisfaction upward.

II.2. BUILDING CONDITIONS AND FACILITIES

The term atmospherics refers to "*the physical elements in a store's design that appeal to consumers' emotions and encourage buying, help to create an image and position a retailer*" (Ferrel, 2007). Atmospherics elements include external, general interior, layout and design variables (Berman and Evans, 1995). Berman and Evans (1995) noted that external elements include storefront, marquees, entrances, display windows, building architectures, the surrounding area, and parking (Turley and Milliman, 2000). Those external elements are essential as those what the consumers are seeing first. Undoubtedly, those elements must be appealing.

The general interior variables include "*flooring/carpeting, lighting, scents, sounds, temperature, cleanliness, wall textures, and color usage*" (Turley and Milliman, 2000). Several studies had been performed on the perceptions of building interiors toward consumer behaviors. The result was that the interiors influenced approach or avoidance behaviors, time spent in the environment and embedded with potentials in generating sales (Baharum, et al, 2009; Broers, 2008; Reimer and Kuehn, 2005). For example, in office environments, furniture represents image status, for instance, professional image. For shopping malls, interior atmospherics take into considerations how the mall smells, mall's facilities, such as; availability of rest rooms, escalators, elevators, background music, and wall designs. For hotel interiors, cleanliness of the rooms (from bed to bathroom), emergency exits, furniture inside guest rooms, hotel's facilities, such as; business center, and availability of laundry services, may portray professionalism, or simplicity, or even intimacy.

The physical setting, as Reimer and Kuehn (2005) said, does not only influence the perception of service quality (Kenningham, et al, 2006), but also affects other factors, both perceptual and behavioral perspectives. Studies found that physical setting influences consumer behaviors by (1) creating a pleasurable total customer experience (Berry, et al., 2002), (2) influencing personal interactions between patrons and staff and among patrons (Le Bel, 2005), and (3) influencing future patronage intentions (Berry, et al., 2006).

Aside from building condition, as discussed above, building facilities have also become crucial, a very important group of elements that cannot be dispensed with. It is essential for businesses to attain maximum output from facilities to reduce building life-cycle costs. Most services are provided through facilities offered. This should be related to main business objectives, which is attempting to push upward the level of customer satisfaction.

The facilities are composed of buildings, infrastructure and support services. Hotels facilities may include anything from restaurants infrastructure/equipment, banquets, air-conditioning system, fans, elevators, electrical installations, escalators, to areas dedicated for recreational facilities. Mall facilities may include parking areas, entrances, restrooms, escalators, elevators, food courts, choices of restaurants, play areas, store choices, and ATMs. Facilities for office buildings may include; infrastructure inside the office, corridors, elevators, rest-rooms, utilities (electricity and water), parking area, convenient stores, ATMs, branch offices of banks, lighting, and reception area.

Based on above reviews, it can be inferred that:

H_1 : Building conditions positively influence customer satisfaction
H_2 : Building facilities positively influence customer satisfaction
H_3 : Building conditions and building facilities positively influence customer satisfaction.

III. RESEARCH DESIGN

Figure 1: Research Model

This study will incorporate the following simple research model. It is expected that both the conditions of the building and the availability of buildings' facilities are required to increase the level of customer satisfaction. Though the unobserved variables seem uncomplicated, the intricacies lie on deciding which one is considered as products, and which one is considered as services. To minimize such intricacies, the two-sided boundaries are placed.
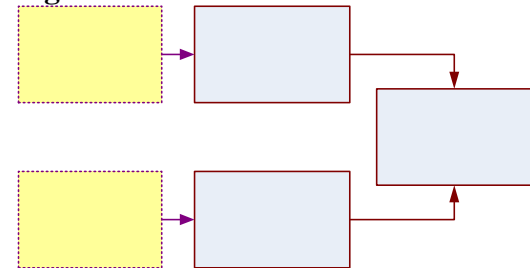
This study assumes that the actual conditions of the building, which include; location, design, numbers of floors, types of tiles, colors, decorations, layouts, and size of the building, are anticipated to provide descriptions onto the product category of such buildings.

Likewise, this study also assumes that the availability of facilities, which include; lobby/waiting areas, convenient stores, elevators, escalators, toilets, cafeterias, food courts, windows, sound systems, emergency exits, stairs, parking areas, security, and close proximity to public transportation, are intended to portray the service category of buildings' facilities.

Though logically the better the conditions of building and the more facilities available in buildings, the higher the level of customer satisfaction, this study attempts to provide statistical support of such a logical perception. Certainly, it is expected that the statistical evidence is able to confirm the logical perception. To gather information from respondents' satisfaction level, the basic five dimensions of SERVQUAL is incorporated in this study to evaluate the level of customer satisfaction (Lovelock and Wright, 2002; Zeithaml, et al, 1990; 2009).

Table 1: Case Processing Summary

		N	%
Cases	Valid	200	**100.0**
	Excluded[(a)]	0	.0
	Total	200	100.0

[(a)] Listwise deletion based on all variables in the procedure.

Source: SPSS

This study incorporates primary data from respondents. Given the topic of this study, the respondents are employees of various organizations in office buildings and malls, including visitors, who visit those office buildings and malls in Bandung. This study attempts to use a combinations of sampling

methods; random, quota, and convenience. Aside from the quantitative analyses, which are based on questionnaires, a combination of qualitative inferences will also be gathered in this study. As stated, it is expected that such studies would reveal the significance of customer satisfaction level toward buildings' conditions and facilities.

As stated, respondents in this study are randomly chosen in several buildings in Bandung, to accumulate a total of 200 respondents. The majority of respondents are directly approached on the spot without any previous acquaintances. This is particularly true for visitors. A handful of tenants, however, are approached based on contacts in previous studies. To maintain the randomness, several buildings are targeted, which mainly include; office buildings within the proximity of central business district, and malls. Though this study attempts to uphold the randomness in choosing prospective respondents, those respondents are also conveniently chosen, as they were physically present in any particular building in Bandung. All participants were requested to respond a set of questions regarding the "building conditions", "building facilities", and "level of satisfaction". In the instance when prospective respondents declined to participate, the next available individual was chosen instead. On-the-spot interviews are also conducted with the respective respondents.

IV. DATA ANALYSIS
IV.1. OVERVIEW OF THE STUDY

All statistical analyses are processed using SPSS. The initial statistical processes of descriptive statistics and frequency reveal the characteristics of respondents as follows; (1) about 46% of respondents were females, (2) about 66% of respondents hold a position of at least as managers/general managers, (3) about 46% of respondents are married, (4) about 68% of respondents do not have any children by the time of the study, (5) about 42% of respondents hold at least an undergraduate degree[6], (6) about 8% of those respondents went to international schools in Indonesia, and 17% studied abroad, (7) the average monthly spending of respondents was Rp. 7.5 million (US$789 at Rp. 9,500/US$1), (8) about 52% of respondents work for IT/telecommunication, and consulting firms, and (9) about 7% of respondents occupy office locations in the basement/ground floor, or visiting an office location in the basement/ground floor of a particular building.

There were no significant differences in the characteristics or responses regardless of physical and/or location differences of buildings. Thus, despite the specificity of the characteristics of those respondents in different buildings, as mentioned above, their responses are combined. The preliminary studies have been conducted since the first

Table 2: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.569	**.785**	30

Source: SPSS

Table 3: Scale Statistics

Mean	Variance	Std. Deviation	N of Items
7,571,053	1.8E + 13	4,184,569	30

Source: SPSS

Table 4: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.619**
Bartlett's Test of Sphericity	Approx. Chi-Square	370.513
	df	210
	Sig.	.000

Source: SPSS

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[6] This includes undergraduate degrees, graduate degrees, and doctoral degrees.

semester of 2007, but with a major modification in analyzing the customer satisfaction based on conditions of the building and the available facilities in the building. Such studies are documented and used as references on this paper.

IV.2. ANALYSIS AND DISCUSSION

The reliability statistics indicate that the data are considered 79% reliable. However, although the data shows a satisfactory level of validity and reliability, the scale statistic table shows that there are large variations[7] on the data scales. To note for outliers, standardized Z-scores are used in further analysis. The KMO and Barlett's Test indicates an adequacy measurement of 62%. Though the result does not indicate a substantially high adequacy level as expected, this implies that the sampling was relatively adequate for further testing.

Based on the studies and the numbers of variables used, the communalities table indicates that the variations on each of the variables appear to be significant[8]. Results from the Principal Component Analysis show that all variables appear to have the ability to statistically explain the variance. Though they do not show a high degree of significance, particularly "convenient stores" at only 45%, as initially expected, nonetheless, the explanation power of those indicators is rather satisfactory. Judging only from the communalities table, it can be inferred that the existence of convenient stores remain influential to tenants, visitors, and users of the buildings. Equipped with those acceptable levels of explanatory power, it can be safely inferred to that those indicators portray adequate levels of contribution toward satisfaction of tenants, visitors, and users of the buildings.

To verify the acceptableness of the explanation power of those communalities, data reduction analysis was performed. From the factoring table, however, the results do not show a clear-cut formation of just 2 factors; "building conditions", and "building facilities". The formation of few other factors, instead of just 2 factors as initially expected, has confirmed that all indicators used in this study may not necessarily measure the same variables. This is to say that the sets of indicators do not seem to have the similar ability in

Table 5: Communalities

	Communalities (using **Principal Component Analysis**)	
	Initial	**Extraction**
Building Location	1.000	**.696**
Designs	1.000	**.586**
No of Floors	1.000	**.538**
Tiles	1.000	**.626**
Colors	1.000	**.720**
Decorations	1.000	**.584**
Layouts	1.000	**.602**
Lobby/Waiting Lounge	1.000	**.559**
Convenient Stores	1.000	.449
Elevators	1.000	**.580**
Escalators	1.000	**.592**
Toilets	1.000	**.529**
Cafeterias	1.000	**.551**
Food Courts	1.000	**.503**
Windows	1.000	**.579**
Sound Systems	1.000	**.680**
Emergency Exits	1.000	**.764**
Stairs	1.000	**.638**
Parking	1.000	**.633**
Security	1.000	**.634**
Public Transportation	1.000	**.649**

Source: SPSS

measuring the "building conditions" and "building facilities". Those few statistically accepted formations are component 1 and 1 (-0.788), component 3 and 4 (0.535), component 5 and 2 (0.604), component 7 and 9 (-0.532), component 8 and 7 (-0.707), and component 9

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[7] The average value is 7,571,053, and the standard deviation of 4,184,569

[8] This is based on the communalities table using **Principal Component Analysis**, which shows that all of the variables used in this study appear to be moderately significant, except for the variable "convenient store", with only 45% explanatory power to explain the variations toward the formation of factors intended in this study.

and 9 (0.653). Such findings from data reduction analysis provide support to the relatively moderate level of explanation power of each of the indicators, as previously explained, which ranges only from 45%-76%. Also, this confirms the relatively minimal level of sampling adequacy that such indicators may be indirectly measure "building conditions" and "building facilities", or there are other unaccounted indicators.

Table 6: Factor Analysis

Component	1	2	3	4	5	6	7	8	9
1	**-.788**	.423	-.247	.023	-.206	.122	.078	.127	.246
2	-.285	-.235	**.634**	**.608**	-.076	.133	.191	-.178	-.027
3	.170	-.228	-.486	**.535**	.194	-.070	.381	.355	.290
4	.103	**.502**	.211	-.057	**.545**	.347	.392	.216	-.267
5	.377	**.604**	.151	.275	-.476	-.395	.082	.068	.033
6	.254	.239	-.254	.300	.009	**.575**	-.290	**-.517**	.205
7	-.226	.140	-.265	.348	.360	-.437	-.260	-.258	**-.532**
8	.006	.066	.230	.197	.197	.063	**-.707**	.574	.177
9	-.033	.129	.215	-.122	.472	-.401	.036	-.333	**.653**

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Source: SPSS

The following table indicates the independent samples test. This test is shown here to evaluate differences between male and female toward the "building conditions" and "building facilities". Gender is analyzed to represent the basic demographic element in this study. The logical expectation predicts that males and females are valuing the conditions and facilities of buildings from 2 vastly different angles.

Table 7: Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						90% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference		Lower	Upper
BC	Equal variances assumed	5.213	.023	-2.709	198	.007	-.13440	.04962		-.21640	-.05241
	Equal variances not assumed			-2.759	197.880	.006	-.13440	.04871		-.21491	-.05390
BF	Equal variances assumed	.163	.686	-1.217	198	.225	-.02768	.02274		-.06526	.00990
	Equal variances not assumed			-1.223	194.710	.223	-.02768	.02263		-.06509	.00973

Source: SPSS

F-test[9] attempts to test the basic assumption that the variances are statistically similar for both male and female respondents. First, since the significance level of the "building conditions"

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[9] The hypothesis are; H_0 = male and female respondents have the same variance. H_1 = male and female respondents do not have the same variance.

of 2.3% is less than α of 10%, it can be concluded that the variance of "building conditions" is statistically similar for both males and females. However, the significance level of "building facilities" of 68.6% is higher than α of 10%. It can be concluded that the variance of "building facilities" is statistically dissimilar for both males and females. From these statistical results of F-test, it can be concluded that males and females value building conditions from a similar perspective, but using a different viewpoint to assess building facilities. The values of t-test[10] provide evidence from a different side for both males and females. From the statistical results of t-test, it can be concluded that "building conditions" do have a significant influence to both male and female respondents[11]. On the contrary, "building facilities" do not have a significant influence to respondents[12].

Following the verifications on data validity and reliability, the available data is regressed to see the relationships among variables in customer satisfaction, building conditions, and building facilities. To satisfactory meeting the requirements of regressions analysis, the underlying basic assumptions are tested.

Table 8 shows the tests of normality. This test attempts to evaluate the normality of the available data. If the data were found to be normal, it is perceived to have acceptable disparities that mirrored the population variations. Since the levels of significance are

Table 8: Tests of Normality

	Kolmogorov-Smirnov[(a)]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
CS	.101	200	**.000**	.983	200	**.015**
BC	.089	200	**.001**	.983	200	**.018**
BF	.129	200	**.000**	.972	200	**.001**

(a) Lilliefors Significance Correction
Source: SPSS

all below the value of alpha used in this study (α=0.1), for both Kolmogorov-Smirnov and Shapiro-Wilk results, it is safe to conclude that the available data satisfies the normality tests (Wijaya, 2009).

Table 9: Tests of Multicollinearity[(a)]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	0.253	0.043		5.937	0.000		
	BC	0.299	0.011	0.683	26.510	0.000	0.999	**1.001**
	BF	0.593	0.025	0.612	23.767	0.000	0.999	**1.001**

(a) Dependent Variable: CS
Source: SPSS

Table 9 shows the tests of multicollinearity. This test evaluates the level of correlations among independent variables used in the regressions. An acceptable regression model should not have correlations among independent variables, as a way to maintain independencies. Since the value of value inflation factor ("VIF") are less than 10, it is safe to conclude that there is no multicollinearity in the data set (Wijaya, 2009).

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[10] The hypotheses are; H_0 = building products/building services do not influence male and female respondents. H_1 = building products/building services do influence male and female respondents.

[11] This is due to the fact that the significance of t-test is less than α of 10%. If this is the case, the conclusion is to reject H_0.

[12] This is due to the fact that the significance of t-test is higher than α of 10%. If this is the case, the conclusion is to not reject H_0.

The next test is autocorrelation tests. This test evaluates the level of correlations of the dependent variable over periods, particularly periods before, during, and after research. Since the value of Durbin-Watson is between -2 and +2, as shown in table 10, it is safe to conclude that the available data does not violate the any autocorrelations specifications (Wijaya, 2009).

One last statistical test, heterocedasticity, is to note the variations. The more constant variations in the available data are preferred. Table 11 shows the Spearman's rho correlation coefficients and the level of significance of those correlations. From the level of Spearman's rho, it is evident that "building conditions" and "building facilities" show relatively moderate relationships toward "customer satisfaction", at the level of 70% and 59%, with 99% confidence. From the level of significance, it is safe to conclude that the data set does have a constant variation.

Table 10: Autocorrelation Tests[b]

Model	R	R Square	Adjusted R Square	Std. Error of Estimate	Durbin-Watson
1	.932[a]	.869	.868	.05639	**.762**

(a) Predictors: (Constant), BC, BF
(b) Dependent Variable: CS
Source: SPSS

In order to address H_1, "building conditions positively influences customer satisfaction", the following table of coefficient is necessary. Referring to the significant level of t-test, it is apparent that "building conditions" have a positive influence toward "customer satisfaction".

Table 11: Correlations

			CS	BC	BF
Spearman's rho	CS	Correlation Coefficient	1.000	**.697**[**]	**.589**[**]
		Sig. (2-tailed)	.	**.000**	**.000**
		N	200	200	200

(**) Correlation is significant at the 0.01 level (2-tailed).
Source: SPSS

To address H_2, "building facilities positively influences customer satisfaction", and "building facilities" have a positive influence toward "customer satisfaction". Hence, it is safe to conclude that "building conditions" positively influences "customer satisfaction". Separately, it is safe to conclude that "building facilities" positively influences "customer satisfaction".

Table 12: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.253	0.043		5.937	**0.000**
	BC	0.299	0.011	**0.683**	26.510	**0.000**
	BF	0.593	0.025	**0.612**	23.767	**0.000**

(a) Dependent Variable: CS
Source: SPSS

To address the final hypothesis in this model, H_3, "building conditions and building facilities positively influences customer satisfaction", the table of analysis of variance becomes necessary. The value of F and the level of significance provide statistical evidence that building conditions and building facilities, simultaneously, positively influence customer satisfaction. As initially expected, improvements on building conditions and facilities may

bring about more satisfaction. This is logical since renovation projects may mainly be targeted to provide more unique ambience, comforts, enhancement in aesthetics, and/or safety.

Table 13: ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.173	2	2.086	**656.245**	**.000**[a]
	Residual	.626	197	.003		
	Total	4.799	199			

(a) Predictors: (Constant), BC, BF
(b) Dependent Variable: CS
Source: SPSS

Considering the statistical results above, a regression model in this study is CS = 0.253 + 0.683 (BC) + 0.612 (BF). The managerial explanations on those value and variables are as follows;

- $a = 0.253$ = it refers to the lowest level of customer satisfaction. This means that even without fancy building conditions and superb building facilities, the minimal level of customer satisfaction is approximately 25%.

- $b_1 = 0.683$ = for every 1% improvement on building conditions, the level of customer satisfaction increases by 68%. Hence, if the minimal level of customer satisfaction were true at about 25% toward building conditions, an increase of 68% would eventually raise level of customer satisfaction to 42%.

- $b_2 = 0.612$ = for every 1% improvement on building facilities, the level of customer satisfaction increases by 61.2%. Hence, if the minimal level of customer satisfaction were true at 25% toward building facilities, an increase of 61.2% would eventually raise level of customer satisfaction to 40%.

From the autocorrelation table, it is also apparent that this regression model has the ability to explain the variations around the mean of customer satisfaction, as much as 87%. At this level, this regression model is considered as a good predictor for future occurrence.

Table 14 (a): Coefficients[a]

To know more on the details of each of the independent variables, additional analysis may have to be generated to acknowledge the impact of each indicator.

Details on indicators of "building conditions" are shown in table 14 (a). With all indicators are considered significant, the available data for "building conditions" are all accounted for. From these sets of statistical results, it is

Model		Standardized Coefficients Beta	t	Sig.
1	(Constant)		17.839	0.000
	Office Floor	-0.100	-1.351	0.078
	Building Location	**-0.600**	-0.827	0.010
	Designs	**0.643**	0.897	0.071
	No. of Floors	-0.019	-0.257	0.098
	Tiles	-0.155	-1.698	0.091
	Colors	**0.473**	1.022	0.008
	Decorations	**-0.302**	-0.032	0.075
	Layouts	**0.539**	1.928	0.055

(a) Dependent Variable: BC
Source: SPSS

apparent that the top five contributors are; designs, location, layouts, colors and decorations.

This may be logically acceptable since "externalities" represent the first glimpse of what people can directly observe. Undoubtedly, the designs and locations of the building may be the top priority for prospective tenants in choosing where to house their business. Nevertheless, it should be noted that building location shows a negative contribution toward "building condition". Further investigations on the details reveal that buildings outside the main area of central business district are regarded as inconvenience, for tenants. For visitors, designs and locations of building may still be on the top priority due to the uniqueness and accessibility. Once the externalities issues are taken care of, tenants may start deciding on more internal matters of the building. This is confirmed by the results, as the top five contributors include some internal matters, such as; layouts, colors and decorations. This is to say that once prospective tenants may have decided on the external issues, now the reasoned actions toward making decisions are based on layouts of the building, choices of colors, as well as decorations. It is interesting to note that decorations carry a negative contribution toward "building conditions". Investigations reveal that the style to decorate the exteriors and interiors may not be similar to the preferences of tenants. For visitors, those internal issues may be the driver towards reasons on future re-visits. In the cases for banks, malls, cafes/restaurants, for instance, layouts, colors and decorations may well be the basic reasons for returns.

Details on indicators of "building facilities" are shown in table 14 (b). As indicated in the table, the majority of indicators are considered significant, except; lobby/ waiting lounge, food courts, sound systems, emergency exits, and starts. From these sets of statistical results, it is apparent that the top five contributors are; the accessibility to public transportation, availability of windows, cafeterias, parking space, and the presence of security. This may also be relevant to what the general public would pick. Like it or not, windows play an important role in buildings. Lack of windows, particularly

Table 14 (b): Coefficients[(a)]

Model		Standardized Coefficients Beta	t	Sig.
1	(Constant)		7.285	0.000
	Lobby/Waiting Lounge	-0.019	-0.254	**0.199**
	Convenient Stores	0.123	0.304	0.062
	Elevators	0.104	1.337	0.083
	Escalators	-0.031	-0.393	0.095
	Toilets	-0.249	-0.668	0.005
	Cafeterias	**0.626**	0.330	0.042
	Food Courts	0.013	0.170	**0.165**
	Windows	**0.682**	-1.037	0.001
	Sound Systems	-0.055	-0.657	**0.112**
	Emergency Exits	0.112	1.451	**0.148**
	Stairs	-0.092	-1.198	**0.232**
	Parking	**0.507**	0.094	0.025
	Security	**-0.376**	-0.978	0.029
	Public Transportation	**0.762**	2.084	0.039

(a) Dependent Variable: BF

Source: SPSS

in high-rise buildings, may seem awkward. The accessibility to public transportations, along with cafeterias, also claims the top spot. Logically, this is true for both tenants and visitors. Accessibility represents the attractiveness of the building. Likewise, the presence of cafeterias inside the buildings becomes the magnet to attract visitors. In turn, this increases traffics. Nonetheless, it is also interesting to note that the presence of security, although it is significant, but its contribution toward building facilities is negative. This may represent the situation whereby as the level of building security becomes stricter, people may choose to stay away.

V.   CONCLUSION AND RECOMMENDATIONS

The statistical results provide evidence that conditions and facilities of buildings have substantial contributions toward the level of customer satisfaction. Though this may not seem as a breakthrough in the studies of consumer behaviors and customer satisfaction, at least this study is able to provide insights on what people may be looking for in buildings. Few notable findings include; (1) males and females have a tendency to perceive building condition from the same perspective, (2) males and females have a tendency to perceive building facilities from two different perspectives, (3) conditions of building contribute 68% toward customer satisfaction, (4) facilities of building contribute 61% toward customer satisfaction, (5) this regression model has 87% ability to explain the level of customer satisfaction, (6) location in central business districts are preferred, (7) exterior and interior designs are important, (8) layouts of the building interior are also important, (9) accessibility to public transportation is preferred, (10) the presence of windows, cafeterias, and parking space also contributes to the traffic and occupancy rates of buildings.

Based on those findings, this study can recommend building owners and building management to simply focus on location, design, layout, public transportation, windows, cafeterias, and parking spaces. In terms of locations, building owners and building management may not able to do anything. However, there are lots of actions to consider other ingredients for success in increasing traffic and satisfaction. Minor, but periodic beautifications of the exterior and interior may well be the driver toward improvement. If such efforts were to be combined with major remodeling projects, based on the results of this study, satisfaction should improve drastically.

Though this study may provide additional insights in terms of consumer behaviors and customer satisfaction, however, there are flaws and deficiencies. It is highly anticipated that future studies can be developed further by acknowledging more indicators from the technical perspectives, including architectural issues.

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