The Effect of Value Co-Creation, and Corporate Image on Building Customer Loyalty Toward Apartment Contractor: The Mediating Role of Customer Satisfaction

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ABSTRACT

Purpose: The purpose of this study is to create strategy for apartment contractors to build loyalty of apartment developer by examine customer satisfaction as mediator between corporate image, vccreation with customer loyalty in the Indonesia apartment construction industry.

Design/methodology/approach: Current study is conducted in the apartment construction industry in Indonesia. The population for this study is apartments developer in Indonesia. To accomplish main purpose, the data were collected from project managers of apartment developer firms in Indonesia. Online questionnaires were distributed and total of 316 respondents' data were collected and analysed. Respondent data was processed using SmartPLS for hypothesis testing.

Findings: The results shows that customer loyalty significantly influenced by their satisfaction, corporate image, and vccreation. The result also reveals that customer satisfaction mediate the relationship between corporate image, vccreation and with customer loyalty. Furthermore, the research results also found that corporate image, vccreation and positively influence satisfaction.

Paper type: Research paper

Keywords: *Customer Loyalty, Customer Satisfaction, Corporate Image, Co-Creation, Apartments Construction.*

I. INTRODUCTION

The construction industry is an essential industry for a country, where the construction industry is a major contributor to the economic and social development of a country (Niazi & Painting, 2017). In Indonesia, the construction sector contribute a substantial amount in the Indonesian economy, where the construction sector contributes approximately 10.44% of Indonesia's gross domestic product (GDP) or Gross Domestic Product (GDB) (Kusnandar, 2022). The apartment construction industry in Indonesia is one of the most promising sectors within the construction industry, driven by the country's population growth and increasing demand for residential housing (ARCADIS Indonesia, 2019). Even during the COVID-19 pandemic, the apartment sector is one of the sectors that is showing a rapid recovery in demand in 2023 (Grahadyarini, 2023). The potential of the apartment construction sector also supported by the high population in Indonesia and high urbanization in Indonesia. Apartment construction projects in Indonesia are carried out by developer companies, where in the process the developer appoints a contractor company to work on apartment projects (Budiman, 2022). The rapid growth of the iapartment construction industry accompanied by intense competition, requiring companies in the apartment construction contracting sector to adopt effective strategies to secure loyalty from apartment developers and maintain a competitive edge. Customer loyalty is an important asset for companies operating in the business 2 business or B2B industry to be able to compete in a competitive and developing industrial environment (Kittur &

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Chatterjee, 2021), thus apartment contractor need to focus on building customer loyalty from apartment developer in their strategy to excel in the apartment construction competitions.

Customer loyalty is an important strategies for companies operating in the B2B industry (Kittur & Chatterjee, 2021). Several academic studies pointed out that a satisfied customer will predict their loyalty toward a certain brand in B2B businesses (Almomani, 2019; Opata et al., 2021). The main goal for business strategy is to ensuring customer loyalty and satisfaction, because customer satisfaction will predict customer loyalty (Ruiz-Martínez et al., 2019). In the academic world, the relation between satisfaction and customer loyalty is widely proved in multiple B2B industries (Almomani, 2019; Gaudenzi et al., 2021; Hai et al., 2021; Hariandja & Vincent, 2022; Nasution, 2024; Woratschek et al., 2020), this research proposes the customer satisfaction as a predictor for customer loyalty of developer toward apartment contractor. This research uses stimulus organism response or SOR theory to analyze the relationship between customer satisfaction and customer loyalty. SOR theory is used considering that several previous studies used the basis of SOR theory to explain the relationship between customer satisfaction and customer loyalty (Ahanger et al., 2023; Lusianingrum & Pertiwi, 2023). SOR theory in the context of the multi-storey apartment building construction industry with customer satisfaction from the developer as the organism, customer loyalty from the developer as the response, and stimulus taken from the contractor company side which has an influence in shaping the organism and response from the developer company.

Corporate image is one of the company's strategic assets which acts as one of the company's competitive advantages in achieving customer loyalty (Özkan et al., 2020). Several academic researcher prove the important role of corporate image in various industries (Gelderman et al., 2021; Özkan et al., 2020). This research proposes corporate image as a stimulus in forming customer loyalty. In building good relationships, companies cannot view customers only as passive recipients, but companies must consider the value of co-creation or VCC where the company treats customers as partners, co-creators in working together (Sales-Vivó et al., 2021). Several previous research have provide empirical proved regarding the effect of corporate image, value co-creation or vccreation on customer loyalty in the context of business to business or B2B industries (Gelderman et al., 2021; Kwiatek et al., 2020; Sales-Vivó et al., 2021), but academic research which studied the influence of corporate image, and vccreation in forming customer loyalty of apartment developer toward contractor is still relatively small, so this is one of the gaps that is filled through this research. From these considerations, this research proposes corporate image, guanxi and value co-creation as stimuli in building satisfaction and loyalty.

In academic literature, customer satisfaction not only acts as a predictor of customer loyalty but also acts as a mediator of customer loyalty. Previous research provides empirical evidence of the significant mediation role of satisfaction toward customer loyalty (Dehghanpouri et al., 2020; Kaura et al., 2015; Khan et al., 2022). There is also research on the mediating role of customer satisfaction between relationships and customer loyalty (Khan et al., 2022). However, there are still few studies that address the mediating role of customer satisfaction on corporate image and value co-creation with customer loyalty in the context of the B2B industry, and even fewer research that examine customer loyalty of apartment developers toward contractor, so this is a gap in the academic literature. The novelty and main problem of this research is to fill the gap in academic literature by examining the mediating role of customer satisfaction between guanxi, corporate image and value co-creation with customer loyalty in the context of the apartment construction industry.

A. Literature Review
1. Customer Satisfaction

The customer satisfaction for the service and retail industry context is based on expectancy-disconfirmation theory (R.L, 1997). The expectancy-disconfirmation theory is a theory from psychology which states that individual satisfaction with a product is based on their evaluation of the product, where the evaluation is an evaluation of their expectations from the product compared to their experience when using or feeling the product.(Oliver, 1980). Customer evaluations in the expectancy disconfirmation theory are measured using a scale of "better or worse than expectations", where in a psychological construct/form, the result of this perceived evaluation is subjective disconfirmation (Oh, 1999). Consumer decisions in customer satisfaction are influenced by good or bad evaluations from consumers based on their comparison between experiences and their expectations (Nisar & Prabhakar, 2017).

Customer satisfaction will predict customer loyalty so it is no secret that satisfied and loyal customers are the main goal of business strategy (Ruiz-Martínez et al., 2019). In the academic world, the influence of satisfaction on customer loyalty is a strong topic that is widely empirically researched in various B2B industries (Almomani, 2019; Gaudenzi et al., 2021; Hai et al., 2021; Hariandja & Vincent, 2022; Nasution, 2024; Woratschek et al., 2020). Sun et al., (2020) states that vccreation has a significantly forming consumer loyalty towards banks that carry out CSR. Research from Gaudenzi et al., (2021) proves the effect of satisfied customers on their loyalty on food companies' loyalty in the B2B food company in Italy. Seeing that the apartment construction industry is a

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B2B business, this research proposes the customer satisfaction as a antecedent for customer loyalty toward apartment contractor as hypotheses 1.

Hypotheses 1. customer satisfaction significantly influences their loyalty towards apartment contractors.

2. The SOR Theory

This stimulus organism response or SOR theory is used as framework considering that several previous studies used the basis of SOR theory to understand better the relationship between satisfaction - loyalty in consumers mind (Ligaraba et al., 2023; Molinillo et al., 2021). SOR theory in the context of the multi-storey apartment building construction industry with customer satisfaction from the developer as the organism, customer loyalty from the developer as the response, and stimulus taken from the contractor company side which has an influence in shaping the organism and response from the developer company. Research from Wu & Li, (2018) uses SOR to analyze online loyalty in an online social commerce. Research from Hsu et al., (2021) and research from Yu et al., (2021) uses the S-O-R theory to examines consumer behavior regarding satisfaction and loyalty as a response. Seeing that SOR theory is a theory that is widely popular in studying consumer loyalty behavior in various industries, but only a few research that have used SOR theory to study customer loyalty in the apartment construction industry. Therefore, this study uses SOR Theory as framework.

3. Value Co-Creation

Good relationship networks with customers are a potential way to improve construction company performance and become a platform for sustainable strategies (Lau & Rowlinson, 2009). In building good relationships, companies cannot view customers only as passive recipients, but companies must consider the value of co-creation or vccreation where the company treats customers as partners, co-creators in working together (Sales-Vivó et al., 2021). Vccreation is a concept formed based on service-dominant logic (SD logic) as its foundational idea. Vccreation asserts that in the relationship with customers, they should not be seen as passive parties in the relational process but rather as active actors who play an active role in the process of co-creating value together. (González-Mansilla et al., 2019; Vargo & Lusch, 2004). vccreation views customers not only as passive parties in business relationships, but customers are seen as active parties who participate in the business process by exchange knowledge and other resources (Opata et al., 2021; Vargo & Lusch, 2004; Xiao et al., 2020). According to Prahalad and Ramaswamy (2004). According to Minkiewicz et al., (2014), co-creation is defined as an experience created by customers through active participation in activities, involvement and personalization of vccreation experiences. Prior study provide empirical evidence that vccreation have impact on creating loyalty (Dewarani & Alversia, 2023; Firdaus et al., 2023; Iglesias et al., 2020; Xu et al., 2021). Thus, this research proposes vccreation as one of the predictors that lead to customer loyalty.

Hypotheses 2. Vccreation positively related to the customer loyalty towards apartment contractors.

4. Corporate Image

Corporate brand image is one of the company's strategic assets which acts as one of the company's competitive advantages in achieving customer loyalty (Özkan et al., 2020). Corporate image is one of the key assets that serves as a source of competitive advantage for a company, as it is an intangible business asset that is not easily replicated by competitors. (Alam & Noor, 2020). One definition of corporate image is the perception of the brand image in the consumers mind which is formed based on the totality of impressions from all aspects of the company (Han et al., 2019). Consumer perceptions in the form of company impact have a significant influence in forming and maintaining consumer loyalty and satisfaction, as proven in previous empirical research (Alam & Noor, 2020; Arrivabene et al., 2019; Gelderman et al., 2021; Özkan et al., 2020). Research by Alam & Noor, (2020) also provides results that confirm that Y generation loyalty on superstores in Bangladesh is positively and significantly influenced by its brand image. This research proposes corporate image as a stimulus in forming customer loyalty.

Hypotheses 3. Corporate image positively influences toward customer loyalty towards apartment contractors.

The influence that customer satisfaction has on their loyalty has been widely proven in academic research (Almomani, 2019; Gaudenzi et al., 2021; Woratschek et al., 2020). Beside that, customer satisfaction has also been proven to play a mediating variable toward loyalty, one example is how customer satisfaction mediates corporate image with loyalty (Abbas et al., 2021; Jamshidi & Rousta, 2021), several prior studies also provide empirical finding of customer satisfaction mediate the corporate image, and vccreation with their loyalty (Hayati et al., 2020; Jamshidi & Rousta, 2021; Khan et al., 2022; Naqvi et al., 2020). From these considerations, this research proposes customer satisfaction positively mediate the relationship between corporate image, and vccreation and loyalty.

Hypotheses 4. customer satisfaction positively mediates between vccreation and customer loyalty from developers towards apartment contractors.

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Hypotheses 5. customer satisfaction positively mediates between corporate image and customer loyalty from developers towards apartment contractors.

Of the five hypotheses formed, the framework model for this research is presents in Figure 1.
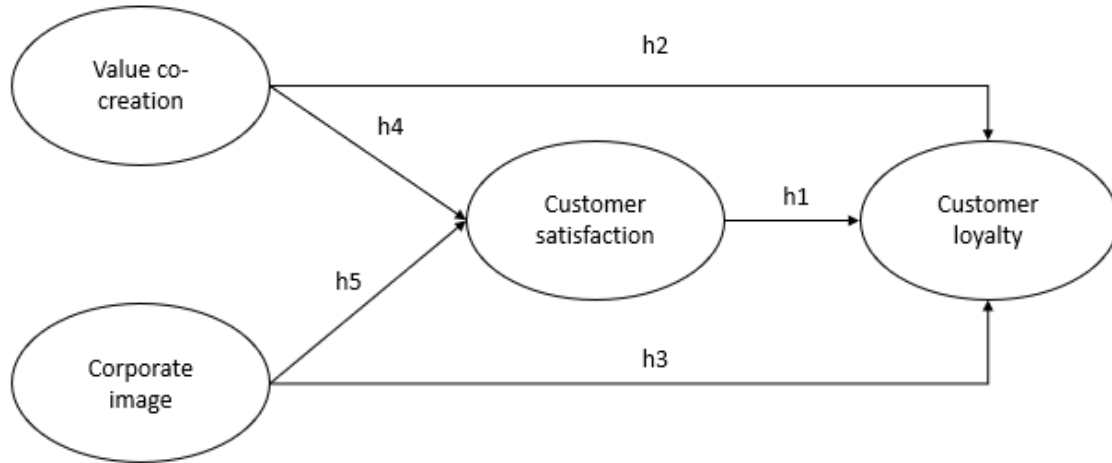

Figure 1. Research model

II. METHODS

Regarding methodology, the statistical approach used to analyze is structured equation modeling partial least squares or SEM-PLS, while the tool used for statistical analysis is SmartPLS.

The population for the subject on this research is developer companies which has constructed apartments projects in Indonesia. The sampling time approach that used is a cross sectional design, where the collections happen from October until December 2023. The collection process of respondent data was done by using Google forms. The language that were used in this questionnaire is Indonesian, because Indonesia is the daily language used by the respondent population, making it easier to fill out the questionnaire. This research conducts a pilot study with 30 respondendtas before collecting data, the pilot study conducted to test whether there are any difficulties in filling out the questionnaire and do the respondents understand the meaning of the questions. After data collection, the first analysis is descriptive which is outlined in table 1.

Table 1. Respondents Demography

Classifications	numbers
Gender	
Male	291
Female	25
Age	
20 – 30	
31 – 40	17

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Classifications	numbers
41 – 50	120
51 - 60	125
>61	44

The data in Table 1 shows that the majority of respondents are from 51 until 60 years, namely 40.85 percent or 125 respondents, followed by respondents with an age of 41 until 50 years with 39.22% or 120 respondents. Meanwhile, there were 14.38% or 44 respondents aged more than 60 years, then 5.56% of the respondents or 17 respondents age are within range of 31 – 40 years. The most of respondents were male with 291 respondents or 92% of the respondents, while female were accounted of 7.91% of the respondents as mentioned in Table 1.

All variables in the research model are measured with indicators adapted from previous research that have been tested and are relevant to the research.

The measurement of the customer loyalty variable uses previous study done by Kittur and Chatterjee (2021), and Zhang and Li (2019) which relevant to the B2B industry (Kittur & Chatterjee, 2021; Zhang & Li, 2019). The measurement of the customer satisfaction variable was adapted using indicators that used in several prior study that are relevant to the B2B industrial context, such as Gligor et al (2020), and Kittur and Chatterjee (2021) (D. Gligor et al., 2020; D. M. Gligor & Maloni, 2022; Kittur & Chatterjee, 2021). The corporate image was measured using indicators from study by Alam and Noor (2020), and Balmer et al (2020), which their study relevant with B2B context (Alam & Noor, 2020; Balmer et al., 2020). The measurement of the vccreation uses prior study by Iglesias et al (2020), Sales-Vivó et al., (2020), and Sun et al (2020) (Iglesias et al., 2020; Sales-Vivó et al., 2021; Sun et al., 2020). Questions from the questionnaire can be seen in the appendix.

III. RESULTS AND DISCUSSION

A. Results

This section explains the results of statistical tests carried out on research data and models using SmartPLS v3.2.7. The and customer loyalty variables from this research are higher order constructs with a reflective-reflective type (Sarstedt et al., 2019). The analysis was carried out with reference to journals from Hair et al (2017), where the analysis process with SEMPLS is divided into 2 parts, namely the outer model or confirmatory factor analysis stage, and path analysis or structural analysis. (Hair Jr. et al., 2017). The preliminary stage of the CFA involves doing a factor loading study. The loading value demonstrates the magnitude of the correlation or association between the indicator and its latent construct, and the loading indicator is ideally set at 0.7 (Hair Jr. et al., 2017). If indicator falls below this recommended value, it suggests a lack of validity in the indicators. The subsequent phase in the CFA process involves assessing the degree of convergent validity, which pertains to the extent to which each item underlying a variable succeeds in converging to clarify the validity of the variable. This stage was evaluated by employing the average variance (AVE) metric, which ideally set at 0.5. Subsequently, the evaluation of internal consistency reliability is conducted by the utilisation of composite reliability analysis, commonly referred to as CR. According to relevant criteria, CR values that surpass 0.7 are often deemed satisfactory. The table 2 displays the outcomes of the statistical examination conducted on the loading factors, EVA, and CR.

Table 2. CFA

	Items	Loading factor	AVE	CR
Value Co Creation	vccreation1	0.926	0.848	0.965
	vccreation2	0.943		

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	vccreation3	0.951		
	vccreation4	0.940		
	vccreation5	0.840		
Customer Loyalty	CL1	0.881	0.764	0.951
	CL2	0.715		
	CL3	0.899		
	CL4	0.920		
	CL5	0.913		
	CL6	0.926		
Customer Satisfaction	CS1	0.966	0.925	0.980
	CS2	0.957		
	CS3	0.965		
	CS4	0.959		
Corporate Image	CI1	0.945	0.862	0.969
	CI2	0.916		
	CI3	0.944		
	CI4	0.902		
	CI5	0.936		

The aforementioned in Table 2, the loading factor findings indicate that all items score over 0.7, hence signifying the validity of all items in assessing the hidden variable under consideration. Subsequently, the research model's EVA value also exhibits a magnitude over 0.5, indicating that all latent construct possess commendable convergent validity. The aforementioned table further demonstrates that all CR values surpass 0.7, so indicating that all latent construct exhibit commendable levels of internal reliability.

The last phase entails assessing discriminant validity. discriminant validity is used to prove that each latent variable in the research is empirically different from one another. The rule of thumb for discriminant validity to be called good if the value of the square root of AVE in the correlation of each construct is the greatest compared to the correlation with other. the results of the discriminant validity calculation can be seen in Table 3.

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Table 3. Discriminant Validity Results

	corporate image	loyalty	satisfaction	value co-creation
corporate image	0.919			
loyalty	0.686	0.884		
satisfaction	0.645	0.683	0.972	
value co-creation	0.648	0.698	0.619	0.921

The Table 3 shows that the value of each variable with its own variable is the greatest compared to the correlation of other variables, so the valid discriminant of the model is good, where each variable is empirically different.

The second stage of SEMPLS analysis begins with analysis of the coefficient of determination. This phase describes the level to which the variance of the dependent latent variable influenced by the independent variables that related to it. The calculation analysis uses R square, and the calculation results are delivered in Table 4.

Table 4. R Square result

Dependent Variables	R squares
Customer loyalty	0.616
Customer satisfaction	0.484

The Table 4, exhibits a 0.626, signifying that 62.6% of the variance in the customer loyalty can be accounted for by the influencing variables. As for R-square value of customer satisfaction is 0.494 means that 49.4% of the variation can influenced by the underlying factors that have relation to it.

The next phase is doing the structural model examination. The commencement of this hypothesis test involves the generation of 5,000 resamples using the procedure of bootstrapping through SmartPLS. The calculation results of the path computation are displayed in Table 5 and Figure 2.
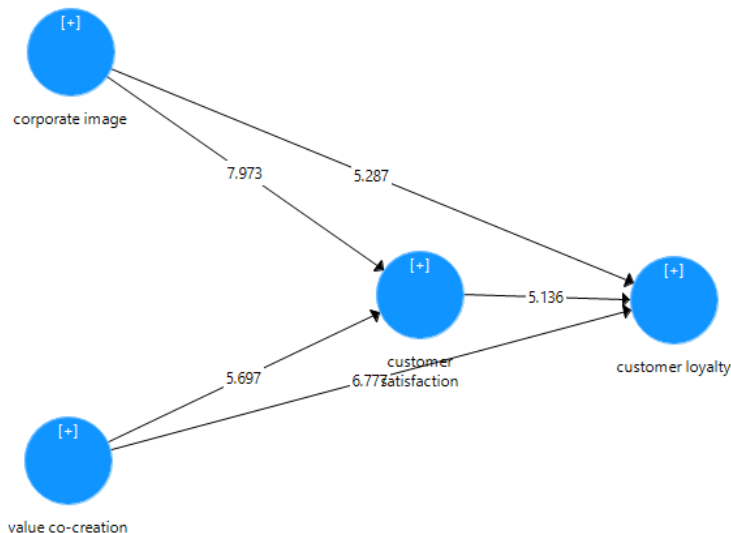

Figure 2. Structural Path Test Result

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Table 5 Structural Path Test Result

Hypotheses	Path coefficient	T-values	P-valuess
H1. customer satisfaction → customer loyalty	0.265	5.136	0.000
H2. vccreation → customer loyalty	0.337	6.777	0.000
H3. corporate image → customer loyalty	0.305	5.287	0.000

To determine of the significance of the relationship between variables relies on the calculations of the t-value and P-values which shows in Table 5 and Figure 2, which a t-value of 1.96 and P-value of 0.05 is the recommended value to determine that there is a statistical significance of a hypothesis. Therefore, to demonstrate a significant and positive relationship, the t-value of the hypothesis must be more than 1.96 and P-value lower than 0.05.

The Figure 2 and Table 5, revealing that there is a positive influence of customer satisfasction (t-value = 5.316, P-values = 0.0000), and corporate image (t-value = 5.287, P-values = 0.0000), as well as vccreation (t-value = 6.777; P-values = 0.00000), on customer loyalty, all exhibit a statistically significant outcome because all the t-value above 1.96. Thus, the hypotheses 1 until 3 are accepted.

In order to analyze hypotheses 4 to 5, this study conducted a mediation test. The mediation test stage was carried out by conducting bootstrapped calculation with 5,000 resamples (Petzer & van Tonder, 2019). Checking the mediation test is carried out by looking at the relationship test between the variables corporate image and vccreation with customer loyalty first, then look at the relationship test of the variables corporate image and vccreation with customer loyalty through satisfaction with the indirect test in Smart PLS (Ali et al., 2021). The outcomes of the mediation test are in Table 6.

Table 6. Mediation analysis

Path	Path coefficient (β)	T values	P-valuess
H4. corporate image → customer satisfaction → customer loyalty	0.116	4.222	0.000
H5. vccreation → customer satisfaction → customer loyalty	0.089	3.966	0.000

The Table 6 , reveals the indirect effect test results in the table show that vccreation (t-value = 3.966, P-values = 0.00), and corporate image (t-value = 4.222, P-values = 0.00) with customer loyalty through satisfaction show positive and significant results with a t value above the recommendation, and the P-values close to 0.00. Then results in the table 5 also shows that the variables vccreation and corporate image have a positive affect on customer loyalty directly. Thus, the mediation test shows that customer satisfaction partially mediate the influence of vccreation and corporate image with loyalty. By looking at the calculation results, the mediation analysis shows that the hypotheses 4 and 5 are accepted.

B. Discussions

To analyse the mediation effect of customer satisfaction on the relationship between corporate image, and vccreation and customer loyalty is the main focus in this study. To answer this main objective, the research proposes several hypotheses. The results of the calculation of hypothesis tests five to seven answer this main research question, where it is proven that there is a positive mediating influence from customer satisfaction to mediate between corporate image, and vccreation with customer loyalty. The results obtained from the calculations for the fourth hypothesis show that there is a mediating effect between satisfaction for corporate image and loyalty. These results are in line with prior findings that researched the education and telephone industries (Jamshidi & Rousta, 2021; Schlesinger et al., 2023). Then the hypothesis 5 test were also accepted where customer satisfaction affectively mediates between vccreation and customer loyalty, these results is in tune

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with previous journal in the B2C industry (Gaudenzi et al., 2021; Opata et al., 2021; Xiao et al., 2020). Prior studies have proved the mediating influence of customer satisfaction on corporate image and vccreation with customer loyalty, but previous studies have studied them separately (Gaudenzi et al., 2021; Hayati et al., 2020; Jamshidi & Rousta, 2021; Opata et al., 2021; Schlesinger et al., 2023), however only a few studies that examine the mediating influence of satisfied customers on , corporate brand image and vccreation with customer loyalty in one research model, and even fewer have studied it for the apartment construction industry, so this is a literature gap that is focused by this research, and one of the novelties of this research.

The structural test also show that the first to third hypotheses are accepted, customer satisfaction, , vccreation and corporate brand image positively affect customer loyalty to apartment contractor. The first hypothesis test show that customer satisfaction positively affect their loyalty towards apartment construction contractors, these results are in line with previous research in the B2B industry (Gaudenzi et al., 2021; Woratschek et al., 2020). The second hypothesis test prove that corporate image affectively forming customer loyalty, where these results is in tune with prior studies in the B2B industry (Alam & Noor, 2020; Gelderman et al., 2021). The third hypothesis test conclude that vccreation significantly influence customer loyalty, these results is in accordance with the results of previous research in the banking and insurance industries (Iglesias et al., 2020; Xu et al., 2021). Result of first to third hypotheses tests extends academic literature by empirically prove that vccreation, corporate image, and customer satisfaction positively affect their loyalty toward contractor in the apartment construction industry. The hypothesis test in Table 5 also revealed that the corporate image variable has the highest beta value (0.337), followed by corporate image with a slight difference (beta = 0.307), so it can be assumed that the corporate image and vccreation variables has the highest influence in forming customer loyalty. Based on the findings, reveals that to build loyalty from developers, contractors must establish a strong value co-creation relationship with them. This relationship can be achieved by treating developers not merely as customers, but as active collaborators in project execution. Additionally, contractors must build a positive brand image both among competitors and apartment developers to facilitate the development of loyalty from apartment developers in Indonesia.

IV. CONCLUSION

The purpose of this study is to examine the mediation impact of customer satisfaction on the relationship between corporate image, and vccreation and customer loyalty. Based on the findings, customer satisfaction significantly mediates between corporate image and vccreation with their loyalty. The findings from the research also show that corporate image and vccreation positively affect customer loyalty to apartment contractors. These findings provide useful information in apartment contractor strategy management. Because the findings of this research show that customer loyalty and satisfaction with apartment contractors can be increased by building and improving the contractor's corporate image, and contractors carrying out value co-creation strategy in working on apartment projects.

This study provides several contributions to the advancement of academic theory. First, it expands upon the Stimulus-Organism-Response (SOR) theory, which serves as the foundational model for this research. While numerous prior studies have applied SOR theory across various industries, there remains limited research employing this theory to examine developer loyalty toward contractors in the apartment construction industry.

The other implication is in the development of the expectancy disconfirmation theory. Expectancy disconfirmation theory is the theoretical used as backbone in developing customer satisfaction variables. Customer satisfaction is a variable that has been widely researched in various industries, but only few addresses customer satisfaction in the apartment construction industry, this research fills this literature gap on expectancy disconfirmation theory.

Apart from having theoretical implications, this research also have several managerial practical implications for the apartment construction industry in Indonesia. The first managerial implication, research provides empirical evidence that customer satisfaction plays an important role in forming loyalty, where customer satisfaction not only acts as a predictor but as a mediator of corporate image, and vccreation. So it is important for apartment contractors to understand their developers as customers. Understanding the developer's expectations when they want to carry out a project is important to be able to gain loyalty from developers.

Second managerial implication is that the result can be a used as a guide for creating strategies to build customer satisfaction and customer loyalty to apartment contractor. To uphold and build customer satisfaction and customer loyalty, contractors must pay attention to their corporate image, , and implement vccreation. The results of this research show that value co-creation has the greatest influence on the formation of customer loyalty, contractors need to build value co-creation in project implementation by encouraging developers as customers to active in working on solutions when project problems occur, and finally maintaining relationships with developers through , namely by forming a network of relationships based on mutual assistance.

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Although this research has several implications, there are also limitations which could provide suggestions for future research. This research examines the apartment construction industry with corporate image, vccreation and as factors that effect of customer satisfaction and their loyalty, where there are several other variables that can play a role and influence in maintaining and building satisfaction and loyalty, such as hedonic, service quality..

Then this research uses a cross sectional method in collecting data, where data collection is carried out once in a certain period, subsequent research can use a longitudinal data collection approach to compare differences that occur over a certain period of time.

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