THE IMPACT OF BRAND IMAGE AND PROMOTION PROGRAMS ON CUSTOMER LOYALTY WITH CUSTOMER SATISFACTION AS A MEDIATOR: A STUDY OF LIVIN' BY MANDIRI USERS

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Abstract

The rapid growth of mobile payment services in Indonesia has intensified competition, driven by technological advancements and the growing presence of from both banking and non-banking payment service providers. This study analyzes the effect of brand image and promotion programs on customer loyalty, with customer satisfaction as a mediating variable, focusing on users of the Livin' by Mandiri application in the Greater Jakarta (Jabodetabek) area. The research employed a quantitative approach using Partial Least Squares Structural Equation Modelling (PLS-SEM) for data analysis. The results show that brand image increases customer satisfaction but does not directly impacts customer loyalty. In contrast, promotion programs significantly affect both customer satisfaction and loyalty. Furthermore, customer satisfaction is found effectively mediate the relationship between brand image and promotion programs on customer loyalty. These results emphisize the strategic importance of strengthening brand image and desining effective promotional strategies to enhance customer satisfaction, which ultimately leads to sustained loyalty among payment users.

Keywords: Brand Image, Customer Loyalty, Customer Satisfaction, Mobile Payment, Promotion Program

INTRODUCTION

Technological advancements have significantly transformed consumer behavior, including payment systems. Mobile payment services in Indonesia have experienced rapid growth, supported by various providers from both the banking and non-banking sectors. This competitive landscape compels service providers to strengthen marketing strategies, particularly through brand image and promotional programs, to maintain customer satisfaction and loyalty.

Livin' by Mandiri, one of Indonesia's prominent mobile payment applications, offers various features such as account opening, fund transfers, bill payments, and investment services. In a competitive market, Bank Mandiri must maintain a strong brand image and implement attractive promotional programs to retain its users.

This study examines the direct and indirect effects of brand image and promotion programs on customer loyalty, with customer satisfaction acting as a mediating variable. The research focuses on Livin' by Mandiri users within the Greater Jakarta (Jabodetabek) area, aiming to provide actionable insights for the banking industry to develop strategies for sustaining user loyalty amidst intense competition.

REVIEW OF LITERATURE

Brand Image

Brand image refers to customers' perceptions of a brand formed through experience, product quality, symbols, and reputation. A strong brand image enhances expectations and influences customer satisfaction. According to Tahir et al. (2024), brand image represents an asset that shapes customers' beliefs toward a brand. Consistent quality delivery reinforces brand image (Winanti & Fernando, 2024). Brand image is something about the product features, design, packaging, and characteristics of the brand or product that make it different and unique from other products. Brand image is a combination of consumer perceptions and trust in a brand (Abbas et al., 2021)

Promotion Program

Promotion programs are marketing efforts designed to inform, influence, and persuade customers through discounts, advertising, special offers, and campaigns. As Haryadi and Syahruddin (2023) argue, promotions play a critical role in shaping consumer behavior and purchasing decisions. The main objective of promotion is to change customer behavior, inform, influence, and persuade them about products or services to achieve customer satisfaction (Nugraha & Nisa, 2023).

Customer Satisfaction

Satisfaction is an emotional response that arises after use by comparing expected performance with experience. Customer satisfaction is the perceived outcome relative to consumer expectations. Customer communication depends on satisfaction, as satisfied customers spread positive reviews (Tahir et al., 2024). Customer satisfaction arises from consumers' subjective perceptions of their experience compared to their prior expectations (Nadjwa et al., 2024).

Customer Loyalty

Customer loyalty reflects a commitment to continuously use a brand despite competitive offers. Loyalty is a key intangible asset positively correlated with customer

retention and profitability (Tahir et al., 2024). In the mobile banking business, customer loyalty is crucial, especially electronic customer loyalty (e-loyalty), to win the mobile banking competition. E-loyalty is a consumer's conscious attitude in using an online service and providing recommendations to other potential customers to use that online service (Saputro, 2023). As a core marketing concept, customer satisfaction is widely considered an important intangible asset and a strong predictor of a company's future due to its positive correlation with customer loyalty (Nadjwa et al., 2024).

Supporting Theories

Expectation-Confirmation Theory (ECT)

Other Theories that support this research the first is Expectation-Confirmation Theory (ECT) (Oliver, 1980): Explains post-adoption behavior and satisfaction (Bhattacherjee, 2001). Bhattacherjee integrated ECT with Information Technology/Information System adoption theory to construct a customized ECT model, which encompasses two key concepts: perceived usefulness and continuance intention. In the field of information systems, this customized ECT model has been widely applied, particularly in studies examining technology adoption and continuance behavior.

In early research, some scholars focused primarily on the process of expectation confirmation when individuals use information systems. They found that users, after viewing information posted by others, confirmed their expectations about others' behavior by comparing their own expectations with the actual behavior observed. This is consistent with the core idea of ECT, that expectation confirmation is achieved through behavioral observation (Yao et al., 2025).

Technology Acceptance Model (TAM)

The second theory is Technology Acceptance Model (TAM) (Davis, 1989): Highlights perceived ease of use and usefulness as critical factors influencing technology adoption (Ly & Ly, 2024). Key constructs of the Technology Acceptance Model (TAM), such as perceived usefulness and ease of use of AI technology, have significantly influenced customer satisfaction and behavioral intentions (Chotisarn & Phuthong, 2025).

The model in this study is to determine the influence of the Brand Image and Promotion Program variables on the Customer Loyalty variable with Customer Satisfaction as mediator.

There are 7 Hypotheses that developed from this models that is:

H1: Brand image positively influences customer satisfaction.

Based on research results (Nadjwa et al., 2024), brand image has a positive effect on customer satisfaction. Customer satisfaction is influenced by brand image by 31%, which is considered a weak effect. Because the two variables are interrelated, this hypothesis is accepted.

Brand image has a positive impact on customer satisfaction, which can be used as a benchmark to strengthen customer satisfaction. A well-known and well-received brand image leads to customer satisfaction. Consumer satisfaction helps businesses recognize, identify, and anticipate brand products, supporting brand image conformation and growth. Among the five benefits of image, only experiential, psychological, practical, and visual imagery have a significant positive effect on satisfaction (Tahir et al., 2024).

H2: Promotion programs positively influence customer satisfaction.

Based on research results (Nugraha & Nisa, 2023), the first result shows that promotions influence customer satisfaction among Starbucks customers in Bekasi. This influence is positive, where the better the promotion and service quality, the better the level of customer satisfaction with the product and service.

The results of the study (Hulasoh & Halawa, 2023) showed that the F-statistical test (simultaneous) showed that the F-count value was 223.536 > F-table 3.09, with a significance value of 0.000 < 0.05. This means that the Promotion and Service Quality variables simultaneously have a positive and significant effect on Customer Satisfaction at PT Sumber Alfaria Trijaya, Tbk, Ciputat Branch, South Tangerang.

H3: Brand image positively influences customer loyalty.

Based on research (Haryadi & Syahruddin, 2023), it can be concluded that partially, promotion has a positive and significant influence on customer loyalty, while brand image does not. Meanwhile, simultaneously, promotion and brand image have a positive and significant influence on customer loyalty.

H4: Promotion programs positively influence customer loyalty.

Research results (Haryadi & Syahruddin, 2023) show that the promotion program significantly influences customer loyalty, as expected. Because GrabFood's promotions are quite extensive on various social media platforms such as YouTube, Instagram, and other internet platforms, customers seem interested in ordering what they want through the GrabFood service while at the same time being able to sit at home or at work and have their food delivered to their location.

H5: Customer satisfaction positively influences customer loyalty.

Based on research (Tahir et al., 2024), the study found that brand image has a positive impact on customer satisfaction when marketers successfully meet customer expectations, which ultimately leads to customer satisfaction. The findings of this systematic literature review corroborate previous research in the same field. The systematic literature review also found that customer satisfaction directly influences customer loyalty; increased customer satisfaction leads to greater brand loyalty.

H6: Customer satisfaction mediates the relationship between brand image and customer loyalty.

Based on research results (Dam & Dam, 2021), if consumers have a highly impressive brand image, they will tend to have positive attitudes toward customer satisfaction and loyalty. Ultimately, these findings confirm that customer satisfaction is also a precursor to customer loyalty.

Subsequent research examined the relationship between brand image and customer loyalty, with customer satisfaction and brand awareness as mediators. All brands were included in the study. This study concluded that brand image has a significant impact on customer loyalty. However, brand awareness and customer satisfaction influenced brand image and customer loyalty, according to the study (Abbas et al., 2021).

H7: Customer satisfaction mediates the relationship between promotion programs and customer loyalty.

Based on research (Aisyah et al., 2024), promotions have a positive and significant impact on customer loyalty through customer satisfaction. The meaning of this positive and significant impact in this hypothesis is that if UD Club Parfum frequently holds promotions, customer satisfaction and loyalty will also increase. This finding aligns with previous

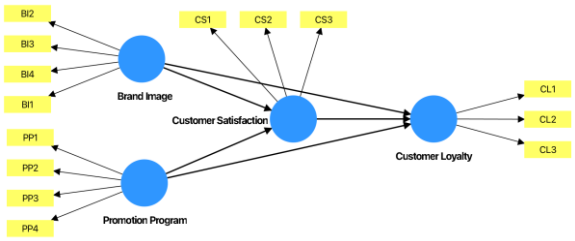
research that confirms that promotions have a positive and significant impact on customer loyalty through customer satisfaction.

RESEARCH METHOD

This research adopts a quantitative approach using PLS-SEM for hypothesis testing. The population comprises Livin' by Mandiri users in Jabodetabek, with a sample size of 141 respondents, exceeding the minimum requirement calculated using the Hosmer-Lemeshow method (96 respondents). The Hosmer–Lemeshow method is designed considering the dual-objective optimization problem of reducing energy and creating timescales in a heterogeneous environment (Kalaiselvi, 2022). Data were collected via an online questionnaire using a 5-point Likert scale.

An indicator variable is a fundamental concept in research that refers to an element or attribute that can be measured, obtained, or influenced. Variables can vary or change in value or nature, and in research, variables are used to test the relationship or effect between various factors (Creswell, 2014).

The measurement model use 4 indicators Brand Image, 4 indicators Promotion Program, 3 indicators Customer Satisfaction and 3 indicators Customer Loyalty as shown in the following image:



This study used Structural Equation Modeling (SEM), an analytical technique used to model the relationship between latent variables and their indicator variables. This method is very useful for predicting and understanding the relationships between various variables in complex models, especially when the model involves many interrelated latent variables and indicators. SEM-PLS combines the principles of Structural Equation Modeling (SEM) and Partial Least Squares (PLS). This allows researchers to explore and test relationships between latent (unobserved) and measured (observed) variables with greater flexibility (Hair et al., 2022). The analysis was conducted using SmartPLS 4, including outer and inner model evaluation.

Outer model evaluation

Outer model analysis is carried out to ensure that the measurements used are suitable for use as measurements (valid and reliable) (Ananda Sabil Hussein, 2015).

1. Convergent validity is the factor loading value of a latent variable with its indicators. The expected value is >0.7.
2. Composite reliability is a measurement; if the reliability value is >0.7, the construct has high reliability.
3. Average Variance Extracted (AVE) is the average variance of at least 0.5.
4. Cronbach's alpha is a calculation to prove composite reliability results, with a minimum value of 0.6.

5. Discriminant Validity is the measurement of a latent variable's difference from other constructs or variables, theoretically proven empirically through statistical testing. Measurement is performed using the Fornell-Larcker Criterion, where a construct has a greater variance with its related indicators compared to other constructs.

Inner model evaluation

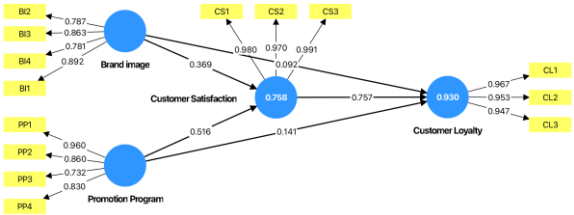
Inner model analysis, also known as structural modeling, is a technique for predicting causal relationships between model variables using:

1. R-square (R2) is a measure that indicates how much of the variability of an endogenous variable can be explained by the exogenous variables in the model. The R-square value ranges between 0 and 1.
2. Q-square (Q2) Predict is a metric used in PLS prediction to assess the predictive power of a model. A value greater than 0 indicates that the PLS-SEM estimate outperforms the naive benchmark in terms of prediction.
3. Multicollinearity testing is used to determine the absence of high correlation between indicators (two or more indicators). This test uses the VIF (Variance Inflation Factor) value. A VIF <10 indicates no multicollinearity.
4. Hypothesis Testing
   Hypotheses are tested during the inner model analysis in Smart PLS bootstrapping testing. Path coefficient and probability values can be used to evaluate hypotheses. The path coefficient results are used to test hypotheses of influence between variables using a beta value > 0, while the p-value is used to determine the significance of the relationship between variables. The criteria for accepting/rejecting the hypothesis are:
   Ha = α > 0 with a p-value score < 0.05
   Ho = α < 0 with a p-value score > 0.05
   Using a significance level of 5% or 0.05

RESULTS AND DISCUSSION

The result of this research is majority of respondents were millennials (55%), residing mainly in Tangerang (32%), and had used Livin' by Mandiri for more than three years (71%). Most users utilized the service for fund transfers, balance checks, and cash withdrawals (37%), with Gopay being the most common alternative e-wallet (23%).

The result of the outer models as shown in the following image **:**



Outer Model Analisys

Convergent Validity

One of the validity tests is convergent validity, a form of valid testing that measures indicators against the same construct or variable, correlates with each other, and reflects the same concept in a consistent manner. This is an important aspect of construct validity in research. To conduct a convergent validity test, the outer loading value can be used (Chin W., 1998). The magnitude of the outer loading is also commonly referred to as indicator

reliability. Statistically, the outer loading for all indicators must have a minimally significant value because a significant value of an outer loading can be considered weak. A practical and general reference is that the outer loading value must be equal to or greater than 0.708 (Hair et al., 2022).

The result is valid that shown in the following table

Variable	Indicator	Outer Loading	Note
Brand Image	BI1	0.892	Valid
	BI2	0.787	Valid
	BI3	0.863	Valid
	BI4	0.781	Valid
Promotion Program	PP1	0,960	Valid
	PP2	0,860	Valid
	PP3	0,732	Valid
	PP4	0,830	Valid
Customer Satisfaction	CS1	0,980	Valid
	CS2	0,970	Valid
	CS3	0,991	Valid
Customer Loyalty	CL1	0,967	Valid
	CL2	0,953	Valid
	CL3	0,947	Valid

Average Variance Extracted (AVE)

Furthermore, Average Variance Extracted (AVE) is a measure in factor analysis to determine whether the indicators in a model adequately measure a construct or latent variable. AVE helps assess the convergent validity of a construct. A construct is considered to have good convergent validity if its AVE is greater than 0.5 (Hair et al., 2022).

The result is valid that shown in the following table

Variable	Average Variance Extracted (AVE)
Brand Image	0.692
Promotion Program	0.721
Customer Satisfaction	0.961
Customer Loyalty	0.914

Cronbach's Alpha and composite reliability

Cronbach's Alpha and composite reliability are concepts related to measurement reliability in research. The reference value for Cronbach's Alpha ranges from 0 to 1, with good reliability being above 0.7. Composite Reliability, on the other hand, is used to measure internal consistency, similar to Cronbach's Alpha, but has the advantage of considering different indicator loading weights. A composite reliability value above 0.7 is considered good, while a value above 0.8 or 0.9 indicates excellent reliability (Hair et al., 2022).

The result is reliable, as shown in the following table

Variable	Cronbach's Alpha	Composite Reliability
Brand Image	0.850	0.852
Promotion Program	0.867	0.879

Variable	Cronbach's Alpha	Composite Reliability
Customer Satisfaction	0.980	0.981
Customer Loyalty	0.867	0.953

Discriminant Validity

Discriminant Validity is a concept to measure the extent to which a construct is truly different from other constructs based on empirical standards. Thus, establishing discriminant validity implies that a construct is unique and covers phenomena not represented by other constructs in the model. Traditionally, researchers rely on the Fornell-Larcker criterion to assess discriminant validity (Hair et al., 2022). The measurement of discriminant validity in this study refers to the Fornell-Larcker Criterion model, specifically, the square root of the AVE of each construct must be greater than its highest correlation with other constructs. Logically, the Fornell-Larcker method is based on the idea that the construct being tested has a larger variance value when the indicators are connected compared to other constructs.
The result is valid that shown in the following table

	Brand Image	Customer loyalty	Customer Satisfaction	Promotion Program
Brand Image	**0,872**			
Customer loyalty	0,869	**0,956**		
Customer Satisfaction	0,851	0,947	**0,980**	
Promotion Program	0,834	0,839	0,831	**0,849**

Inner Model Analysis

R-square (R^2)

R-square (R^2) is a measure of the extent to which the variability of an endogenous variable can be explained by the exogenous variables in the model. The reference value for R-square ranges between 0 and 1, with values close to 1 indicating the model explains most of the variance in the dependent variable. Conversely, values close to 0 indicate that the model explains only a small amount of variance (Hair et al., 2022).
The result is shown in the following table

Variabel	R Square
Customer Loyalty	0.930
Customer Satisfaction	0.758

Q-square (Q^2)

Q^2 Predict is a metric used in PLS prediction to assess the predictive power of a model. A Q^2 Predict value greater than zero indicates that the PLS-SEM estimate outperforms the naive benchmark, where the naive benchmark is one of the benchmark variables for prediction (Hair et al., 2022).
The result is shown in the following table

Indicator	Q^2 Predict
CL1	0.721
CL2	0.688
CL3	0.739
CS1	0.715
CS2	0.676
CS3	0.678

Multicollinearity

Unlike reflective indicators, which are interchangeable as a fundamental characteristic, high correlations between items are not expected for formative measurement models. In practice, a high correlation between two formative indicators is called collinearity, which can be problematic from different methodological and interpretational perspectives. It should be noted that when two or more indicators are involved, multicollinearity occurs (Hair et al., 2022). According to (Ghozali, I., 2018), the decision-making criteria for multicollinearity testing in this study refer to the VIF (Variance Inflation Factor) value as follows:

• If the VIF value is <10 or the Tolerance value is >0.01, multicollinearity is absent.
• If the VIF value is >10 or the Tolerance value is <0.01, multicollinearity is present.

The result is shown in the following table

Variabel	VIF
Brand image - Customer Loyalty	8.444
Brand Image - Customer Satisfaction	7.881
Promotion Program - Customer Loyalty	8.985
Promotion Program - Customer Satisfaction	7.881

Direct Effect (Path Coefficient Hypothesis Testing)

The direct effect hypothesis in SEM-PLS can be tested using the path coefficient, which indicates the extent of influence of one latent variable (as a predictor or cause) on another latent variable (as an outcome or effect). This is a parameter in the model that describes the strength and direction of the relationship between constructs in the PLS-SEM model.

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T statistics (|O/STDEV|)	P values
Brand image -> Customer Loyalty	0.092	0.090	0.051	1.800	0.072
Brand image -> Customer Satisfaction	0.369	0.375	0.108	3.421	0.001
Customer Satisfaction -> Customer Loyalty	0.757	0.769	0.074	10.279	0.000
Promotion Program -> Customer Loyalty	0.141	0.132	0.056	2.531	0.011
Promotion Program -> Customer Satisfaction	0.516	0.511	0.113	4.587	0.000

The results of this hypothesis testing table using a p-value of 5% or <0.05 yield the following results:

1. Brand image has a positive effect on customer loyalty (α = 0.092) and is not significant (p-value 0.072).
2. Brand image has a positive effect on customer satisfaction (α = 0.369) and is significant (p-value 0.001).
3. Customer satisfaction has a positive effect on customer loyalty (α = 0.757) and is significant (p-value 0.000).
4. Promotion programs have a positive effect on customer loyalty (α = 0.141) and is significant (p-value 0.011).
5. Promotion programs have a positive effect on customer satisfaction (α = 0.516) and is significant (p-value 0.000).

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Promotion Program -> Customer Satisfaction -> Customer Loyalty	0.391	0.393	0.095	4.131	0.000
Brand image -> Customer Satisfaction ->	0.279	0.289	0.088	3.173	0.002

Customer Loyalty					

The indirect effects table shows that:

1. The strength of customer satisfaction in mediating the relationship between brand image and customer loyalty has a positive effect (α = 0.279) and is significant (p-value 0.002).
2. The strength of customer satisfaction in mediating the relationship between promotion programs and customer loyalty has a positive effect (α = 0.391) and is significant (p-value 0.000).

Path analysis results revealed:

- Brand image significantly affects customer satisfaction but not customer loyalty directly.
- Promotion programs significantly affect both customer satisfaction and loyalty.
- Customer satisfaction significantly influences customer loyalty and mediates the effects of brand image and promotion programs on loyalty.
- In H3 or the direct path, the influence of Brand Image on Customer Loyalty is not significant, so the role of Customer Satisfaction is a full mediation.
- In H4 or the direct path, the promotion program has a significant effect on Customer Loyalty, so the role of Customer Satisfaction is a partial mediation.

These findings suggest that promotional strategies have a direct impact on loyalty, while brand image influences loyalty primarily through customer satisfaction.

CONCLUSION

Brand image significantly influences customer satisfaction (H1 supported) but does not directly affect loyalty (H3 not supported). Promotion programs significantly affect both satisfaction (H2 supported) and loyalty (H4 supported). Customer satisfaction strongly predicts loyalty (H5 supported) and mediates the relationships between brand image and loyalty (H6 supported) and between promotion programs and loyalty (H7 supported).

Based on the limitations of this research, here are some suggestions for more comprehensive research.

Suggestions for future researchers include It is recommended to add other variables such as transaction fees, service security, and feature completeness (both for payment and lifestyle features such as games, infotainment, advertising, and so on) to further complement the research and incorporate important variables that are currently trending. Future researchers are also advised to conduct research outside the Greater Jakarta area to observe the behavior of Livin by Mandiri users in other areas. Future researchers could also focus on the characteristics of each generation, especially Generation Z, which will eventually become the majority generation.

Suggestions for Livin by Mandiri providers include Conduct regular customer satisfaction evaluations, considering that customer satisfaction is a significant mediator of Livin by Mandiri customer loyalty. Improve appropriate promotional program strategies, such as personalized promotions, as promotional programs are a key factor in both customer satisfaction and loyalty among Livin by Mandiri users.

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