International Conference on Health Science, Green Economics, Educational Review and Technology| ISSN (e): 2986-1985
Volumes 7 No. 1 (2025)

THE INFLUENCE OF PROMOTION AND APPLICATION FEATURES ON INCREASING ONLINE TRANSACTIONS OF LIVIN MERCHANT APPLICATION USERS WITH USER SATISFACTION AS AN INTERVENING VARIABLE (CASE STUDY AT BANK MANDIRI KC MEDAN IMAM BONJOL)

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Received	: 31 July 2025	Published	: 30 August 2025
Revised	: 05 August 2025	DOI	: https://doi.org/10.54443/ihert.v7i1.496
Accepted	: 20 August 2025	Link Publish	: https://proceeding.unefaconference.org/index.php/IHERT

Abstract

This study aims to analyze the influence of promotions and application features on user satisfaction and their impact on increasing online transactions. The research method uses a quantitative approach with Partial Least Squares (PLS-SEM) analysis techniques. The results show that promotions have a significant effect on user satisfaction and increasing online transactions. Meanwhile, application features do not have a direct effect on increasing online transactions, but have a significant effect on user satisfaction. Furthermore, user satisfaction is proven to have a significant effect on increasing online transactions, while also acting as a mediator that strengthens the influence of application features on online transactions. However, user satisfaction does not mediate the effect of promotions on increasing online transactions. This finding confirms that promotions are more effective in directly encouraging transactions, while application features play a greater role in building satisfaction that impacts transaction sustainability.

Keywords: **Promotion; Application Features; User Satisfaction; Online Transactions; PLS-SEM**

1. Introduction

The development of digital technology has brought significant changes in people's behavior, particularly in financial transactions. The digitalization of payment systems has encouraged banks in Indonesia to innovate through application-based services to provide convenience, speed, and security for customers. One innovation developed by Bank Mandiri is the Livin Merchant application, a digital platform aimed at making it easier for business partners or merchants to manage their financial transactions online. In the increasingly competitive banking industry, promotional factors and application features are key to increasing the appeal of digital banking applications. Appropriate promotion can build awareness, stimulate interest, and increase the intensity of application usage. Meanwhile, comprehensive features, ease of use, and tailored to user needs will determine their level of satisfaction and loyalty to the application.

User satisfaction is a crucial variable, as it influences repeat online transaction behavior. If users perceive an application as providing optimal benefits, possessing features tailored to their needs, and supported by an effective promotional strategy, they are likely to increase their usage frequency. In the context of Bank Mandiri, Medan Imam Bonjol Branch, the use of the Livin Merchant application is expected to support merchants' digital transaction activities and increase online transaction volume. However, challenges remain in maximizing the application's use. Some merchants have not fully utilized all available features, while promotions are sometimes not optimal in reaching all user segments. This situation indicates the need for an in-depth study of the extent to which promotions and application features influence online transaction increases, with user satisfaction as a mediating variable.

Table 1.1 Level of Promotion Intensity and Increase in Online Transactions

Month	Promotion Intensity (%)	Increase in Online Transactions (%)
Jan	45	12
Feb	50	15
Mar	55	17
Apr	60	20
May	65	23
June	70	26

Based on the data in Table 1.1, it can be seen that the promotional intensity conducted by Bank Mandiri KC Medan Imam Bonjol through the Livin Merchant application showed a consistent increasing trend from January to June. In January, promotional intensity was recorded at 45%, with a 12% increase in online transactions. This figure continued to increase until June, with promotional intensity reaching 70% and online transactions increasing by 26%. This illustrates a direct relationship between increasingly intense promotions and increasing online transactions. Overall, Bank Mandiri's promotions have encouraged merchants to actively use the Livin Merchant app for transactions. These promotions not only serve as a means of disseminating information about the app's services but also stimulate user interest in trying and utilizing its available features. Intensive promotions encourage merchants to use the app more frequently, ultimately contributing to increased online transaction volume.

However, the increase in transactions is not solely influenced by promotions. Another equally important factor is user satisfaction with the application. This satisfaction is closely related to the features offered, ease of use, transaction speed, and system security. Promotions will only be effective in the long term if they are accompanied by a satisfying user experience. In other words, promotions can attract new users or encourage existing merchants to transact, but satisfaction is what determines whether they will continue to use the application. These results align with the research concept, where user satisfaction acts as an intervening variable. Good promotions will increase user awareness and interest, while app features tailored to merchants' needs will enhance their satisfaction. Ultimately, this satisfaction will strengthen the influence of promotions and features on increasing online transactions. Therefore, it can be concluded that the success of Bank Mandiri's promotional strategy at the Medan Imam Bonjol branch in increasing online transactions through the Livin Merchant app is inseparable from the role of user satisfaction as the primary link between promotions, app features, and user transaction behavior.

Table 1.2 User Ratings of Application Features (Scale 1–5)

Application Features	Average Satisfaction
Ease of Login	4.3
Transaction Speed	4.5
Security	4.4
Menu Completeness	4.1
Notifications & Reports	3.9
User Interface (Display)	4.2

Overall, user satisfaction with the app's features was high, with an average rating of 4.23/5. The score range from 3.9 to 4.5 indicates moderate variation (0.6 points): the majority of features met merchant expectations, but there was room for improvement that could potentially improve overall satisfaction and, in turn, increase online transactions. The two highest-scoring aspects were Transaction Speed (4.5) and Security (4.4). These findings confirm that processing efficiency and a sense of security are core values for merchants. Fast transactions minimize wait times and the risk of drop-offs at the point of payment, while a strong perception of security strengthens trust in the system's reliability and ensures continued use. Together with Ease of Login (4.3), these three factors form the foundation of a smooth initial user experience—facilitating adoption and repeat use.

In the next tier, User Interface/Appearance (4.2) and Menu Completeness (4.1) were rated good but not optimal. This indicates that the layout, navigation flow, and feature discoverability are adequate, but could still be simplified to speed up merchant business processes—from settlement, void/refund, to reconciliation—and minimize the need for multiple steps. A Menu Completeness score that is not as high as speed/security signals that some merchants may not have discovered or found the advanced features that could actually improve productivity helpful. The lowest score was for Notifications & Reports (3.9). This is a potential bottleneck for satisfaction and transaction intensity.

Merchants generally require relevant, real-time notifications (successful/failed transactions, incoming balances, chargebacks/disputes), as well as actionable reports (concise, segmented by product/hour/payment method, easily exported to accounting). If notifications are less timely or reports are difficult to read/download, perceived usefulness declines, which can hinder transaction growth even if promotions and core features are strong. The link to the research framework is clear: App Features → Satisfaction → Increased Transactions. Theoretically, this aligns with TAM/UTAUT (ease & usefulness reinforce attitudes and usage intentions) and the DeLone–McLean IS Success Model (system & information quality drives satisfaction and net benefits). In your context, high scores on speed/security/ease of login reinforce satisfaction, which then mediates the impact of features on transaction frequency and value. Conversely, weak areas on notifications & reports could potentially weaken this mediation pathway.

The implication is that the improvement strategy should prioritize improvements to Notifications & Reports and sharpening Menu Completeness. Concrete examples include personalized real-time notifications (amount threshold, transaction type, channel), automated daily digests via email/WhatsApp, a drill-down dashboard with simple filters, one-click export (CSV/PDF), and in-app tooltips for easy discovery of advanced features. On the promotional side, communication materials should highlight proven strengths (speed, security) while educating about the benefits of enhanced reports & notifications—so that promotions not only drive trials but also retention and feature utilization that impact transaction performance. Thus, a reading of the table leads to a practical conclusion: Livin Merchant has been strong in core performance aspects (fast, secure, easy to access), but the next acceleration in transaction growth will likely come from strengthening information quality (notifications & reports) and orchestrating features more closely aligned with merchants' operational needs. Strengthening these two areas is expected to increase satisfaction as an intervening variable, thus making the effect of promotions and features on increasing online transactions greater and more sustainable.

Table 1.3 User Satisfaction vs Transaction Frequency

Satisfaction Level (1–5)	**Average Transaction Frequency per Month**
2 (Not Satisfied)	5 transactions
3 (Quite Satisfied)	9 transactions
4 (Satisfied)	14 transactions
5 (Very Satisfied)	19 transactions

Descriptively, transaction frequency increases with increasing satisfaction: at levels 2 → 5, the average transaction increases from 5 → 19 times/month. The increase between levels is relatively stable (+4 to +5 transactions per one satisfaction point), so the relationship pattern appears nearly linear. Simple estimates indicate that each +1 satisfaction point is associated with approximately +4.7 transactions/month per merchant (indicative R^2 ±0.997—very strong). This means that an experience improvement that increases the satisfaction score by one level has the potential to have a significant operational impact on transaction activity. To put the scale into perspective, a 1-point increase in average satisfaction for every 100 merchants can be associated with approximately 470 additional transactions per month. This finding confirms that investing in experience quality (which increases satisfaction) is a key lever for maximizing the impact of promotions and features on increasing online transactions.

Digital transformation in the Indonesian banking sector is growing rapidly in line with the increasing public demand for fast, secure, and practical transaction services. Bank Mandiri, as one of the largest banks in Indonesia, has launched the Livin Merchant application specifically for merchants in managing their digital transactions. This application is expected to provide a solution for merchants, enabling transactions to be conducted efficiently, transparently, and integrated with the banking system. However, in practice, not all merchants are utilizing this application optimally. Some merchants still rely on manual transactions or third-party applications, while others are not yet fully familiar with the available features. Furthermore, Bank Mandiri's promotional strategy also faces challenges: promotions can attract merchants, but continued use of the application is largely determined by user satisfaction with the application's features and services. This phenomenon demonstrates that the success of increasing online transactions through Livin Merchant is determined not only by promotions alone, but also by the quality of the application's features and user satisfaction, which are key factors bridging the two.

There has been considerable research into the factors influencing increased digital transactions in the banking sector. Several previous studies have emphasized the role of promotions in increasing interest and increasing the use of digital banking services. Promotion has proven effective as a means of increasing awareness and driving initial user behavior. However, most of these studies only highlight the direct effect of promotions on increased app usage,

without considering mediating factors such as user satisfaction. Furthermore, several other studies have focused more on app features as a determinant of user satisfaction and loyalty. Features that are easy to use, secure, and attractive are seen as key to retaining customers in the banking digital ecosystem. However, many previous studies have focused solely on the feature-to-satisfaction relationship, without linking it more broadly to users' ongoing online transaction behavior. Furthermore, studies on user satisfaction as an intervening variable are relatively limited, particularly in the context of merchant banking apps like Livin Merchant. Satisfaction plays a strategic role as a bridge between promotions and app features and increased online transactions. Without satisfaction, intensive promotions will only result in a temporary increase in transactions, while sophisticated features do not automatically guarantee user loyalty. Furthermore, most previous research has been conducted on general banking applications (e.g., mobile banking for individuals), rather than merchant-specific applications. However, merchants' needs differ: they require real-time notifications, detailed transaction reports, and easy integration with daily business activities. This makes the research on Livin Merchant at Bank Mandiri's Medan Imam Bonjol branch significantly novel, as it highlights a more specific context relevant to merchant business practices. Based on this phenomenon, this research is important to provide a clearer picture of the role of promotions and application features in increasing satisfaction and online transactions among Livin Merchant users at Bank Mandiri's Medan Imam Bonjol branch. The research results are expected to provide strategic input for banks in developing digital marketing strategies, improving the quality of application services, and encouraging the growth of online transactions in the future.

Identification of problems

1. The increasing trend of online transactions requires digital financial applications such as Livin' Merchant to continue to innovate in promotional strategies and feature development.
2. Competition between digital financial services applications is increasingly fierce, so attractive promotions and user-friendly application features are important factors in retaining users.
3. App users often rate their experience based on satisfaction with promotions (discounts, cashback, rewards) and the ease of use of app features.
4. User satisfaction is believed to be a key factor mediating the influence of promotions and application features on increasing online transactions.
5. There are still limitations in previous research that simultaneously tested the influence of promotions and application features on increasing transactions with user satisfaction as a specific intervening variable in the Livin' Merchant application.

Formulation of the problem

1. How do promotions affect user satisfaction in the Livin' Merchant app?
2. How do app features affect user satisfaction of the Livin' Merchant app?
3. How does promotion affect the increase in online transactions of Livin' Merchant application users?
4. How do the application features influence the increase in online transactions of Livin' Merchant application users?
5. How does user satisfaction affect the increase in online transactions of Livin' Merchant application users?
6. Does user satisfaction mediate the effect of promotions on increasing online transactions on the Livin' Merchant application?
7. Does user satisfaction mediate the influence of application features on increasing online transactions on the Livin' Merchant application?

2. Literature Review

2.1. Digital Promotion in Financial Services

In the context of financial apps, promotions are no longer limited to advertising, but include price incentives (cashback, fee discounts), push notifications, and in-app campaigns designed to activate, retain, and drive transaction frequency. Causal evidence from large-scale field studies shows that price incentives significantly shift consumer payment choices to digital channels and the effect persists for several days after the promotion ends—meaning promotions not only shift shopping time but actually increase the share of digital transactions during the promotional period and beyond.

In addition to price incentives, push notifications and real-time campaigns have been shown to increase engagement and participation in loyalty programs, thus increasing the likelihood of transactions. Experimental findings in the retail sector indicate that in-app messages can increase participation and reward retrieval, a mechanism

relevant for merchant banking when promotions are delivered in a timely and relevant manner. Industry practice also finds a significant lift in engagement when users receive personalized notifications. Therefore, in the context of Livin' Merchant, data-driven promotions (e.g., event-triggered offers, time-limited deals) are expected to have a direct impact on increasing online transactions and an indirect impact through increased satisfaction due to higher perceived value/benefit during transactions.

2.2. Application Features and Digital Service Quality

The performance of core features such as ease of login, processing speed, security, menu completeness, notifications/recaps, and interface are key determinants of banking app quality. A recent open-access study showed that pragmatic quality (functionality/reliability/speed) and hedonic quality (convenience/usefulness/UI) significantly contribute to satisfaction and continued usage intentions of mobile banking apps. Text mining-based analysis of tens of thousands of bank app reviews also confirmed that dimensions such as stability, ease of use, security, and UI design are most frequently associated with customer satisfaction ratings, confirming that features that users "feel" directly resonate with their evaluations. The current technology adoption framework (an extension of UTAUT2 for the fintech context) adds that perceived usefulness, ease of use, habit, and hedonic motivations drive adoption and continued use of banking apps; these variables are operationally manifested through good feature design.

2.3. User Satisfaction as an Intervening Variable

In digital banking services, satisfaction plays a strategic role because it bridges service experience (promotions and features) to loyalty, continued usage intentions, and behavioral outcomes such as transaction frequency. Cross-country empirical evidence finds a strong satisfaction → loyalty relationship with mobile banking, and the strength of this relationship is influenced by users' psychological characteristics (e.g., technology readiness).N/A Several recent studies have demonstrated the mediating role of satisfaction: service/feature quality increases satisfaction, and this satisfaction drives continuance intention and actual usage behavior. In the context of mobile banking/e-wallets, satisfaction has been shown to mediate the effect of ease/usefulness on reuse intention. Similar findings have also been reported in models examining service quality → satisfaction → continuance.

2.4. Increased Online Transactions as a Behavioral Outcome

Recent payment behavior literature explains why digital channels accelerate transactions: in addition to promotions, psychological mechanisms such as lower pain/greater pleasure of paying in mobile payments increase purchase probability. This effect is observed across various product categories and provides the theoretical basis that, when app satisfaction is high and promotions are effective, the frequency and volume of online transactions tend to increase. Combined, the above evidence forms a theoretical pathway: App Promotions and Features → (increase) User Satisfaction → (encourage) Online Transactions; with possible direct effects of promotions and features on transactions (e.g., short-term lift from incentives, shorter task time from fast features). This pathway is relevant for testing in the context of Bank Mandiri's Livin' Merchant, Medan Imam Bonjol Branch.

2.5. Conceptual Model (brief)

Promotion → Online Transactions (immediate effect). Application Features → Online Transactions (immediate effect). Promotion → Satisfaction and Application Features → Satisfaction (quality/value effect). Satisfaction → Online Transactions (continued behavioral effect).

3. Method

This study uses a quantitative approach with an explanatory cross-sectional survey design that aims to test the causal/associative relationship between Promotions and Application Features on Increasing Online Transactions of Livin' Merchant users, with User Satisfaction acting as an intervening variable. Data analysis was conducted using PLS-SEM (SmartPLS 4) because the nature of the research model (several latent constructs, prediction goals, the possibility of non-normal distributions, and the need for mediation testing) makes PLS-SEM an appropriate methodological choice and is commonly recommended in recent literature. **Location, population, and sample.**The study was conducted on merchants using Livin' Merchant at Bank Mandiri KC Medan Imam Bonjol. The population was all active merchants who met the inclusion criteria (e.g., having used Livin' Merchant for ≥3 months and having made a minimum reasonable transaction in the last period). The sampling technique was purposive (non-probability) to suit the research criteria, but the sample size was determined based on a statistical power analysis—not a simple "ten times" rule—so that the target sample was determined to achieve statistical power (e.g., power = 0.80; $\alpha = 0.05$)

according to PLS-SEM best practice recommendations. In the report, researchers must report the power parameters, effect size assumptions (f^2), and the G*Power results used. **Variables and measurement.**The main constructs include: (1) Promotion (intensity, relevance, attractiveness of the offer), (2) Application Features (ease of login, processing speed, security, menu completeness, notifications & reports, UI), (3) User Satisfaction (general satisfaction, expectation confirmation, willingness to recommend), and (4) Transaction Increase (transaction frequency, average transaction value, perceived increase). Each construct is operationalized through reflective items on a 1–5 Likert scale; if objective transaction data (logs) are available, integrate them as additional composite/indicator variables for triangulation validation. Organize items based on concept definitions, literature, and pretest/content validity testing with experts. (For reflective vs. formative discussions and measurement choices, use modern PLS-SEM guidelines). **Data collection instruments & procedures.**The questionnaire was written in clear language, pre-tested on a small group of merchants to refine wording and completeness, and then distributed online and offline to a selected sample. Ensure informed consent, data anonymity, and ethical protocols (data for research purposes only). If possible, triangulate with secondary data from the bank's system (with permission) to strengthen the Transaction Improvement construct.

Analysis flow using SmartPLS 4 (concise, step-by-step):

a. Evaluation of the measurement model (reflective):
   1) Examine outer loadings; ideally ≥ 0.708; items with low loadings (0.40–0.70) are considered based on their contribution to reliability/validity.
   2) Calculate Composite Reliability (CR) (≥0.70) and Average Variance Extracted (AVE) (≥0.50) for convergent validity.
   3) Also report Cronbach's Alpha as a supplement. Detailed guidelines are available in the modern PLS-SEM literature.

b. Discriminant validity: use HTMT (Heterotrait-Monotrait Ratio) as the primary criterion (conservative cut-off <0.85 or ≤0.90 depending on construct proximity). SmartPLS provides tools and CI estimation of HTMT via bootstrapping—report values and CIs.

c. Structural model evaluation:
   1) Check for multicollinearity (VIF) for predictors; ideal VIF < 3 (conservative) or <5.
   2) Report R^2 for endogenous constructs (substantive interpretation: small/medium/large depending on context) and f^2 for effect size (0.02/0.15/0.35 as a rule of thumb).
   3) Q^2 predictive relevance test via blindfolding for reflective indicators; $Q^2 > 0$ indicates predictive relevance.
   4) Use PLSpredict to assess out-of-sample predictive ability and compare prediction metrics (RMSE/MAPE) with simple benchmarks.

d. Significance & mediation test:
   1) Run non-parametric bootstrapping (recommended ≥ 5,000 subsamples; two-tailed) to obtain t-values, p-values, and confidence intervals for the path coefficients.
   2) For mediation (Satisfaction as a mediator), focus on the indirect effect and the bootstrapping confidence interval to assess significance. Classify mediation as partial/full based on the significance of the direct and indirect relationships, and use further procedures to quantify the uncertainty of the mediation effect if necessary.

SmartPLS practical settings & technical recommendations: use the default PLS-SEM algorithm (path weighting), then run consistent bootstrapping when needed for PLSc-SEM; set the number of bootstraps ≥5,000 for stable confidence interval estimation; run PLSpredict as a model prediction test. All these options are documented in the SmartPLS documentation and are common practice in recent PLS-SEM research.

Results and Discussion

4.1 Evaluation of Measurement Model (Outer Model)

The measurement model (outer model) is a confirmatory factor analysis (CFA) that tests the validity and reliability of the latent constructs. The following are the results of the outer model evaluation in this study.

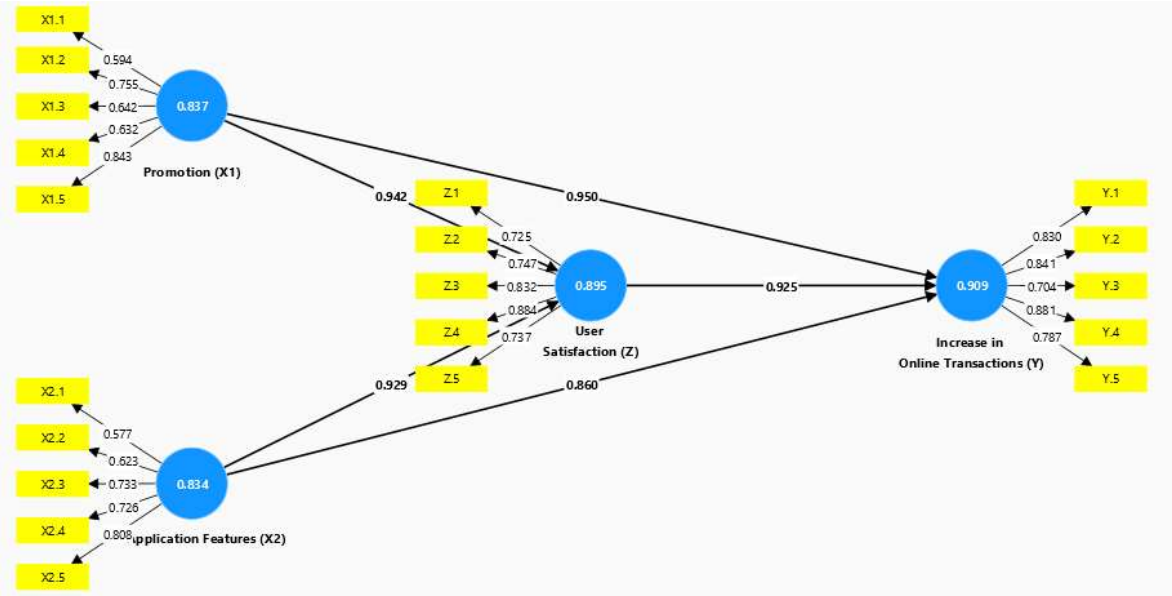

Figure 4.1. Outer Model

Table 4.1 Cross Loading

	Application Features (X2)	User Satisfaction (Z)	Increase in Online Transactions (Y)	Promotion (X1)
X1.1	0.610	0.564	0.560	0.594
X1.2	0.606	0.803	0.627	0.755
X1.3	0.573	0.625	0.590	0.642
X1.4	0.570	0.577	0.619	0.632
X1.5	0.717	0.708	0.885	0.843
X2.1	0.577	0.540	0.492	0.546
X2.2	0.623	0.561	0.555	0.589
X2.3	0.733	0.672	0.639	0.675
X2.4	0.726	0.663	0.637	0.638
X2.5	0.808	0.780	0.663	0.628
Y.1	0.717	0.708	0.830	0.846
Y.2	0.678	0.768	0.841	0.823
Y.3	0.597	0.686	0.704	0.637
Y.4	0.805	0.857	0.881	0.781
Y.5	0.676	0.725	0.787	0.751
Z.1	0.620	0.725	0.627	0.807
Z.2	0.714	0.747	0.693	0.682
Z.3	0.773	0.832	0.784	0.760
Z.4	0.758	0.884	0.853	0.828
Z.5	0.792	0.737	0.663	0.628

Source :Primary data processed (2025)

This table illustrates how the indicators in each variable influence each other in the context of maritime business performance. Innovative behavior has a significant relationship with maritime business performance, and inclusive transformation, although having a smaller influence, still plays a significant role in improving business performance.

4.2 Convergent Validity

The convergent validity of the measurement model with the reflective indicator model is assessed based on the correlation between the item score/component score and the construct score calculated using PLS. The following are the results of the convergent validity measurement model test using loading factors:

Table 4.2
Results of Instrument Validity Test Using Loading Factor

	Application Features (X2)	User Satisfaction (Z)	Increase in Online Transactions (Y)	Promotion (X1)
X1.1				0.794
X1.2				0.755
X1.3				0.642
X1.4				0.632
X1.5				0.843
X2.1	0.777			
X2.2	0.623			
X2.3	0.733			
X2.4	0.726			
X2.5	0.808			
Y.1			0.830	
Y.2			0.841	
Y.3			0.704	
Y.4			0.881	
Y.5			0.787	
Z.1		0.725		
Z.2		0.747		
Z.3		0.832		
Z.4		0.884		
Z.5		0.737		

Source :Primary data processed (2025)

Based on Table 4.2 above, it can be seen that all loading factor values have exceeded the 0.7 limit, thus concluding that each indicator in this study is valid. Therefore, these indicators can be used to measure the research variables.

4.3 Reliability Test

An instrument can be considered reliable if its Average Variance Extracted value is greater than 0.5, Cronbach's Alpha value is greater than 0.6, and Composite Reliability value is greater than 0.7. The following table shows the results of the reliability calculations using Average Variance Extracted (AVE), Cronbach's Alpha, and Composite Reliability:

Table 4.3
Calculation of AVE, Cronbach Alpha, and Composite Reliability

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Application Features (X2)	0.830	0.834	0.825	0688
User Satisfaction (Z)	0.888	0.895	0.890	0.620
Increase in Online Transactions (Y)	0.905	0.909	0.905	0.658
Promotion (X1)	0.832	0.837	0.825	0.689

Source :Primary data processed (2025)

Based on the test results table, it can be explained that each research variable, namely Promotion (X1), Application Features (X2), User Satisfaction (Z), and Increased Online Transactions (Y), have met the reliability and construct validity criteria. The Cronbach's Alpha values for all variables were above 0.70, namely Promotion (0.832), Application Features (0.830), User Satisfaction (0.888), and Increased Online Transactions (0.905). According to Hair et al. (2019), a Cronbach's Alpha value ≥ 0.70 indicates good internal reliability. This means that the indicators in each variable are consistent in measuring the intended construct. The composite reliability values for both rho_a and rho_c also showed high figures, ranging from 0.825 to 0.909. The acceptance standard according to Henseler et al. (2020) is ≥ 0.70. Thus, the constructs in this study can be declared reliable, as each question item in the questionnaire was able to provide good consistency in results. The AVE values for all variables also met the standard of ≥ 0.50. The Promotion (0.689), Application Features (0.688), User Satisfaction (0.620), and Online Transaction Improvement (0.658) variables indicate that more than 50% of the indicator variance can be explained by their respective constructs. This indicates that convergent validity is met, thus the indicators used appropriately represent the research variables. Overall, the results of the reliability and construct validity tests confirm that the research instrument used is reliable and valid, allowing for further analysis using Partial Least Squares (PLS). In other words, both promotions and app features have reliable indicators in explaining the relationship with user satisfaction, which ultimately influences increased online transactions.

4.4 Structural Model Evaluation (Inner Model)

Evaluation of the inner model can be seen from several indicators, including the coefficient of determination (R2), Predictive Relevance (Q2), and Goodness of Fit Index (GoF) (Hussein, 2015). The results of the structural model displayed by Smart PLS 3.0 in this study are as follows:

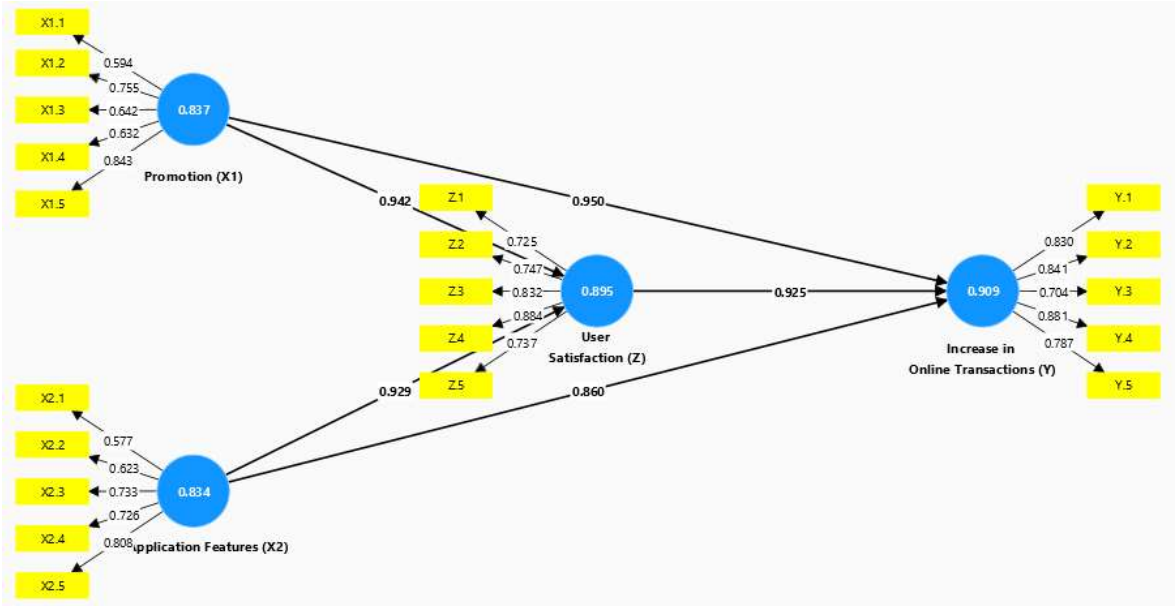

Figure 4.2 Structural Model (Inner Model)

4.5 R2 (R-square) Results

In assessing a model using PLS, we begin by looking at the R-square for each dependent latent variable. The results of the r2 calculation in this study are as follows:

Table 4.4
Correlation Value (r2)

	R-square	R-square adjusted
User Satisfaction (Z)	0.931	0.930
Increase in Online Transactions (Y)	0.910	0.907

Source :Primary data processed (2025)

The results of the coefficient of determination test show that the User Satisfaction (Z) variable has an R-square

value of 0.931 and an Adjusted R-square of 0.930. This means that 93.1% of the variation that occurs in User Satisfaction can be explained by the independent variables in the research model, while the remaining 6.9% is explained by other factors outside the model. This value is considered very high so it can be said that the model used has strong predictive ability in explaining variations in user satisfaction. Meanwhile, for the Increase in Online Transactions (Y) variable, the R-square value was 0.910 and the Adjusted R-square value was 0.907. This means that 91% of the variation in the increase in online transactions can be explained by the variables in the model, while the remaining 9% is influenced by other variables outside the study. Similarly, for User Satisfaction, this value is also in the very high category, indicating that the research model has a good level of accuracy in explaining the relationship between variables. A comparison of these two results indicates that User Satisfaction (Z) is more dominantly influenced by the variables in the model than Increase in Online Transactions (Y). However, both still show a very strong degree of determination. Therefore, this research model can be concluded as suitable for describing the relationship between user satisfaction, increased online transactions, and the factors that influence them.

4.6 Hypothesis Testing

Based on the results of the outer model, all tested hypotheses met the requirements and can therefore be used as analysis models in this study. Hypothesis testing in this study used a 5% alpha, meaning that if the t-statistic value is ≥ 2.048 or the probability value is ≤ the level of significance (α = 5%).

Table 4.5
Path Coefficients

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Application Features (X2) -> Increase in _Online Transactions (Y)	0.106	0.430	23,715	0.004	0.996
Application Features (X2) -> User _Satisfaction (Z)	0.577	0.562	0.098	5,875	0.000
Promotion (X1) -> Increase in _Online Transactions (Y)	0.623	0.604	0.113	5,527	0.000
Promotion (X1) -> User _Satisfaction (Z)	0.733	0.719	0.083	8,790	0.000
User _Satisfaction (Z) -> Increase in _Online Transactions (Y)	0.642	0.635	0.071	9,008	0.000

Source :Primary data processed (2025)

The results of the path coefficient test indicate that the Promotion variable (X1) has a significant effect on the increase in online transactions (Y) and user satisfaction (Z). This can be seen from the T-statistics value which is greater than 1.96 and P-values which are less than 0.05.

1. The effect of promotions on increasing online transactions (X1 → Y) yields a T-statistic of 5.527 with a P-value of 0.000, indicating a significant effect. This finding indicates that the more intensive and targeted a company's promotions are, the more likely users are to engage in online transactions. In other words, effective promotions can attract users' attention, foster interest, and ultimately increase purchasing behavior or the use of online services.
2. The effect of promotions on user satisfaction (X1 → Z) shows an even stronger relationship, with a T-statistic of 8.790 and a P-value of 0.000. These results confirm that promotions not only serve as a tool to encourage transactions but also contribute to user satisfaction. Promotions that are delivered clearly, informatively, and in accordance with user needs will increase their positive perception of the service, thus impacting satisfaction.
3. The Effect of Application Features on Increasing Online Transactions (X2 → Y) shows a T-statistic value of 0.004 with a P-value of 0.996, which means it is not significant. This indicates that although application features are an important part of digital services, their direct presence is not strong enough to encourage users to make online transactions. In other words, simply having complete features does not necessarily make users

immediately increase the intensity of transactions, because there may be other factors such as promotions, trust, and convenience in use that play a more dominant role.

4. The effect of application features on user satisfaction (X2 → Z) was proven significant with a T-statistic of 5.875 and a P-value of 0.000. These results indicate that good application features that are user-friendly, responsive, and relevant to user needs can increase their satisfaction. Features that facilitate the application's use process, provide clear information, and provide a positive experience will create higher satisfaction for users.
5. The relationship between user satisfaction and increased online transactions (Z → Y) shows a very strong result with a T-statistic of 9.008 and a P-value of 0.000. This finding confirms that user satisfaction is a key factor in increasing online transactions. When users are satisfied with their experience using an application—whether in terms of features, services, or ease of access—they will be more encouraged to make repeat transactions and even recommend the service to others.

Overall, the results of this study indicate that app features play a greater role in creating user satisfaction than directly driving online transactions. However, it is the user satisfaction generated by app features that ultimately contributes significantly to increasing online transactions. Therefore, app development strategies should not only focus on adding features, but also ensure that these features are truly relevant, easy to use, and create a satisfying user experience.

Table 4.6
Indirect Influence

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Application Features (X2) -> User _Satisfaction (Z) -> Increase in _Online Transactions (Y)	0.704	0.698	0.074	9,476	0.000
Promotion (X1) -> User _Satisfaction (Z) -> Increase in _Online Transactions (Y)	0.159	-0.779	36,179	0.004	0.996

The results of the indirect influence analysis show that there is a difference in the role of User Satisfaction (Z) as a mediating variable in the relationship between Application Features (X2) and Promotions (X1) on Increasing Online Transactions (Y). First, the path Application Features → User Satisfaction → Increased Online Transactions is proven significant with a T-statistic of 9.476 and a P-value of 0.000. This indicates that user satisfaction acts as a mediator in the relationship between application features and online transactions. This means that although application features do not directly increase transactions, quality features can increase user satisfaction, and this satisfaction then encourages them to make more online transactions. This finding confirms that application development needs to focus on creating a pleasant, simple, safe, and useful user experience, because the satisfaction arising from this experience will increase user loyalty and transaction frequency.

Second, the Promotion → User Satisfaction → Increased Online Transactions path showed insignificant results, with a T-statistic of 0.004 and a P-value of 0.996. These results indicate that user satisfaction does not mediate the effect of promotions on increased online transactions. In other words, company promotions directly influence online transactions without necessarily going through user satisfaction. This is understandable because promotions are usually persuasive and can encourage users to immediately make transactions, although they may not necessarily increase their satisfaction in the long term. Overall, these results suggest that app features have a significant indirect effect through user satisfaction, while promotions have no indirect effect through user satisfaction. Therefore, company strategy should prioritize app feature development to foster satisfaction, which will subsequently lead to a sustained increase in online transactions. Meanwhile, promotions remain important as a transaction driver, but their role is stronger directly than through user satisfaction.

5. Conclusion and Suggestions

5.1 Conclusion

Based on the results of data analysis using the Partial Least Squares - Structural Equation Modeling (PLS-SEM) approach via SmartPLS, the following conclusions were obtained:

1. Promotion (X1) has a significant direct effect on Online Transaction Increase (Y) and User Satisfaction (Z). However, promotion does not have an indirect effect through user satisfaction, so the effect of promotion on online transactions occurs directly without being mediated by satisfaction.
2. Application features (X2) do not directly influence the increase in online transactions (Y), but have a significant effect on user satisfaction (Z). The mediation results show that user satisfaction mediates the influence of application features on online transactions. This means that the better the application features, the higher the user satisfaction, and ultimately, this satisfaction drives an increase in online transactions.
3. User satisfaction (Z) has been shown to play a significant role as a variable that significantly influences the increase in online transactions. This confirms that satisfaction is a key factor in creating sustainable online transactions.

In general, this study shows that promotional strategies are effective in increasing online transactions directly, while application features play an important role in building user satisfaction which then has an impact on increasing online transactions.

5.2 Suggestion

Based on these conclusions, the following are suggested:

1. For Companies/Applications
    a. Application feature development needs to be continuously improved by emphasizing aspects of ease, speed, security, and convenience, because application features contribute to satisfaction that drives online transactions.
    b. Promotions are consistently run because they've been proven to directly increase transactions. However, for a more long-term impact, promotions should be combined with service improvements to not only drive immediate transactions but also foster user satisfaction and loyalty.
    c. Focus on user satisfaction as a key strategy, as satisfaction has been shown to be a critical link in driving repeat transaction behavior.
2. For Further Research
    a. It is recommended to add other variables such as user trust, customer loyalty, and perceived ease of use to enrich the research model.
    b. Using mixed-method research methods with interviews or FGDs to gain a deeper understanding of user experiences with application features and promotions.
    c. Expanding research objects to various other application platforms or different regions so that research results can be more generalized.

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