

The Influence of Product and Service Quality on Satisfaction, with the Mediation of Perceived Value on Linkaja Users in Padang City

Ikhwanul Ikhsan¹, Yasri²

Padang State University, Indonesia

Email: ikhwanulikhsan741@gmail.com, yasri33@fe.unp.ac.id

Abstract

This study aims to analyze the influence of *Product Quality* and *Service Quality* on *Customer Satisfaction*, with *Customer Perceived Value* as a mediation variable in LinkAja e-wallet service users in Padang City. The background of this research is based on the increasing penetration of digital *financial technology* (fintech) services, so that understanding the quality of products and services is crucial in creating value and customer satisfaction. The research method used is a quantitative approach, with data collection techniques through the distribution of questionnaires to 280 LinkAja user respondents who are domiciled in Padang City. The data analysis technique was carried out using *the Structural Equation Modeling* (SEM) method based on *Partial Least Square* (PLS) using the SmartPLS 4 application. The results of the study show that *Product Quality* and *Service Quality* have a significant influence on *Customer Perceived Value* and *Customer Satisfaction*. In addition, *Customer Perceived Value* has been shown to significantly mediate the relationship between *Product Quality* and *Service Quality* to *Customer Satisfaction*. These results support the framework of *the Expectation Disconfirmation Theory* (EDT), which states that customer satisfaction is formed from comparisons between expectations and perceptions of service performance. This research provides theoretical contributions to the development of consumer behavior models in the fintech sector as well as practical implications for companies to improve the quality of services and value perceived by customers.

Keywords : *Product Quality, Service Quality, Customer Satisfaction, Customer Perceived Value, LinkAja, Fintech.*

INTRODUCTION

Amid the rapid digitalization of the economy, electronic wallets (e-wallets) have become essential financial instruments that facilitate various transactions globally. The success of adoption and the sustainability of this technology largely depend on user satisfaction and trust (Abas & Puspawati, 2024). Satisfaction, defined as a post-consumption evaluation in which user expectations are met or exceeded by perceived service performance (Gajewska et al., 2020; Otto et al., 2020), serves as a crucial indicator determining users' intention to continue using a technology. When perceived performance exceeds expectations, positive disconfirmation occurs, resulting in high satisfaction, and vice versa (Wang, 2020). In this context, LinkAja, as one of Indonesia's leading e-wallets with more than 84 million registered users (Rahardyan, 2022), plays a vital role in promoting national financial inclusion (Wartakini, 2024).

The Influence of Product and Service Quality on Satisfaction, with the Mediation of Perceived Value on Linkaja Users in Padang City

Despite its large user base and user-friendly interface, reports from various sources — including Google Play Store reviews and consumer media — indicate significant challenges related to user satisfaction with LinkAja (Indonesiapublisher, 2025; Kontan.co.id, 2024; Mediakonsumen.com, 2024; Yuwono, 2023). Common complaints revolve around issues such as application instability, transaction failures, slow and unresponsive customer service, and account security concerns (Playstore, 2025). This dissatisfaction phenomenon can be analyzed through several theoretical frameworks. The Expectation Confirmation Model (ECM) explains that dissatisfaction arises when a service fails to meet users' initial expectations (Fu et al., 2018). Meanwhile, the Service Quality Model highlights weaknesses in dimensions such as *reliability* and *responsiveness* as key sources of customer dissatisfaction in electronic services (Hussain, 2023; Zeithaml et al., 1988).

Product quality and service quality are essential antecedents shaping customer perceived value, which in turn influences satisfaction (Samudro, 2020; Uzir et al., 2020). Product quality refers to a product's ability to meet customer needs (Abigail et al., 2024), while electronic service quality represents users' comprehensive assessment of the excellence of virtual facilities offered (Al-Dweeri et al., 2019; Raza et al., 2020; Sharma, 2024). Previous studies have shown that perceived customer value mediates the relationship between service quality and customer satisfaction (Bashir et al., 2020).

Although the relationships among quality, value, and satisfaction have been widely studied, there remains a research gap in the comprehensive understanding of how these variables interact simultaneously. Specifically, studies examining the mediating role of customer perceived value in models integrating product quality and service quality toward e-wallet user satisfaction are still limited (Alwarshdeh, 2020; Bashir et al., 2020; Suhartanto et al., 2019; Syah & Olivia, 2022). Incorporating this mediating variable aims to fill the gaps in prior research and provide a more holistic understanding (Dhingra, 2023; Suttikun & Meeprom, 2021).

Based on the background and identified research gap, this study aims to examine **“The Influence of Product Quality and Service Quality on Customer Satisfaction with Customer Perceived Value as a Mediating Variable among LinkAja e-wallet users in Padang City.”**

LITERATURE REVIEW

Grand Theory

The main theoretical foundation (grand theory) of this study is the Expectation Disconfirmation Theory (EDT), formally developed by Oliver (1980). This theory explains that customer satisfaction results from a cognitive evaluation process in which customers compare their initial expectations with the actual performance of a product or service received. When actual performance exceeds expectations, positive disconfirmation occurs, leading to higher satisfaction. Conversely, when performance falls short of expectations, negative disconfirmation arises, resulting in lower satisfaction. Thus, within the EDT framework, satisfaction is not merely a response to objective performance but rather a subjective comparison between expectations and actual experience (Oliver, 1980).

The Influence of Product and Service Quality on Satisfaction, with the Mediation of Perceived Value and the Moderate Role of Social Media on Linkaja Users in Padang City

In the context of digital services, the EDT concept was further expanded by Bhattacharjee (2001) through the Expectation-Confirmation Model (ECM) in information systems research. The ECM emphasizes that the intention to continue using an information system is strongly influenced by user satisfaction, which emerges from the confirmation of expectations after system usage. This model is highly relevant for examining user behavior in digital platforms such as the LinkAja e-wallet, where users' expectations regarding application performance play a crucial role in determining their level of satisfaction and loyalty.

Meanwhile, to bridge performance perception with satisfaction evaluation, the concept of Customer Perceived Value, as defined by Zeithaml et al. (1988), becomes essential. Customer Perceived Value refers to the customer's overall assessment of a product's utility based on the perceived benefits received compared to the sacrifices made (in terms of cost, time, and effort). Within the EDT framework, perceived value can be viewed as an outcome of the disconfirmation process: when the benefits perceived by the customer exceed the sacrifices incurred, the perceived value becomes positive, thereby fostering greater customer satisfaction.

Relationship Between Variables

The Influence of Product Quality on Customer Satisfaction

Product quality refers to a product's ability to meet customers' needs and desires, both expressed and implied (Abigail et al., 2024). In the context of e-wallets, product quality is manifested in aspects such as application stability, transaction feature reliability, speed, and system security. A high-quality product will meet or even exceed user expectations, leading to increased satisfaction (Setyadi et al., 2024). Based on the Expectation Disconfirmation Theory (EDT), a stable and reliable application (high performance) produces positive confirmation of user expectations, thereby directly enhancing customer satisfaction.

H1: Product Quality has a positive effect on Customer Satisfaction.

The Influence of Service Quality on Customer Satisfaction

Service Quality is a comprehensive evaluation by users of the overall excellence or superiority of a service (Sharma, 2024). In the digital environment, this is referred to as e-service quality, which encompasses the entire customer journey from information search and transaction processes to post-purchase services (Hussain, 2023; Syah & Olivia, 2022). According to the model proposed by Zeithaml et al. (1988), dimensions such as reliability, responsiveness, and assurance significantly influence customer perceptions. Responsive customer service and effective problem-solving (high service performance) fulfill user expectations, which in turn enhance customer satisfaction (Ighomereho et al., 2022; Liu et al., 2021).

H2: Service Quality has a positive effect on Customer Satisfaction.

The Influence of Product and Service Quality on Satisfaction, with the Mediation of Perceived Value on Linkaja Users in Padang City

The Mediating Role of Customer Perceived Value

Customer Perceived Value serves as an essential bridge between perceived quality and overall satisfaction. Superior product and service quality enhance the benefits perceived by customers—such as efficiency, convenience, and security—thereby improving their overall perception of value (Uzir et al., 2020). When customers feel that the benefits they receive are equal to or exceed the sacrifices made (e.g., transaction costs or time spent), their perceived value becomes high (Samudro, 2020).

Furthermore, this perceived value directly triggers satisfaction. Customers who believe they are receiving the best value from a service tend to be more satisfied. Several studies have confirmed that customer perceived value plays a significant mediating role in the relationship between service quality and customer satisfaction (Bashir et al., 2020; Suhartanto et al., 2019). This implies that product and service quality not only have a direct impact on satisfaction but also an indirect effect through the formation of positive value perceptions.

H3 : Product Quality has a positive effect on Customer Perceived Value.

H4 : Service Quality has a positive effect on Customer Perceived Value

H5 : Customer Perceived Value has a positive effect on Customer Satisfaction.

H6 : Customer Perceived Value mediates the effect of Product Quality on Customer Satisfaction.

H7 : Customer Perceived Value mediates the effect of Service Quality on Customer Satisfaction.

Conceptual Framework

The conceptual framework in this study is formulated in the following figure :

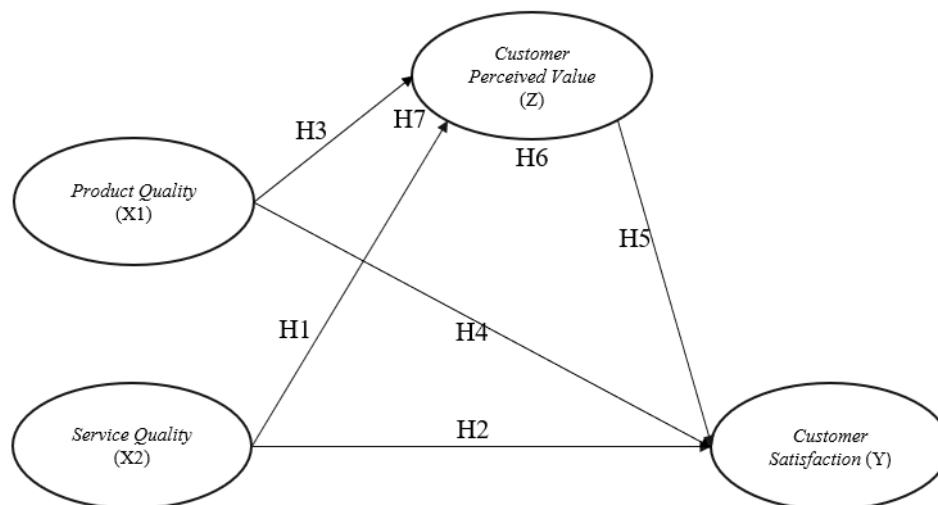


Figure 1. Conceptual Framework

The Influence of Product and Service Quality on Satisfaction, with the Mediation of Perceived Value and the Moderate Role of Social Media on Linkaja Users in Padang City

METHOD

This study employs a quantitative approach with a causal research design to examine the cause-and-effect relationships among variables. According to Hair et al. (2019), causal research aims to demonstrate reciprocal interactions between research variables. Primary data were collected through surveys using questionnaires distributed both online and offline to respondents. The research instrument was designed as a set of closed-ended statements using a 5-point Likert Scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), to measure respondents' perceptions (Sekaran, 2016). In addition, secondary data from articles, journals, and books were utilized to support the analysis and strengthen the research arguments (Sunarsi, 2021).

The population of this study consists of all LinkAja e-wallet users in Padang City (Abdullah, 2022; Nuryadi, 2017). The sampling technique applied was non-probability sampling with the purposive sampling method (Sahir, 2022). The criteria established for respondents included active LinkAja users as of 2025, residing in Padang City, being above 17 years of age, and having experienced issues in using LinkAja services. The determination of the sample size was based on the recommendation of F. Hair Jr et al. (2014), which suggests that the number of samples should be five to ten times the number of indicators. With 28 indicators used in this study, the target sample size was set at 280 respondents.

The variables in this study were operationalized as follows. Customer Satisfaction (Y), as the dependent variable, was measured using three indicators adapted from Ajina et al. (2023), namely expectation fulfillment, payment satisfaction, and ease of use. Product Quality (X1), as the independent variable, was measured using indicators from Phonthanukitithaworn et al. (2021), which include security, special offers, convenience, and flexibility. Service Quality (X2) was measured using indicators from Ajina et al. (2023), encompassing professional service, customized service, fast connectivity, and payment options. Meanwhile, Customer Perceived Value (Z), as the mediating variable, was measured using indicators from Dhaigude et al. (2023), including value for money, fair payment, price balance, and reasonable cost.

Data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) with the SmartPLS 4.0 software. This approach was chosen because of its capability to analyze complex predictive models without requiring strict data distribution assumptions (F. Hair Jr et al., 2014). The analysis process was carried out in two main stages as recommended by Hair (2019). The first stage involved the evaluation of the measurement model (outer model) to ensure the validity and reliability of the research instruments. Convergent validity was assessed through the Average Variance Extracted (AVE) value with a minimum threshold of 0.50, while discriminant validity was tested to ensure that each construct was distinct from the others. Construct reliability was evaluated using composite reliability, with acceptable values ranging between 0.70 and 0.95. The second stage involved the evaluation of the structural model (inner model) to test the research hypotheses. This stage assessed the R-Square (R^2) values of the dependent variables, the path coefficients to determine the direction and strength of relationships, and the statistical significance based on the t-statistic values obtained through the bootstrapping

The Influence of Product and Service Quality on Satisfaction, with the Mediation of Perceived Value on Linkaja Users in Padang City

procedure. Hypotheses were accepted if the t-statistic value exceeded 1.96 at a 5% significance level (F. Hair Jr et al., 2014).

RESULT AND DISCUSSION

Responden Demografi

The characteristics analyzed include gender, age, educational background, monthly income, type of occupation, and duration of using the LinkAja e-wallet application. The following presents the classification of respondents based on their characteristics/profile:

Table 1
Responden characteristic, n = 280

<i>Identities</i>	<i>Frequency</i>	<i>Percentage</i>
A. Gender :		
1. Man	114	40,7%
2. Woman	166	59,3%
B. Age :		
1. 18–25 years old	72	25,7%
2. 26–35 years old	67	23,9%
3. 36–45 years old	73	26,1%
4. >45 years old	68	24,3%
C. Last Education :		
1. SMA	78	27,9%
2. D3	62	22,1%
3. S1	61	21,8%
4. S2	69	24,6%
5. S3	10	3,6%
D. Income/Allowance :		
1. < IDR1.000.000	57	20,4%
2. IDR 1.000.000–2.000.000	64	22,9%
3. IDR 2.000.001–3.000.000	49	17,5%
4. IDR 3.000.001–4.000.000	53	18,9%
5. > IDR 4.000.000	57	20,4%
E. Type of Job :		
1. Student	46	16,4%
2. Civil Servant	84	30,0%
3. Private Employees	70	25,0%
4. Self employed	80	28,6%
F. Long Use :		
1. < 6 months	63	22,5%
2. 6–12 months	86	30,7%
3. 1–2 years	57	20,4%
4. > 2 years	74	26,4%

Based on the table above, this study involved a total of 280 respondents who met the predetermined criteria. The demographic profile of the sample is described as follows. In terms of gender, the sample was dominated by female respondents (59.3%), while males accounted for 40.7% of the total. The age distribution of respondents was relatively balanced across all

The Influence of Product and Service Quality on Satisfaction, with the Mediation of Perceived Value and the Moderate Role of Social Media on Linkaja Users in Padang City

categories, with 25.7% aged 18–25 years, 23.9% aged 26–35 years, 26.1% aged 36–45 years, and 24.3% aged over 45 years.

The respondents' educational background showed considerable diversity. The largest group consisted of high school graduates (27.9%), followed by those with a master's degree (24.6%), a diploma (22.1%), and a bachelor's degree (21.8%). A small proportion of respondents held a doctoral degree (3.6%). Monthly income levels also varied, with the largest segment (22.9%) earning between IDR 1,000,000 and IDR 2,000,000.

Regarding occupation, the majority of respondents were civil servants (30.0%), entrepreneurs (28.6%), and private employees (25.0%), while students made up 16.4% of the total sample. Finally, the duration of LinkAja usage reflected varying levels of experience among respondents. The largest group (30.7%) had used the service for 6–12 months, followed by users with more than two years of experience (26.4%). Meanwhile, newer users (less than six months) and those with 1–2 years of experience accounted for 22.5% and 20.4% of the sample, respectively.

Confirmatory Factor Analysis (CFA)

Product Quality

The results of the CFA test for the Product Quality variable are as follows :

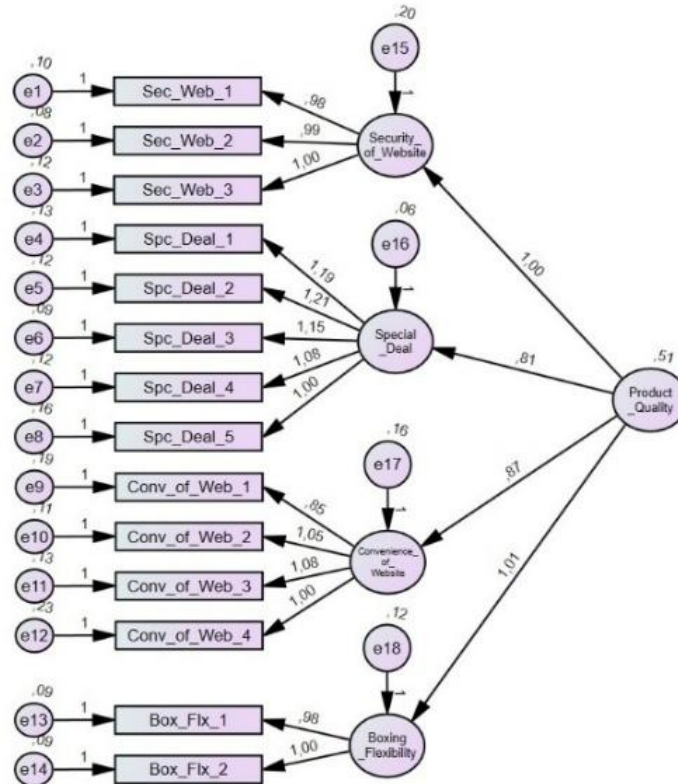


Figure 2. Confirmatory Factor Analysis (CFA) Product Quality

The Influence of Product and Service Quality on Satisfaction, with the Mediation of Perceived Value on Linkaja Users in Padang City

To facilitate interpretation, the estimated loading factor results in the standardized regression weight CFA model are presented again in a tabular form, as shown in the table below :

Table 3
CFA Product Quality

<i>Dimension</i>	<i>Indicator</i>	<i>Loading Factor</i>	<i>Decision</i>
<i>Security of Website</i> →	<i>Sec_Web_1</i>	0,932	Valid
	<i>Sec_Web_2</i>	0,947	Valid
	<i>Sec_Web_3</i>	0,925	Valid
<i>Special Deal</i> →	<i>Spc_Deal_1</i>	0,898	Valid
	<i>Spc_Deal_2</i>	0,907	Valid
	<i>Spc_Deal_3</i>	0,922	Valid
	<i>Spc_Deal_4</i>	0,892	Valid
	<i>Spc_Deal_5</i>	0,847	Valid
<i>Convenience of Website</i> →	<i>Conv_of_Web_1</i>	0,823	Valid
	<i>Conv_of_Web_2</i>	0,918	Valid
	<i>Conv_of_Web_3</i>	0,908	Valid
	<i>Conv_of_Web_4</i>	0,839	Valid
<i>Boxing Flexibility</i> →	<i>Box_Flx_1</i>	0,931	Valid
	<i>Box_Flx_2</i>	0,936	Valid

Based on the results of the Confirmatory Factor Analysis (CFA) for the Product Quality variable, it was found that all indicators used demonstrated excellent convergent validity. The standardized loading factor values for each indicator were well above the recommended threshold of 0.50, ranging from 0.823 to 0.947. Therefore, it can be concluded that the Product Quality construct possesses strong construct validity, and all indicators used are valid and appropriate to be retained for subsequent model analysis.

Outer Model

Convergent Validity

The parameters used in this test include outer loading, composite reliability (CR), Cronbach's alpha (CA), and average variance extracted (AVE). The results of the measurement model testing are presented in the table below :

Table 4
Measurement Model Assasment Result

<i>Construct and Indicator</i>	<i>Outer Loading</i>	<i>CR</i>	<i>CA</i>	<i>AVE</i>
Customer Satisfaction		0,974	0,960	0,926
Fullfilment of expectation	0,968			
Payment satisfaction	0,962			
Confort of use	0,957			
Product Quality		0,940	0,915	0,798
Security of Website	0,863			

The Influence of Product and Service Quality on Satisfaction, with the Mediation of Perceived Value and the Moderate Role of Social Media on Linkaja Users in Padang City

Special Deal	0,909			
Convenience of Website	0,885			
Booking Flexibility	0,914			
Service Quality		0,946	0,925	0,816
Professional service	0,891			
Customized service	0,916			
Fast connction	0,908			
Payment option	0,897			
Customer Perceived Value		0,872	0,805	0,631
Value for money	0,739			
Matching payout	0,851			
Price Balance	0,820			
Fair cost	0,762			

The results of the measurement model testing indicate that the research instrument demonstrates strong validity and reliability, consistent with the criteria recommended by Hair (2019). All indicators show outer loading values above the 0.70 threshold, confirming indicator validity. Internal reliability is also excellent, with Composite Reliability (CR) and Cronbach’s Alpha (CA) values for all constructs exceeding 0.70. Convergent validity is fulfilled, as each construct has an Average Variance Extracted (AVE) value greater than 0.50. Furthermore, the model exhibits moderate to strong predictive power. Therefore, the measurement model is considered valid, reliable, and suitable for subsequent structural model testing.

Discriminant Validity

The following are presented the results of the discriminant Validity Test based on *Rasio Heterotrait-Monotrait* (HTMT) (F. Hair Jr et al., 2014). as follows :

Table 5
Results Analysis Discriminant Validity Based on *Heterotrait Monotrait Ratio* (HTMT)

<i>Variable</i>	<i>Customer Perceived Value</i>	<i>Customer Satisfaction</i>	<i>Product Quality</i>
<i>Customer Satisfaction</i>	0,561		
<i>Product Quality</i>	0,805	0,843	
<i>Service Quality</i>	0,849	0,662	0,742

Based on Table 5 above, the validity test using the Heterotrait-Monotrait Ratio (HTMT) approach shows that all HTMT values are below the maximum threshold of 0.90. According to Hair (2019), an HTMT value lower than 0.90 indicates that the latent variables are clearly distinct and free from discriminant validity issues. This means that constructs such as Product Quality, Service Quality, Customer Perceived Value and Customer Satisfaction are unique and do not overlap in measurement. These results confirm the discriminant validity of the model, ensuring

The Influence of Product and Service Quality on Satisfaction, with the Mediation of Perceived Value on Linkaja Users in Padang City

that each variable measures a different concept and strengthening the credibility of the research findings.

Inner Model

According to Althinayyan & Alojail (2024), the inner model in PLS-SEM functions to test the causal relationship between latent constructs through an R^2 value that shows strong predictive ability with a result of 0.705 for user satisfaction and 0.62 for continuous use intention. The results of the test of the Inner model with R-square are as follows:

Tabel 6
R-Square Analysis

	<i>R-square</i>	<i>R-square adjusted</i>
<i>Customer Perceived Value (Z)</i>	0,619	0,616
<i>Customer Satisfaction (Y)</i>	0,668	0,660

The results of the R^2 test in table 4.12 show that the *Customer Satisfaction variable* has a value of 0.668 which is classified as moderate to strong (Hair et al., 2019), so that product quality, service quality, and perceived value, to explain 66.8% of the variation in customer satisfaction, while the remaining 33.2% is influenced by other factors outside the model. The *Customer Perceived Value* obtained an R^2 value of 0.619 which is included in the moderate category, indicating that the quality of products and services explains 61.9% of the variation in customer value perception, while the other 38.1% is influenced by external factors such as price, promotion, and personal experience.

Research Hypothesis

According to F. Hair Jr et al., (2014) Hypothesis testing in the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach was performed to evaluate the relationships between latent variables that have been formulated in the theoretical model. This process includes testing the direct, indirect (mediation), and interaction (moderation) of the influence between constructs. The hypothesis is declared significant if the relationship between variables is indicated by a t-statistical value that exceeds a certain threshold, i.e. more than 1.96 at a significance level of 5% ($p\text{-value} < 0.05$). This test is usually carried out through a bootstrapping procedure, which is a resampling technique that produces more stable and accurate statistical estimates in assessing the significance of paths between constructions. The results of hypothesis testing in this study are as follows :

The Influence of Product and Service Quality on Satisfaction, with the Mediation of Perceived Value and the Moderate Role of Social Media on Linkaja Users in Padang City

Table 6
Hypothesis Testing Results

<i>Hypothesis</i>	<i>Path</i>	<i>Coeff.</i>	<i>t-statistics</i>	<i>p-values</i>	<i>Decision</i>
H1	<i>Product Quality -> Customer Perceived Value</i>	0,360	4,308	0,000	Accepted
H2	<i>Product Quality -> Customer Satisfaction</i>	0,770	13,920	0,000	Accepted
H3	<i>Service Quality -> Customer Perceived Value</i>	0,495	5,804	0,000	Accepted
H4	<i>Service Quality -> Customer Satisfaction</i>	0,205	2,801	0,005	Accepted
H5	<i>Customer Perceived Value -> Customer Satisfaction</i>	-0,240	3,625	0,000	Rejected
H6	<i>Product Quality -> Customer Perceived Value -> Customer Satisfaction</i>	-0,086	2,621	0,009	Rejected
H7	<i>Service Quality -> Customer Perceived Value -> Customer Satisfaction</i>	-0,119	2,965	0,003	Rejected

The results of the hypothesis testing indicate that four of the seven proposed hypotheses were accepted, while the remaining three hypotheses (H5, H6, and H7) were rejected due to their negative path coefficients. Specifically, Product Quality and Service Quality were found to have positive and significant effects on Customer Perceived Value and Customer Satisfaction, both directly and indirectly. Strong direct effects were observed in the paths from Product Quality to Customer Satisfaction ($\beta = 0.770$; $t = 13.920$) and from Service Quality to Customer Satisfaction ($\beta = 0.205$; $t = 2.801$), confirming the significant role of these variables in enhancing customer satisfaction.

However, the mediating effects involving Customer Perceived Value, as represented by hypotheses H5, H6, and H7, showed negative coefficients, indicating that these indirect relationships do not support the proposed theoretical framework. Specifically, Customer Perceived Value to Customer Satisfaction (H5), Product Quality to Customer Satisfaction through Customer Perceived Value (H6), and Service Quality to Customer Satisfaction through Customer Perceived Value (H7) were not supported. These findings suggest that although Customer Perceived Value is influenced by Product Quality and Service Quality, its role as a mediating variable in strengthening customer satisfaction is not empirically confirmed in this study.

Discussion

The Effect of Product Quality on Customer Perceived Value

The findings confirm that product quality has a significant positive effect on perceived value among users. In the context of the LinkAja e-wallet in Padang, the product quality variable includes transaction speed, system reliability, data security, and user interface simplicity. The improvement of these technical aspects enhances the perception of benefits relative to the costs or risks involved (Oliver, 1997; Zeithaml, 1988). This finding is consistent with previous studies

The Influence of Product and Service Quality on Satisfaction, with the Mediation of Perceived Value on Linkaja Users in Padang City

showing that the stability and technical performance of e-wallet applications strengthen perceived value (Ali et al., 2023; Wahyuni et al., 2023) and reduce perceived risk (Uzir et al., 2020). In other words, improved product quality directly enhances perceived value (Blut et al., 2024), increasing both functional and emotional benefits for consumers (Rita et al., 2019a). Therefore, every innovation or new feature should emphasize technical reliability (Hu et al., 2022; Oliver, 1997). Practically, LinkAja must maintain product quality consistency—such as application speed and transaction security—because reliability forms the foundation of user value perception (Uzir et al., 2020; Zeithaml et al., 1988).

The Effect of Product Quality on Customer Satisfaction

This study finds that product quality is a key determinant of user satisfaction with LinkAja. An application with a stable system, high transaction speed, and strong security directly enhances satisfaction, surpassing the effects of promotions or incentives. This result aligns with the Expectation–Confirmation Theory (Oliver, 1997) and satisfaction theory (Kotler, 2016), which posit that satisfaction occurs when product performance meets or exceeds consumer expectations. This consistency is supported by previous studies, which show that digital product reliability plays a major role in satisfaction by reducing perceived risk (Ali et al., 2023; Uzir et al., 2020), and that post-COVID consumers demand speed and security as prerequisites for satisfaction (Wahyuni et al., 2023). Practically, product quality improvement should remain a priority (Parasuraman et al., 1988), as a strong product consistently fulfills customer needs and expectations (Oliver, 1997). Moreover, perceived product quality is directly linked to consumer satisfaction (Blut et al., 2024), particularly when the application offers superior speed, security, and reliability. Therefore, LinkAja must ensure product quality standards are maintained to keep user satisfaction high and reduce the probability of service failures (Hu et al., 2022).

The Effect of Service Quality on Customer Perceived Value

The study also reveals that service quality contributes positively to users' perceived value. Fast, responsive, and informative service—from information clarity to problem resolution—adds value beyond product attributes alone. In other words, perceived value is determined not only by technical aspects but also by how the company serves its customers (Ali et al., 2023; Uzir et al., 2020). Field findings support this view: e-wallet consumers increasingly evaluate applications based on service capability, as service quality reduces uncertainty and enhances perceived benefits (Wahyuni et al., 2023). Theoretically, the SERVQUAL model (Parasuraman et al., 1988) identifies five service dimensions (tangibles, reliability, responsiveness, assurance, empathy), which, when managed properly, enhance perceived benefits. Zeithaml et al. (1988) further argue that good service reduces sacrifices (e.g., waiting time and risk), thereby increasing perceived value. This finding is consistent with meta-analyses confirming the significant contribution of service dimensions to value in digital contexts (Blut et al., 2024). The implication is that LinkAja should continue to strengthen service aspects—such as response speed and digital interaction security—to build sustainable perceived value (Hu et al., 2022; Rita et al., 2019a).

The Influence of Product and Service Quality on Satisfaction, with the Mediation of Perceived Value and the Moderate Role of Social Media on Linkaja Users in Padang City

The Effect of Service Quality on Customer Satisfaction

The findings show that service quality positively affects LinkAja users' satisfaction, although its effect is weaker compared to product quality. Users are more satisfied when services are responsive, resolve complaints quickly, and provide clear information. This result is consistent with international studies showing that service dimensions (reliability, responsiveness, assurance) significantly predict customer satisfaction, although in utilitarian services such as finance, technical aspects often dominate (Rita et al., 2019; Vatolkina et al., 2020). Studies on mobile wallets also found that service responsiveness and reliability affect satisfaction, though the effect depends on system performance (Ajina et al., 2023). Theoretically, the SERVQUAL model (Parasuraman et al., 1988) and satisfaction frameworks (Kotler, 2016) place service quality as an enhancer of customer experience, where fast and reliable service improves satisfaction (Zeithaml, 1988). Practically, LinkAja should view service improvement as a complementary strategy: while better service quality (e.g., faster customer service response, accurate claim resolution) increases satisfaction, maintaining strong product quality must remain the main focus to meet users' core needs (Blut et al., 2024; Hu et al., 2022).

The Effect of Customer Perceived Value on Customer Satisfaction

The empirical results indicate that *customer perceived value* does not exert a positive effect on *customer satisfaction*, leading to the rejection of H5. This finding suggests that the perceived benefits experienced by LinkAja users, such as convenience, promotional incentives, and cost efficiency, are insufficient to directly enhance satisfaction when not supported by stable system performance and reliable service delivery. This condition aligns with the *Expectation Disconfirmation Theory* (Oliver, 1997), which posits that satisfaction is formed through the comparison between expectations and actual performance. High perceived value may elevate users' expectations, and when these expectations are not fully met due to technical issues or service disruptions, dissatisfaction tends to emerge. This result is consistent with the findings of Fehrenbach and Herrando (2021) and Mutambik (2023), who reported that perceived value does not always translate into higher satisfaction, particularly in digital service environments characterized by high performance dependency.

Customer Perceived Value as a Mediator Between Product Quality and Customer Satisfaction

The results demonstrate that *customer perceived value* does not positively mediate the relationship between *product quality* and *customer satisfaction*, thereby leading to the rejection of H6. This indicates that product quality, reflected in system functionality, transaction speed, and security, exerts a more substantial direct influence on customer satisfaction than through the formation of perceived value. In digital payment services, users tend to prioritize actual functional performance over cognitive evaluations of relative benefits. Based on the *disconfirmation paradigm* (Oliver, 1997), improvements in product quality accompanied by high-value

The Influence of Product and Service Quality on Satisfaction, with the Mediation of Perceived Value on Linkaja Users in Padang City

propositions may raise user expectations. When these heightened expectations are not fully realized in practice, the mediating role of perceived value becomes weakened. This finding is in line with previous studies by Rita et al. (2019) and Uzir et al. (2020), which revealed that the mediating effect of perceived value may diminish or become insignificant when functional performance is the dominant determinant of customer satisfaction in digital service contexts.

Customer Perceived Value as a Mediator Between Service Quality and Customer Satisfaction

The empirical analysis reveals that *customer perceived value* does not positively mediate the effect of *service quality* on *customer satisfaction*, resulting in the rejection of H7. This suggests that service quality dimensions, such as responsiveness, clarity of information, and problem resolution, influence satisfaction primarily through direct interactions rather than through the enhancement of perceived value. In technology-driven financial services, users place greater emphasis on system reliability and operational efficiency than on abstract evaluations of value. Furthermore, higher perceived value derived from superior service quality may increase users' expectations regarding overall service performance. When these expectations are unmet, particularly due to system instability, the mediating effect of perceived value becomes ineffective. This result supports prior empirical evidence reported by Parasuraman et al. (1988), Rita et al. (2019), and Blut et al. (2024), which indicates that in technology-based service environments, perceived value often plays a limited mediating role when core service performance remains suboptimal.

CONCLUSION

This study examines a comprehensive model to explain user satisfaction with the LinkAja e-wallet by integrating quality and value dimensions. The findings reveal that Product Quality and Service Quality have positive and significant effects on Customer Satisfaction, with Product Quality emerging as the strongest predictor, followed by Service Quality. In contrast, Customer Perceived Value does not exert a positive effect on Customer Satisfaction, leading to the rejection of H5. Furthermore, Customer Perceived Value fails to mediate the relationships between Product Quality and Customer Satisfaction (H6 rejected) and between Service Quality and Customer Satisfaction (H7 rejected). These results indicate that, within the context of utilitarian digital financial services, user satisfaction is predominantly driven by core functional performance, such as system stability, transaction speed, and security, rather than by perceived value derived from promotional activities and benefit-based offerings.

Theoretically, this study extends the understanding of *Expectation Disconfirmation Theory* by demonstrating that high perceived value may generate inflated expectations that are not always aligned with actual user experiences, thereby potentially reducing satisfaction. Practically, the findings suggest that e-wallet providers should prioritize improving product reliability, service responsiveness, and system security as primary strategies for enhancing customer satisfaction. Value-based marketing initiatives should be carefully managed to avoid creating expectations beyond the platform's technical capabilities. The limitations of this study include its cross-sectional design and geographic scope limited to a single city, which opens avenues for future

The Influence of Product and Service Quality on Satisfaction, with the Mediation of Perceived Value and the Moderate Role of Social Media on Linkaja Users in Padang City

research. Longitudinal studies are recommended to capture the dynamic nature of user satisfaction over time, while qualitative approaches may provide deeper insights into the mechanisms underlying the negative and non-significant mediating effects observed.

REFERENCE

- Abas, N. I., & Puspawati, D. (2024). E-wallet adoption in continuance intention as an e-payment system for live streaming shopping. *Procedia Computer Science*, 234, 1137–1144. <https://doi.org/10.1016/j.procs.2024.03.109>
- Abdullah, A., Saputra, N. (Ed.), et al. (2022). *Metodologi penelitian kuantitatif* (1st ed.). Yayasan Penerbit Muhammad Zaini.
- Abigail, J., Sari, V. P., & Saputra, D. (2024). The influence of product quality and online shopping experience (OSE) on consumer loyalty through customer satisfaction on local skincare products. *Procedia Computer Science*, 234, 537–544. <https://doi.org/10.1016/j.procs.2024.03.037>
- Ajina, A. S., Joudeh, J. M. M., Ali, N. N., Zamil, A. M., & Hashem, T. N. (2023). The effect of mobile-wallet service dimensions on customer satisfaction and loyalty: An empirical study. *Cogent Business & Management*, 10(2), 2229544. <https://doi.org/10.1080/23311975.2023.2229544>
- Al-Dweeri, R. M., Ruiz Moreno, A., Montes, F. J. L., Obeidat, Z. M., & Al-Dwairi, K. M. (2019). The effect of e-service quality on Jordanian students' e-loyalty: An empirical study in online retailing. *Industrial Management & Data Systems*, 119(4), 902–923. <https://doi.org/10.1108/IMDS-12-2017-0598>
- Ali, S., Rashid, M., Hussain, A., & Abbas, J. (2023). Effects of behavioural intention on usage behaviour of digital wallet. *Future Business Journal*, 9(42). <https://doi.org/10.1186/s43093-023-00242-z>
- Alwarshdeh, M., Al-Saraireh, S., & Al-Saraireh, A. (2020). Data to model the effects of perceived telecommunication service quality and value on the degree of user satisfaction and e-WOM among telecommunications users in North Cyprus. *Data in Brief*, 28, 105034. <https://doi.org/10.1016/j.dib.2019.105034>
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Bashir, M. A., Ali, M. H., Wai, L. M., Hossain, M. I., & Rahaman, M. S. (2020). Mediating effect of customer perceived value on the relationship between service quality and customer satisfaction of e-banking in Bangladesh. *International Journal of Advanced Science and Technology*, 29(2), 3590–3606.
- Bhattacharjee, A. (2001). Understanding information systems continuance: An expectation-confirmation model. *MIS Quarterly*, 25(3), 351–370. <https://doi.org/10.2307/3250921>

The Influence of Product and Service Quality on Satisfaction, with the Mediation of Perceived Value on Linkaja Users in Padang City

- Blut, M., Chaney, D., Lunardo, R., Mencarelli, R., & Grewal, D. (2024). Customer perceived value: A comprehensive meta-analysis. *Journal of Consumer Research*, 51(5), 879–905. <https://doi.org/10.1093/jcr/ucad005>
- Dhaigude, A. S., Tapar, A. V., Jawed, M. S., & Kamath, G. B. (2023). Is perceived value enough to create loyalty for m-wallets? Exploring the role of trust and satisfaction. *Cogent Business & Management*, 10(3), 2281050. <https://doi.org/10.1080/23311975.2023.2281050>
- Dhingra, A. (2023). Factors influencing cloud service quality and their relationship with customer satisfaction and loyalty. *Heliyon*, 9(4), e15177. <https://doi.org/10.1016/j.heliyon.2023.e15177>
- Fehrenbach, D., & Herrando, C. (2021). The effect of customer-perceived value when paying for a product with personal data: A real-life experimental study. *Journal of Business Research*, 137, 222–232. <https://doi.org/10.1016/j.jbusres.2021.08.029>
- Fu, X., Zhang, J., & Chan, F. T. S. (2018). Determinants of loyalty to public transit: A model integrating satisfaction-loyalty theory and expectation-confirmation theory. *Transportation Research Part A: Policy and Practice*, 113, 476–490. <https://doi.org/10.1016/j.tra.2018.05.012>
- Gajewska, T., Zimon, D., Kaczor, G., & Madzik, P. (2020). The impact of the level of customer satisfaction on the quality of e-commerce services. *International Journal of Productivity and Performance Management*, 69(4), 666–684. <https://doi.org/10.1108/IJPPM-01-2019-0018>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2019). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). Sage Publications.
- Hair, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review*, 26(2), 106–121. <https://doi.org/10.1108/EBR-10-2013-0128>
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis*. Guilford Press.
- Hu, S., Chen, Y., & Sun, X. (2022). Effects of social media usage on consumers' purchase intention in social commerce: The mediated role of trust and perceived value. *Frontiers in Psychology*, 13, 913109. <https://doi.org/10.3389/fpsyg.2022.913109>
- Hussain, A. (2023). Exploring the effects of e-service quality and e-trust on consumers' e-satisfaction and e-loyalty. *Journal of Electronic Business & Digital Economics*, 1(1), 1–25. <https://doi.org/10.1108/JEBDE-09-2023-0019>
- Kotler, P., & Keller, K. L. (2016). *Marketing management* (15th ed.). Pearson Education.
- Mutambik, I. (2023). Customer experience in open banking and how it affects loyalty intention. *Sustainability*, 15(14), 10867. <https://doi.org/10.3390/su151410867>
- Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, 17(4), 460–469. <https://doi.org/10.1177/002224378001700405>

The Influence of Product and Service Quality on Satisfaction, with the Mediation of Perceived Value and the Moderate Role of Social Media on Linkaja Users in Padang City

- Oliver, R. L. (1997). *Satisfaction: A behavioral perspective on the consumer*. McGraw-Hill.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12–40.
- Rita, P., Oliveira, T., & Farisa, A. (2019). The impact of e-service quality and customer satisfaction on customer behavior in online shopping. *Heliyon*, 5(10), e02690. <https://doi.org/10.1016/j.heliyon.2019.e02690>
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill-building approach* (7th ed.). John Wiley & Sons.
- Suhartanto, D., Ali, M. H., Tan, K. H., Sjahroeddin, F., & Kusdibyo, L. (2019). Loyalty toward online food delivery service. *Journal of Foodservice Business Research*, 22(1), 81–97. <https://doi.org/10.1080/15378020.2018.1546076>
- Uzir, M. U. H., Jerin, I., Al Halbusi, H., Hamid, A. B. A., & Latiff, A. S. A. (2020). Does quality stimulate customer satisfaction where perceived value mediates and social media moderates? *Heliyon*, 6(12), e05710. <https://doi.org/10.1016/j.heliyon.2020.e05710>
- Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value. *Journal of Marketing*, 52(3), 2–22. <https://doi.org/10.1177/002224298805200302>
- Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1988). Communication and control processes in the delivery of service quality. *Journal of Marketing*, 52(2), 35–48. <https://doi.org/10.1177/002224298805200203>

Copyright holders:

Latipah Lamsir (2024)

First publication rights :

AJEMB – American Journal of Bussiness, Economic and Management
