SHOPEEPAY: HOW SECURITY PERCEPTION AND EASE OF USE AMONG ITS USERS WOULD AFFECT LOYALTY THROUGH TRUST IN PONTIANAK

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Abstract

This study aims to examine the influence of Security Perception and Ease of Use on Loyalty through Trust in choosing to conduct transactions using ShopeePay in Pontianak City. This research employs an associative method. The population in this study consists of all ShopeePay users domiciled in Pontianak City, with a sample size of 100 respondents determined using purposive sampling technique. The data analysis technique in this study uses Structural Equation Modeling (SEM) with the assistance of SmartPLS Version 3 software. The data testing in this study consists of testing the outer model and the inner model. Inner model testing includes tests for convergent and discriminant validity, Average Variance Extracted (AVE), and Reliability Testing. Meanwhile, outer model testing consists of R-Square testing, direct effect, and indirect effect testing. This research is motivated by the empirical gap concerning the role of trust as an intervening variable in the relationship between security perception and ease of use on user loyalty in digital payment services, where most previous studies have emphasized the direct influence of these two variables on loyalty. In Pontianak City, studies on ShopeePay that integrate trust as a mediating variable remain very limited. The novelty of this research lies in the finding of a full mediation model, in which security perception and ease of use significantly influence trust, trust significantly influences loyalty, yet neither security perception nor ease of use exerts a direct influence on loyalty. Theoretically, this research confirms the position of trust as a key determinant in building e-wallet user loyalty and enriches the development of the Technology Acceptance Model and loyalty within the context of financial technology at the regional level. Based on the direct effect analysis results, it is found that security perception and ease of use have a direct influence on trust, and trust subsequently has a direct influence on user loyalty. However, security perception and ease of use do not have a direct influence on loyalty. Furthermore, based on the indirect effect test results, it is known that both security perception and ease of use influence user loyalty through the mediating role of trust.

Keywords: Security Perception, Ease of Use, User Loyalty, Trust, ShopeePay

INTRODUCTION

Payment method innovation has developed rapidly, as evidenced by the shift from using cash to people now being able to make payments through non-cash means. Individuals tend to have their own perceptions regarding the payment methods they will use, one of which is e-money. For some, e-money is considered merely a supplement to support daily activities, but many perceive e-money as a payment method that can facilitate their transactions. Indonesia, as one the most populated country in the world has used various payment methods digitally. Based on data from GoodStats in 2025, the most frequently used digital payment method in Indonesia is through E-Wallet applications, accounting for 80%. Those using Mobile Banking for payments constitute 45%, while only 23% use the Paylater method. A significant portion of the Indonesian population has adopted payment methods using either Mobile Banking or E-Wallet. Many believe that using Mobile Banking or E-Wallet can facilitate every transaction they undertake. This indicates that the presence of Mobile Banking and E-Wallet applications greatly assists in conducting daily transactions. Indonesia also features various E-Wallet applications widely used by individuals from diverse backgrounds, including both Millennials and Gen Z. The shift from originally using cash transactions to adopting digital payment methods such as e-wallets, m-banking, and paylater is evident. Consequently, the growth of non-cash transactions appears more significant and effective compared to cash transactions, particularly through the use of digital platforms like E-Wallets or electronic wallets. This trend signals that society is beginning to experience a shift in transaction patterns, from previously using cash to now moving towards digital payment systems perceived as easier, safer, and more efficient.

In West Kalimantan, specifically Pontianak City, various E-Wallet applications are also used, with each user having their own perception regarding their chosen application. ShopeePay is one of the digital wallet or E-wallet applications designed to facilitate various transaction needs, both online and offline. ShopeePay is a digital wallet service owned by PT AirPay International Indonesia, a subsidiary officially established in November 2015. ShopeePay was first launched in November 2018 after obtaining an official license from Bank Indonesia in August 2018. This service has become a digital payment method integrated with the Shopee e-commerce platform.

ShopeePay undertakes various efforts to gain the trust and loyalty of its users. Several factors contribute to user satisfaction and loyalty with a service. One such factor is security perception. Pitura et al. (2022) in Rosani et al. (2025) state that security perception is an affirmation that can indicate the level of certainty individuals have regarding the security of technological advancements. In people's daily behavior, especially with the development of information technology, people are paying more and more attention to privacy (Zhang, 2024). Actual security is described as the client's belief that their information should not be visible to parties other than themselves, as their information is stored and cannot be accessed by other parties. Security perception is the degree to which an individual believes that the technology used to transmit sensitive information, such as consumer data and financial transaction data, is secure (Nupus et al., 2025). Security in transactions is how a server can protect data to prevent breaches and detect fraud in a technology-based server (Susanto et al., 2022). To foster the aspect of security perception, ShopeePay provides account and data protection through various measures such as two-step verification (e.g., fingerprint and facial recognition). Additionally, ShopeePay notifies users of suspicious activity via SMS and

email. ShopeePay also stores user personal data with limited access and will destroy or anonymize data when it is no longer needed for business or legal purposes. This is because everyone has the right to consider several factors related to privacy, such as communication, behavior, and personal data (Pebiyanti et al., 2023). With guaranteed security, this is likely to foster a strong perception of security among users, which will significantly impact trust. Trust is defined as key in building long-term relationships for customers who have a high relationship orientation towards a service (Nazira et al., 2024). Based on research conducted by Apriliyanto & Fauziah (2024), it is known that security perception has a significant influence on trust. Thus, it can be concluded that security is a factor that fosters trust, making it crucial for every online payment provider to guarantee the security of its users.

In addition to security, ShopeePay also provides ease of use for every user in an effort to foster trust and user loyalty. Davis (1989) in Iffat & Laksmi (2023) defines perceived ease of use as the degree to which a person believes that using a particular technology will be free of effort. To survive and grow, companies are required to simplify application usage because ease of using a system is one of the considerations in making purchasing decisions. Ease will be perceived when an individual can understand and easily use a system or technology (Febrianti et al., 2025). This indicates that one of the criteria customers use to choose a particular product or service is its ease of use (Raudatussyifa & Rahmidani, 2025).

The ease of use offered by ShopeePay includes providing user-friendly features integrated into a single application. Accessible service features for users include transferring ShopeePay balance to other users via the Transfer menu by searching for a phone number, username, or scanning a QR code. Furthermore, ShopeePay users can also transfer funds to banks such as BCA, BRI, BNI, Mandiri, and Others without admin fees. Another easily accessible feature is the ability to top up balances easily via credit card or partnered outlets without admin fees for a minimum top-up of IDR 50,000. Users can also make quick payments by scanning QRIS codes at numerous offline and online merchants, eliminating the need to carry cash. Additionally, ShopeePay allows free balance transfers to any bank account and various other E-Wallets. Other conveniences provided by ShopeePay include the ability to pay electricity, water, and internet bills, as well as purchase mobile credit directly from the application at lower prices. The SPayLater and SPinjam features also provide payment flexibility with easily accessible installments. Moreover, ShopeePay frequently offers attractive promotions such as cashback and discounts, making transactions more economical. Another convenient feature is ShopeeFood, which facilitates online food ordering at cheaper prices.

The presence of security perception and ease of use will impact user trust. Maharani (2010) in Akhsan & Firmialy (2024) states that trust is a key factor in determining the credibility and integrity of other organizations within a specific network, as well as a key factor in determining the honesty of the information they possess. Therefore, building digital trust becomes one of the main pillars in maintaining long-term customer or user loyalty (Fitriadi & Nainggolan, 2025). Trust can enhance commitment and reduce the likelihood of customers switching to competitors, even when minor service errors occur (Sari & Wahyuni, 2022). Thus, it can be concluded that providing security perception and ease of use will significantly impact trust. Users who trust a service will become loyal to that service. Therefore, maintaining user loyalty is crucial for ShopeePay, and providing guaranteed security and ease of use is an appropriate strategy.

Although several studies have examined the relationship between security perception and ease of use on user loyalty, the majority of these studies still focus on the influence of each variable separately, and few have raised trust as a mediator. This means there has been no study that directly examines how security perception and ease of use influence trust and, subsequently, their impact on user loyalty. Upon closer examination, these three factors do not operate independently but are interrelated in influencing consumer behavior. Furthermore, previous research has generally been conducted in major cities such as Jakarta, Surabaya, or Bandung, which have different social, economic, and digital infrastructure characteristics compared to medium-sized cities like Pontianak. This phenomenon has not been extensively explored in the existing academic literature. Therefore, this study aims to fill this gap by integrating the three variables—security perception and ease of use affecting trust, which in turn influences loyalty—into a single research model. Furthermore, this study is expected to contribute a novel element, as previous research has rarely positioned trust as an intervening variable, whereas most prior studies have only treated trust as an independent variable affecting user loyalty.. Focusing on ShopeePay users in Pontianak City, this research is expected to provide a more holistic perspective regarding the factors influencing user loyalty. The results of this study are hoped to serve as an empirical foundation related to the utilization of payment system developments in the digital era, especially in the capital of West Kalimantan.

LITERATURE REVIEW

Technology Accepted Model (TAM)

This study is grounded in the Technology Acceptance Model (TAM). The Technology Acceptance Model is an adaptation of the Theory of Reasoned Action (TRA) developed by Davis (1989). Davis (1989) stated that the Technology Acceptance Model is a framework that describes users' behavioral responses in accepting and utilizing new technology. This model is influenced by two key dimensions: perceived usefulness and perceived ease of use, which together shape users' attitudes and intentions to adopt a technology. According to TAM, technology acceptance is a three-stage process, whereby external factors (system design features) trigger cognitive responses (perceived ease of use and perceived usefulness), which in turn, form an affective response (attitude toward using technology/intention), influencing use behaviour (Davis, 1989; Davis, 1993). Perceived ease of use was defined as the degree to which a person believes that using a particular system is free of effort (Davis, 1989). This construct derived from the self-efficacy concept, which refers to a situation-specific belief about how well someone can execute actions for the prospective task (Davis, 1989; Bandura, 1982) The model implies that if an application is expected to be easy to use, the more likely it is that it will be considered useful for the user and the more likely it is that this will stimulate the acceptance of the technology (Davis, 1989; Davis, 1993).

Security Perception

Desky et al. (2022) state that Security Perception is the degree to which an individual believes that the technology used to transmit sensitive information, such as consumer data and financial transaction data, is secure. Widiastuti et al. (2024) explain that in the context of online transactions, security involves the protection of consumers' personal data from being viewed, stored, or manipulated by unauthorized parties. Safeguarding the security of

consumer data and personal information is an important aspect in building trust.

Bakhtiar et al. (2020) in Fahrudi et al. (2023) state that there are several indicators for measuring Security Perception, which include:

1. Ensuring Security and Confidentiality: This indicator asserts that users must feel confident that the system or service they use guarantees security and maintains the confidentiality of their personal data. This security includes protection from unauthorized access, data theft, and fraud related to personal data.
2. Personal Information is Guaranteed and Protected: This indicator explains that users must feel assured that their personal data is protected both legally and technically, so it is not misused by other parties. This protection includes guarantees from the service provider that their data will not be used for unauthorized purposes and will be kept confidential in accordance with applicable regulations.
3. Integrity Handling toward Users' Personal Information: This indicator emphasizes that service providers must ensure that customer data will not be misused, including for promotional purposes, fraud, or other illegal activities. This aims to increase user trust in the integrity and ethics of the service provided.
4. The Feeling of Security: This indicator explains that users are not only provided with tangible protection but also a sense of security regarding their data when conducting transactions or using online services.

Ease of Use

Saribu et al. (2024) state that ease of use refers to the degree to which an individual believes that using a particular system would be free of significant effort. Although the level of effort required may vary from person to person, the general aim is to avoid user resistance toward the implemented system.

Meanwhile, Irawati et al. (2025) state that ease of use is an important element in user experience, particularly in the context of technology and online platforms. This ease is considered highly influential on user experience and satisfaction, as platforms that are easy to use are more likely to deliver a positive experience, which ultimately enhances customer satisfaction. Beyond increasing satisfaction, ease of use also plays a role in fostering user loyalty and engagement.

Wicaksono (2022) states that there are several indicators for measuring Ease of Use, which include:

1. Ease of Learning: This refers to an individual's perception of how easily a technology can be learned. Ease of learning is related to interface design and technological features that facilitate user understanding.
2. Availability of Technical Support: This refers to an individual's perception of the availability of technical assistance when users encounter difficulties in using the technology.
3. Availability of Resources: This refers to an individual's perception of the availability of resources such as computers, software, and internet connectivity.

Trust

Yusuf et al. (2024) state that trust in technology is defined as a user's belief in the technology's ability to operate reliably, securely, and in accordance with expectations. Trust indicates that users of electronic payment systems are able to achieve this through an

accumulation of personal confidence in its integrity and competence, thereby making them more inclined to use electronic payment systems in financial contexts.

Meanwhile, Sofyan et al. (2022) in Ningrum & Yudistria (2025) state that customer trust is a condition in which an individual feels confident that another party will fulfill its commitments within a relationship, thereby fostering a mutually trusting connection.

Wardhana (2024) states that there are several indicators for measuring Trust, which include:

1. Confidence and Trustworthiness: Confidence refers to the extent to which customers believe that a company or service provider has the capability, integrity, and goodwill to meet their needs and expectations. Trustworthiness is the customer's willingness to rely on the company with the belief that they will not be harmed or betrayed.
2. Integrity: This refers to the degree to which an individual or entity behaves in accordance with moral and ethical principles without violating them, thereby allowing consumers to assess the professionalism demonstrated by the staff.
3. Providing Expected Products and Services: This indicates that a company must be able to deliver products and services that align with its promises and user expectations.
4. Fulfilling Promises: This pertains to user expectations and trust regarding promises made by the company through advertising and direct sales. The greater the user's expectation that the company will deliver the promised value, the higher their level of trust in the company.

Customer's Loyalty

Husain et al. (2025) state that customer loyalty refers to a customer's allegiance to a brand, business, or service provider, rooted in a strongly positive attitude that results in sustained, long-term purchasing behavior. In other words, this loyalty reflects a customer's fidelity in repeatedly purchasing a particular product or service over an extended period.

Tarissyaa et al. (2024) state that loyalty refers to a long-term pattern of repeat purchasing, whereby a specific producer is regarded as the sole supplier without ever switching to another producer or seller. Loyalty can also be defined as the ongoing preference of customers for a particular brand over time.

Firmansyah (2018) states that there are several indicators for measuring Loyalty, which include:

1. Repeat Purchases: This refers to customers who regularly and repeatedly buy or use a product or service from the same company because they are satisfied with it.
2. Resistance to Competitors: This refers to customers who remain loyal to a company despite negative influences from competitors, such as promotions or discounts offered by rival firms.
3. Willingness to Recommend to Others: This refers to customers who voluntarily recommend a company's product or service to others, whether directly or through social media channels.

RESEARCH METHOD

Type of Research

The type of research employed in this study is associative or causal research. According to Sugiyono (2020), "Associative research is a study that aims to identify the influence or relationship between two or more variables." A causal relationship is one of

cause and effect. This associative/causal approach is used in the present study to examine the extent to which security perception and ease of use influence user loyalty through trust in transactions using ShopeePay in Pontianak City.

Data Collection Techniques

The data in this study consists of primary and secondary data. According to Sugiyono (2020), "Primary data is a data source that directly provides data to the data collector." The primary data in this study were obtained by distributing questionnaires in the form of Google Forms to all customers who use ShopeePay for transactions in Pontianak City. Secondary data, as defined by Sugiyono (2020), "refers to sources that do not directly provide data to the data collector, for example, through other people or documents." The secondary data used in this study include figures such as the money supply in circulation in Indonesia, the value of cash and non-cash transactions in West Kalimantan, the most frequently used digital payment methods in Indonesia, e-wallets commonly used by Generation Z and Millennials, and e-wallets used in Pontianak City.

Population and Samples

The population in this study encompasses residents of Pontianak City who use the ShopeePay service for transactions. According to Sugiyono (2020), "a population is a generalization area consisting of objects or subjects that possess certain qualities and characteristics set by the researcher to be studied and from which conclusions are drawn." Furthermore, Sugiyono (2020) states that "a sample is a portion of the number and characteristics possessed by that population."

The sample for this study was determined using a purposive sampling technique. The sample size was calculated using the Purba formula as cited in Sujarweni (2019), which yielded a result of 96 individuals. However, the author established a sample size of 100 respondents. According to Sugiyono (2020), "Purposive Sampling is a sampling technique based on specific considerations." The criteria for the sample in this study are as follows:

1. Respondents are at least 18 years old and at most 45 years old.
2. Respondents possess the application and conduct transactions using ShopeePay.
3. Respondents are domiciled in Pontianak City.

Research Variables & Measurement Scale

This study employs three types of variables: the independent variable, the intervening variable, and the dependent variable. According to Sugiyono (2020), “the independent variable is the variable that influences or is the cause of changes or the emergence of the dependent variable.” The independent variables in this study are Security Perception (X1) and Ease of Use (X2). According to Sugiyono (2020), “an intervening variable is a variable that theoretically influences the relationship between the independent and dependent variables, making the relationship indirect and one that cannot be directly observed or measured.” The intervening variable in this study is Trust (Z). Meanwhile, the dependent variable, as defined by Sugiyono (2020), “is the variable that is influenced or becomes the outcome due to the presence of other variables (independent variables).” The dependent variable in this study is User Loyalty (Y).

The measurement scale used in this study is the Likert scale. Sugiyono (2020) describes the Likert scale as an instrument for measuring the behavior, opinions, and perspectives of an individual or group regarding social phenomena. The Likert scale applied uses a range of 1 to 5, where 1 signifies Strongly Disagree and 5 signifies Strongly Agree.

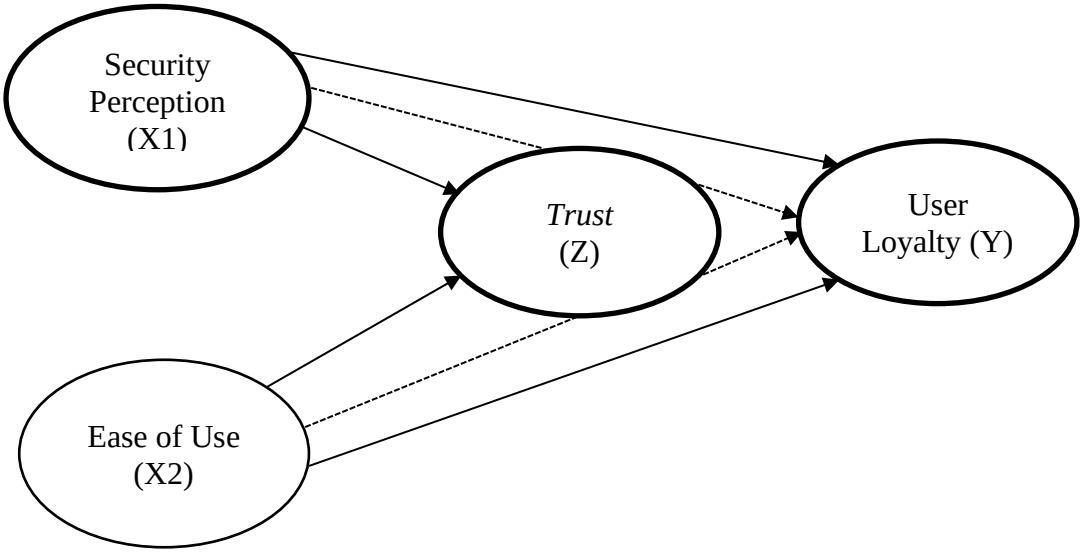
Data Analysis Technique

In this study, to test the hypothesis model, the researcher employs Structural Equation Modeling (SEM). According to Hamid & Anwar (2019), "Structural Equation Modeling (SEM) is a multivariate statistical analysis method that uses a factor analysis approach, a structural model, and path analysis."

The data analysis in this study consists of evaluating the Measurement Model (Outer Model) and the Structural Model (Inner Model). The Measurement Model (Outer Model) in this study is assessed using tests such as convergent validity, discriminant validity, Average Variance Extracted (AVE) test, and reliability measured based on Cronbach's Alpha and Composite Reliability. Subsequently, the Structural Model (Inner Model) is evaluated based on R-Square testing, direct effect testing, and indirect effect testing. The data analysis in this study was conducted using SmartPLS version 3 software.

The model of this research can be seen on the figure 1 below:

Figure 1. Theoritical Framework



RESULTS AND DISCUSSION

Outer Model Test

a. Convergent Validity Test

Convergent validity testing was conducted by evaluating the loading factor value of each indicator constituting a construct. The loading factor value indicates the strength of the relationship between an indicator and the measured latent variable. A higher loading factor value signifies a greater ability of that indicator to represent the research construct. Generally, an indicator is considered to meet the convergent validity criterion if it has a loading factor value greater than 0.7. The results of the convergent validity test for all variables in this study can be seen in Table 1.

Table 1. Convergent Validity Test Results

Variables	Indicator	Loading Factor	Result
Security Perception (X1)	X1.1	0.837	Valid
	X1.2	0.836	
	X1.3	0.751	

	X1.4	0.862	
	X1.5	0.813	
	X1.6	0.776	
	X1.7	0.786	
	X1.8	0.726	
	X1.9	0.826	
	X1.10	0.854	
	X1.11	0.861	
	X1.12	0.823	
Ease of Use (X2)	X2.1	0.792	Valid
	X2.2	0.749	
	X2.3	0.778	
	X2.4	0.820	
	X2.5	0.755	
	X2.6	0.743	
	X2.7	0.758	
	X2.8	0.744	
	X2.9	0.745	
Trust (Z)	Z .1	0.790	Valid
	Z.2	0.827	
	Z.3	0.779	
	Z.4	0.734	
	Z.5	0.765	
	Z.6	0.775	
	Z.7	0.729	
	Z.8	0.787	
	Z.9	0.776	
	Z.10	0.809	
	Z.11	0.748	
	Z.12	0.845	
Customer’s Loyalty (Y)	Y.1	0.865	Valid
	Y.2	0.845	
	Y.3	0.765	
	Y.4	0.753	
	Y.5	0.792	
	Y.6	0.797	
	Y.7	0.857	
	Y.8	0.810	
	Y.9	0.747	

Source: Processed Data, 2026

Based on the results of the Convergent Validity test presented in Table 1 above, it can be concluded that the convergent validity test indicates all indicators for each variable—namely Security Perception (X1), Ease of Use (X2), Trust (Z), and User Loyalty (Y)—have loading factor values above 0.7. These values indicate that each indicator is capable of

adequately representing its respective construct or latent variable. Therefore, all indicators are declared valid as measures of their corresponding variables.

b. Discriminant Validity Test

Discriminant validity testing was conducted using the Fornell-Larcker criterion to assess the extent to which a construct can be empirically distinguished from other constructs. According to this criterion, the square root of the Average Variance Extracted (AVE) for the construct being tested must be greater than its correlation with any other latent construct. If this requirement is met, it can be concluded that the construct possesses adequate discriminant validity, as its indicators are more strongly associated with their own variable than with other variables in the research model. Table 2 below presents the items that have satisfied the discriminant validity criteria.

Table 2. Discriminant Validity Test Results

Variables	Ease of Use	Customer's Loyalty	Security Perception	Trust
Ease of Use	0.765			
Customer's Loyalty	0.573	0.804		
Security Perception	0.682	0.631	0.814	
Trust	0.670	0.708	0.760	0.781

Source: Processed Data, 2026

Based on the results of the discriminant validity test presented in Table 2, it is evident that each construct has a higher Fornell-Larcker criterion value compared to its correlation with other constructs. This condition demonstrates that the indicators within each construct are more dominant in measuring their respective construct than other constructs in the research model. Therefore, it can be concluded that all constructs have met the criteria for adequate discriminant validity.

c. Average Variance Extracted (AVE)

The method for assessing construct validity involves examining the Average Variance Extracted (AVE). A construct is considered valid if it has an AVE value > 0.5. The AVE values for this study are presented in Table 3 below:

Table 3. AVE Test Result

CONSTRUCTS	AVE
Security Perception (X1)	0.662
Ease of Use (X2)	0.585
Trust (Z)	0.610
Customer's Loyalty (Y)	0.647

Source: Processed Data, 2026

Based on the results of the Average Variance Extracted (AVE) test presented in Table 3 above, it can be concluded that all variables in this study exhibit AVE values greater than 0.5. This indicates that all constructs have satisfied the convergent validity criterion. Therefore, it can be inferred that the indicators used in this study are valid for measuring the variables under investigation.

d. Reliability Test

Composite reliability testing in the measurement model aims to assess the level of internal consistency of a construct in measuring the research variables. A Composite Reliability value is considered to meet the reliability criterion if it exceeds 0.7, indicating that

the construct possesses a good level of reliability. Furthermore, to reinforce the reliability assessment results, Cronbach's Alpha is also used, with a minimum threshold of 0.6, serving as an indicator that the construct has met the reliability criteria. The results of the reliability test are presented in Table 4.

Table 4. Reliability Test Results

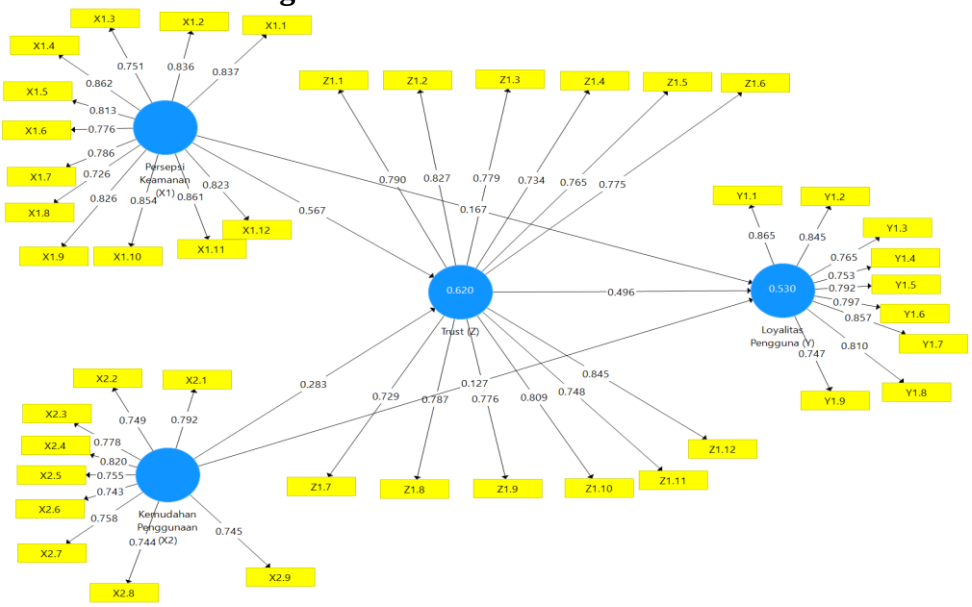
Variables	Cronbach's Alpha	Composite Reliability
Security Perception (X1)	0.953	0.959
Ease of Use (X2)	0.911	0.927
Trust (Z)	0.942	0.949
Customer's Loyalty (Y)	0.932	0.943

Source: Processed Data, 2026

Based on the reliability test results presented in Table 4 above, it can be concluded that all constructs in the research model have met the reliability criteria. This is demonstrated by Composite Reliability values greater than 0.7 and Cronbach's Alpha values exceeding 0.6. Therefore, it can be inferred that all indicators for each variable exhibit a good level of reliability and are suitable for use as measurement instruments in this study.

The results of the Outer Model testing in this study can be seen in Figure 2 below:

Figure 2. Outer Model Test Result



Source: Processed Data, 2026

Inner Model Test

a. Coefficient of Determination *(R-Square)*

In SEM-PLS analysis, the R-square (R^2) value is used to measure the extent to which independent variables can explain the variation in the dependent variable. A higher R^2 value indicates a better ability of the model to explain and predict the dependent variable. This coefficient of determination reflects the magnitude of the contribution of exogenous constructs in explaining endogenous constructs within the research model. The R^2 value ranges from 0 to 1, where a value of 0.75 is categorized as strong, 0.50 as moderate, and 0.25 as weak (Hamid & Anwar, 2019), with the results presented in Table 5.

Table 5. R-Square Test Results

Endogen Variables	R-Square	R-Square Adjusted
Trust (Z)	0.620	0.613
Customer's Loyalty (Y)	0.530	0.515

Source: Processed Data, 2026

Based on the R-Square test results presented in Table 5 above, the findings can be detailed as follows:

1. The Adjusted R-Square value for the Trust variable (Z) is 0.613. This indicates that 61.3% of the variance in Trust is simultaneously explained by the Security Perception (X1) and Ease of Use (X2) variables, while the remaining 38.7% is influenced by factors outside this research model. Furthermore, the R-Square value of 0.620 suggests that the influence of the exogenous constructs, Security Perception and Ease of Use, on Trust falls into the Moderate category.
2. The Adjusted R-Square value for the User Loyalty variable (Y) is 0.515. This indicates that 51.5% of the variance in User Loyalty is simultaneously explained by the Security Perception (X1), Ease of Use (X2), and Trust (Z) variables, while the remaining 48.5% is attributed to factors outside this research model. Furthermore, the R-Square value of 0.530 suggests that the influence of the exogenous constructs, Security Perception, Ease of Use, and Trust, on User Loyalty falls into the Moderate category.

b. Direct Effect Test

The direct effect test is used to examine the direct influence of a construct or exogenous latent variable on an endogenous latent variable. The Direct Effect test can be assessed based on the path coefficient results from the bootstrapping output, with the results shown in Table 6.

Table 6. Direct Effect Test Results

Hypotheses	Relationship among Variables	Original Sample Estimate	T Statistic	P Value	Result
H1	Security Perception─> Trust	0.589	6.092	0.000	Accepted
H2	Ease of Use ─> Trust	0.319	2.807	0.005	Accepted
H3	Trust ─> Customer's loyalty	0.482	3.182	0.002	Accepted
H4	Security Perception ─> Customer's Loyalty	0.182	1.248	0.213	Rejected
H5	Ease of Use ─>Customer's Loyalty	0.107	0.822	0.411	Rejected

Source: Processed Data, 2026

Based on the results of the direct hypothesis testing presented in Table 6 above, the findings of the Direct Effect test can be detailed as follows:

1. The direct test of Security Perception (X1) on Trust (Z) yielded a T-Statistic value of 6.092, which is greater than 1.96, and a P-Value of 0.000, which is less than 0.05. Therefore, it can be concluded that Security Perception has a positive and significant direct influence on Trust.
2. The direct test of Ease of Use (X2) on Trust (Z) yielded a T-Statistic value of 2.807, which is greater than 1.96, and a P-Value of 0.005, which is less than 0.05. Therefore, it can be concluded that Ease of Use has a positive and significant direct influence on Trust.
3. The direct test of Trust (Z) on Customer Loyalty (Y) yielded a T-Statistic value of 3.182, which is greater than 1.96, and a P-Value of 0.002, which is less than 0.05. Therefore, it can be concluded that Trust has a positive and significant direct influence on Customer Loyalty.
4. The direct test of Security Perception (X1) on Customer Loyalty (Y) yielded a T-Statistic value of 1.248, which is less than 1.96, and a P-Value of 0.213, which is greater than 0.05. Therefore, it can be concluded that there is no significant direct influence of Security Perception on Customer Loyalty.
5. The direct test of Ease of Use (X2) on Customer Loyalty (Y) yielded a T-Statistic value of 0.822, which is less than 1.96, and a P-Value of 0.411, which is greater than 0.05. Therefore, it can be concluded that there is no significant direct influence of Ease of Use on Customer Loyalty.

c. Indirect Effect Test

The indirect effect test is used to examine the indirect influence of an exogenous construct or latent variable on an endogenous latent variable through a mediating variable. The Indirect Effect test can be assessed based on the specific indirect effect results from the bootstrapping output. The results of the indirect effect test are presented in Table 7.

Table 7. Indirect Effect Test Results

Hypotheses	Relationship among Variables	Original Sample Estimate	T Statistic	P Value	Result
H6	Security Perception ─> *Trust* ─> Customer's Loyalty	0.284	2.811	0.005	Accepted
H7	Ease of Use ─> *Trust* ─> Customer's loyalty	0.154	2.153	0.032	Accepted

Source: Processed Data, 2026

Based on the results of the indirect hypothesis testing presented in Table 7 above, the findings of the Indirect Effect test can be detailed as follows:

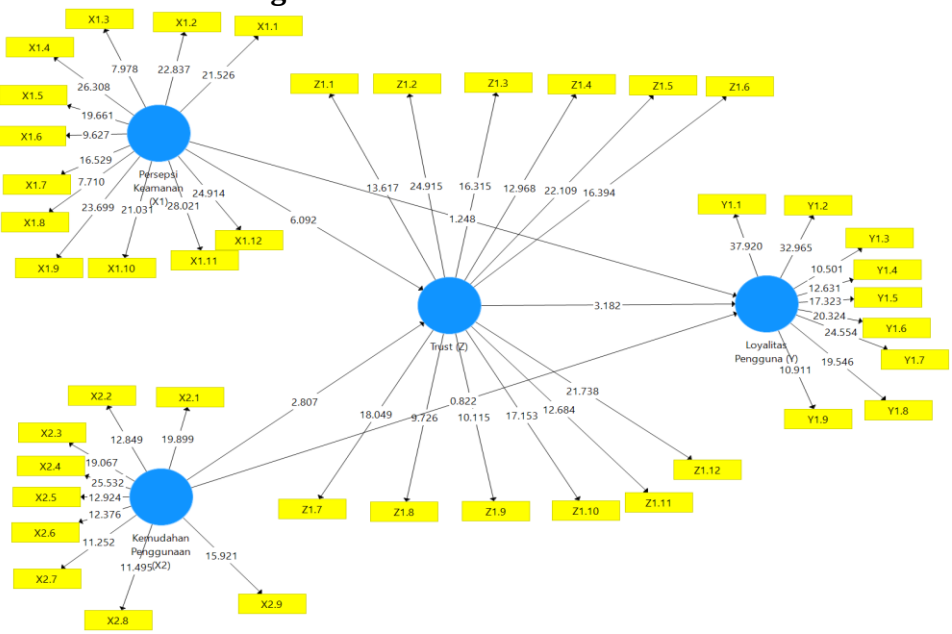
1. Based on the Indirect Effect test results, it is evident that Security Perception (X1) has a positive and significant indirect influence on Customer Loyalty (Y) through the mediating variable Trust (Z). This is supported by a T-Statistic value of 2.811, which is greater than 1.96, and a P-Value of 0.005, which is less than 0.05. Therefore, it can be concluded that

Security Perception significantly influences Customer Loyalty through the mediating role of Trust.

2. Based on the Indirect Effect test results, it is evident that Ease of Use (X2) has a positive and significant indirect influence on Customer Loyalty (Y) through the mediating variable Trust (Z). This is supported by a T-Statistic value of 2.153, which is greater than 1.96, and a P-Value of 0.032, which is less than 0.05. Therefore, it can be concluded that Ease of Use significantly influences Customer Loyalty through the mediating role of Trust.

The results of the Inner Model testing in this study can be seen in Figure 3 below:

Figure 3. Inner Model Test Result



Source: Processed Data, 2026

The test results of the relationships between variables indicate that, directly, security perception and ease of use significantly influence trust. This suggests that when users perceive ShopeePay as secure in protecting data and transactions, as well as easy to use in daily payment activities, their level of trust in the service increases. Security provides emotional reassurance, while ease of use creates an efficient and low-friction experience; both serve as fundamental pillars in building user trust.

Furthermore, trust is proven to have a direct influence on customer loyalty. In the context of digital marketing, trust functions as an emotional factor that encourages users to continue using ShopeePay consistently, recommend it to others, and remain resistant to switching to competing services. Users who have developed trust tend to form a stronger psychological bond with the brand, leading to more stable loyalty.

However, additional direct effect testing results show that security perception and ease of use do not have a direct influence on customer loyalty. This finding implies that although security and ease are important attributes, they are not sufficiently strong on their own to create loyalty without the presence of trust. In other words, users may not become loyal simply because a system is secure and easy to use if trust in the service provider has not been fully established. This is because users of e-wallet services such as DANA, OVO, GoPay, and mobile banking tend to perceive similar levels of security and ease of use across

these platforms. This accounts for the finding in this study that security perception and ease of use do not have a direct influence on user loyalty.

Based on the indirect effect testing results, it is further confirmed that security perception and ease of use influence loyalty through the mediating role of trust. This demonstrates that trust acts as a strategic bridge that converts users' functional perceptions into long-term loyalty. From a marketing perspective, this finding underscores the importance of strategies that not only focus on enhancing security features and ease of use but also on efforts to build and maintain user trust as the key driver in fostering loyalty among ShopeePay users in Pontianak City.

CONCLUSION

Based on the results of the analysis regarding the influence of security perception and ease of use on the loyalty of ShopeePay users in Pontianak City through trust, it can be concluded that this study involved 100 respondents who are users domiciled in Pontianak City. From the collected data, it is evident that the majority of respondents in this study were female, accounting for 60.00% of the sample. Respondents' ages primarily ranged from 19 to 24 years. The highest level of education attained was a Bachelor's degree (S1). Most respondents worked as private sector employees, had an income ranging from IDR 3,000,000 to 4,999,000, and had been using ShopeePay for 3 to 4 years.

Based on the direct effect analysis, it is found that security perception and ease of use have a direct influence on trust. Furthermore, trust has a direct influence on customer loyalty. However, security perception and ease of use do not have a direct influence on customer loyalty. According to the indirect effect test results, both security perception and ease of use influence customer loyalty through the mediating role of trust.

Based on the conclusions drawn above, the author offers suggestions that may serve as evaluative considerations for relevant parties. For ShopeePay management, it is recommended that efforts to enhance user loyalty in Pontianak City should not only focus on improving system security and application ease of use but also on building and maintaining user trust. Security and ease of use should be accompanied by transparent information, user data protection, and responsive complaint handling to foster sustainable user trust.

Furthermore, ShopeePay management is encouraged to continuously refine the application's ease of use by ensuring that available features are easy to understand, stable, and rarely experience disruptions. A consistently positive user experience will help strengthen user trust, which in turn will contribute to increased loyalty.

For future researchers, it is suggested to expand this study by incorporating other variables that may potentially influence user loyalty, such as user satisfaction, service quality, perceived benefits, or other relevant variables. Research could also be conducted in different contexts and regions to yield broader results that can serve as comparative material in studying user loyalty toward digital payment services.

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