

The Construction of Trust and Perceptions of Security in Payment Transactions on Shopee and Their Implications for Consumer Purchase Decisions

Intan Leskantara^{1*}, Muhammad Naim²

^{1,2} Muhammadiyah University Muhammadiyah of Mataram, Indonesia

Corresponding Author: leskantariintan@gmail.com

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ABSTRACT

The growth of the e-commerce industry in Indonesia has fueled intense competition among platforms, one of which is Shopee. This study aims to analyze the influence of Trust (X1) and Perceived Security (X2) both parsial and simultan on Consumer Purchase Decisions (Y) on Shopee. The method used in this study is a quantitative approach employing an explanatory survey method. Data were collected through an online questionnaire via Google Forms using a 5-point Likert scale from 174 respondents who are active Shopee users in Mataram City, selected using purposive sampling. The data analysis techniques applied included descriptive analysis, classical assumption tests, multiple linear regression, and hypothesis testing (t-test and F-test) using Smart-PLS 4 software. The results of the study indicate that Trust (X1) has a partial, positive, and significant effect on Purchase Decision (Y), with a coefficient of 0.402 and a t-value of 3.852. Furthermore, Perceived Safety (X2) was also found to have a positive and significant partial effect on Purchase Decision (Y) with a coefficient of 0.520 and a t-value of 4.855, making it the most dominant factor influencing consumer decisions. Simultaneously, the F-test confirmed that Trust and Perceived Safety together have a significant effect on Purchase Decision, with an F-value of 142.451. The adjusted R-squared value of 0.621 indicates that these two independent variables account for 62.1% of the variability in Shopee consumers' purchasing decisions in Mataram City, while the remaining 37.9% is influenced by other factors outside the scope of this study.

INTRODUCTION

Digital transformation in the field of information technology has significantly shifted consumer preferences from conventional transaction methods toward the use of e-commerce platforms. The prevalence of mobile devices now integrates all stages of the shopping process from searching for information and comparing products to completing payments into a seamless process that prioritizes speed, convenience, and operational efficiency (Handoyo, 2024; Lařzaroř et al., 2020). This shift has ultimately positioned e-commerce as the primary distribution channel that is increasingly dominating the modern market. In this fast-paced era,

people's reliance on online shopping continues to grow because it is seen as better suited to their highly mobile lifestyles. As a result, businesses that do not quickly adopt digital systems risk losing their relevance amid today's intense market competition.

The growth of e-commerce in Indonesia has shown a very positive trend, in line with the expanding reach of the internet and the public's adoption of cashless payment systems as they embrace the era of rapid economic digitalization (Indrijawati et al., 2024). Leading marketplaces such as Shopee, Tokopedia, and Lazada now dominate domestic consumer preferences. This dominance stems from the various competitive advantages they offer, including a comprehensive range of products, incentive strategies in the form of attractive promotions, flexible payment options, and a reliable transaction security system (Agustiningrum & L, 2021; Habsari & Suib, 2022). Amid intense competition among platforms, Shopee has consistently managed to dominate the e-commerce market in Indonesia. This success is evidenced by the platform's ability to maintain visitor traffic volumes and transaction frequencies that significantly exceed those of its competitors in the same industry. (Linamaningsih et al., 2025). Based on empirical data from the Indonesian Internet Service Providers Association (APJII) in its 2025 Internet Penetration and ISP Market Segmentation Survey, Shopee solidified its dominance at the top with a 53.22% share of visits. The next position is held by TikTok Shop at 27.37%, followed by Tokopedia and Lazada, which recorded user shares of 9.57% and 9.09%, respectively. Meanwhile, secondary platforms such as Bibli (0.29%) and Facebook Marketplace (0.25%) represent only a small fraction of the total market, alongside other categories that collectively account for 0.21%. These figures confirm that a clear majority namely, more than half of Indonesia's internet user population centers their online shopping preferences on the Shopee platform (Rendanianti, 2025).

In today's digital age, social media has become one of the digital tools most widely adopted by Micro, Small, and Medium Enterprises (MSMEs) in their business activities. The widespread adoption of these platforms is driven by their operational practicality (user-friendliness) and significant cost efficiency compared to conventional marketing channels. (Naim & Husni, 2025). Consumer trust is one of the key determinants that influence loyalty and purchasing decisions in the e-commerce ecosystem. This dimension of trust is empirically manifested when consumers demonstrate a willingness to make financial commitments and complete transactions, even in the face of information asymmetry where the ordered goods have not yet been physically received (Naim et al., 2025). From a broader perspective, disparities in internet accessibility, differences in network quality, and limitations in human resource capacity in the field of digital governance remain the primary obstacles to achieving inclusive digital economic growth. These structural barriers directly pose challenges for contemporary businesses that rely on digital platforms as their primary tool for building consumer trust (Muslimin & Naim, 2024).

In the context of cashless transactions, the flexibility of payment options and the assurance of transaction protection have been confirmed as key determinants influencing consumer purchasing decisions. This phenomenon holds true consistently, both within the e-commerce ecosystem and in the modern retail sector, such as supermarkets (Tullah & Naim, 2024). Empirical findings confirm that the transaction security variable has a more significant influence on consumer purchasing decisions than the payment flexibility factor. Together,

these two independent variables account for 60.3% of the variability in consumer purchasing decisions.

Trust is understood as consumers' willingness to believe that another party will act in accordance with the principles of honesty, reliability, and non-exploitative behavior in transactional relationships. In the digital context, this concept manifests as confidence in the reliability of operational platforms to fulfill service promises, safeguard the confidentiality of user information, and facilitate secure and accountable transactions (Fernandez-Bonilla et al., 2022; Janel et al., 2024). With reference to the theoretical construct of trust theory in the context of e-commerce, trust functions as a reducing mechanism for uncertainty and transactional risk. This dynamic arises as a logical consequence of information asymmetry and the absence of direct, face-to-face interaction between sellers and buyers in the digital ecosystem (Soleimani, 2022). The view of Wang et al. (2022) confirms that trust has a consistent and significant influence on stimulating purchase intentions in social commerce ecosystems. Trust as one of the key factors with the most significant influence on consumers' purchase decisions on e-commerce platforms (Handoyo, 2024)

In addition to the dimension of trust, perceived security is a crucial determinant in shaping consumers' decisions to make digital payments. Conceptually, perceived security refers to consumers' cognitive evaluation of the assurance that sensitive data including both personal information and financial credentials is protected from threats of intrusion, exploitation, or unauthorized access by third parties (Singh et al., 2024). An increase in perceived security has been shown to have a negative correlation with consumers' levels of anxiety regarding the risk of financial loss and data privacy breaches. In this landscape, ensuring the security of digital transactions is not limited to the protection of raw data, but also involves the integration of cryptographic measures such as payment encryption, authentication protocols (identity verification), and the availability of post-transaction mitigation mechanisms in the form of refund policies (Saeed, 2023). The implementation of robust personal data protection measures can enhance a sense of security while fostering consumer trust in the e-commerce ecosystem (Moric' et al. (2024). Online security behavior makes a significant positive contribution to the intention to adopt digital payments (e-payments). These findings indicate that the more proactive users are in taking preventive measures to safeguard their digital security, the more likely they are to use these cashless payment systems (Nguyen et al., 2024).

To mitigate transactional barriers, Shopee supports users through various security features such as ShopeePay, an escrow system, a money-back guarantee, a seller rating system, and cash-on-delivery (COD) payments. These features have proven effective in reducing consumer concerns about the risks of online shopping, thereby creating a conducive environment for building consumer trust in e-commerce platforms (Husain et al., 2018; Linamaningsih et al., 2025). According to Singh et al. (2024), information integrity and information confidentiality positively and significantly underpin users' trusting beliefs in the realm of e-commerce. Based on this proposition, transaction security guarantees are classified as the most decisive fundamental antecedent in fostering customer trust. The purchase decision is the final stage of the consumer decision-making process, marked by a concrete action to adopt or purchase a specific product. In the e-commerce ecosystem, this transactional decision is highly dependent on users' psychological variables, particularly

those related to the attribution of trust in online service providers and the assessment of risks regarding the reliability of transaction protection systems (Anshori et al., 2022).

A study conducted by Fachry et al., (2025), titled “The Influence of Digital Service Quality, Platform Trust, and User Experience on Purchase Decisions on Shopee,” found that platform trust has a positive influence on the purchase decisions of Shopee users. Furthermore, Abrar et al. (2025), in their study titled “Analysis of Service, Trust, and Security’s Impact on Satisfaction and Behavior on Shopee,” demonstrated that security and trust are key factors influencing consumer behavior when transacting on e-commerce platforms. Meanwhile, Sari et al. (2025), in their study titled “From Doubt to Decision: Exploring the Role of Perceived Risk and Trust in Shaping E-Commerce Purchase Intentions on Shopee Indonesia,” revealed that trust can reduce perceived risk and increase consumers’ purchase intentions on Shopee.

The results of these three studies indicate that trust and security play a significant role in shaping consumer behavior in the e-commerce environment. However, these three studies generally combine the variable of trust with other dimensions such as digital service quality, user experience, or general risk perception and thus have not specifically examined how perceptions of security in the context of payment transactions contribute to the construction of trust itself. This study differs from previous research in that it specifically focuses on the construction of trust which encompasses the platform’s integrity, reliability, and credibility as well as perceptions of security in the context of digital payment transactions on Shopee. It also examines the influence of security perceptions on the formation of consumer trust a relationship that has not been extensively tested directly in the context of digital payments. Furthermore, this study was conducted among Shopee consumers in Mataram, a city with digital market characteristics that differ from those of previous research locations which were generally centered in Jakarta or other major urban areas thereby offering new empirical insights into a geographical context that has not been extensively explored.

The urgency of this research stems from the growing popularity of digital payment methods such as ShopeePay, SPayLater, bank transfers, and cash on delivery (COD), which demand a higher level of transaction security. Therefore, it is important to understand how perceptions of security can build consumer trust, which in turn drives purchasing decisions; thus, the findings of this study can contribute to the development of security and trust strategies on the Shopee platform. Based on the background discussed above in this article, this study aims to analyze the influence of trust constructs on consumer purchasing decisions on Shopee, analyze the influence of perceived security on purchasing decisions, and test the influence of perceived security on trust constructs.

RESEARCH METHODS

This study employs a quantitative approach using an explanatory survey method, which aims to objectively and measurably test the influence and relationships among variables (Inggaris & Wibowo, 2023; Sudaryanto et al., 2025). The study population consists of 300 consumers in Mataram City who have made purchases on Shopee. The sampling technique used purposive sampling, with criteria requiring respondents to be at least 17 years old, have made a purchase on Shopee, and use digital payment methods. Based on the Slovin formula with a 5% margin of error, the minimum sample size was determined to be 172 respondents.

Data collection was conducted via an online questionnaire using Google Forms with a 5-point Likert scale, ranging from 1= strongly disagree to 5= strongly agree. The security perception indicator refers to the security of personal data and payment transactions; the trust construct refers to the platform's integrity, reliability, and credibility; and the purchase decision refers to consumers' confidence in completing purchase transactions. The data were analyzed using Smart-PLS4 through descriptive analysis, validity tests, reliability tests, classical assumption tests (normality, multicollinearity, and heteroscedasticity), and multiple linear regression analysis. The researcher also conducted hypothesis testing using the t-test, F-test, and the coefficient of determination (R^2), with a significance level of 0.05.

RESULTS AND DISCUSSION

Respondent Characteristics

This study involved data from 174 respondents identified as active users of the Shopee platform in Mataram City. Based on the results of the descriptive statistical analysis, the demographic characteristics and profile of the sample in this study can be comprehensively described as follows:

Table 1. Characteristics of Respondents by Gender

Characteristic	Category	Frequency	Percentage (%)
Gender	Male	58	33,3%
	Female	116	66,7%
Total		174	100%

Source: Data analysis results using Smart-PLS 4 (2026)

Based on the data presented in Table 1 regarding respondent characteristics by gender, it is confirmed that the majority of the sample consists of women, totaling 116 individuals, or 66.7% of the total study population. Conversely, male respondents constituted a minority, numbering 58 people (33.3%). This frequency distribution provides empirical evidence that market penetration and the intensity of active users of the Shopee platform in Mataram City are significantly more concentrated among female consumers than among male consumers.

Table 2. Characteristics of Respondents by Age

Characteristic	Category	Frequency	Percentage (%)
Age	17–20 year	54	31,0%
	21–30 year	108	62,1%
	31–40 year	1	0,6%
	41–50 year	3	1,7%
	Di atas 50 year	8	4,6%
Total		174	100%

Source: Data analysis results using Smart-PLS 4 (2026)

Based on the demographic distribution data presented in Table 2, the characteristics of respondents by age group show a very pronounced concentration of data in the working-age category. The majority of respondents in this study were in the 21–30 age range, totaling 108 individuals, or 62.1% of the total sample. The second-largest proportion was the late-adolescent age group (17–20 years), with 54 individuals (31.0%). Conversely, the percentage of respondents in older age groups was very low: the group aged 50 and older consisted of only 8 people (4.6%), followed by the 41–50 age group with 3 people (1.7%), and the 31–40 age group, which was an extreme minority with only 1 respondent (0.6%). This indicates that Shopee users are predominantly young, productive adults.

Table 3. Characteristics of Respondents by Education Level

Characteristic	Category	Frequency	Percentage (%)
Education	SMA	32	18,4%
	S1	136	78,2%
	S2	6	3,4%
Total		174	100%

Source: Data analysis results using Smart-PLS 4 (2026)

Based on data regarding respondent characteristics by educational level, the absolute majority of the sample consisted of bachelor's degree (S1) graduates, numbering 136 individuals, or 78.2% of the total participants. The next largest group consisted of high school graduates, totaling 32 people (18.4%), while those with a Master's degree (S2) constituted a minority, with only 6 people (3.4%). This aggregated data empirically indicates that Shopee's active user base in Mataram is dominated by highly educated consumers, which theoretically correlates positively with levels of technological understanding, the capacity to analyze cyber risks, and the cognitive maturity required to evaluate a platform's security measures and credibility before making digital purchasing decisions.

Validity Test

Validity testing is used to verify that all indicators in the questionnaire are empirically capable of accurately measuring the research variables, thereby ensuring their validity as a data collection instrument. According to sugiyono et al. (2020), validity is a measure that indicates the extent to which a measurement tool actually functions according to its intended purpose. The assessment of validity criteria in this study was estimated using SmartPLS4 software by examining the indicators in the measurement model (outer model).

Table 4. Outer Loading Test Results (Convergent Validity)

Variabel	Kepercayaan (X1)	Persepsi Keamanan (X2)	Keputusan Pembelian (Y)	Description
X1.1	0.925			Valid
X1.2	0.907			Valid
X1.3	0.875			Valid

Variabel	Kepercayaan (X1)	Persepsi Keamanan (X2)	Keputusan Pembelian (Y)	Description
X1.4	0.872			Valid
X1.5	0.901			Valid
X1.6	0.892			Valid
X1.7	0.910			Valid
X1.8	0.865			Valid
X1.9	0.885			Valid
X1.10	0.886			Valid
X2.1		0.887		Valid
X2.2		0.899		Valid
X2.3		0.884		Valid
X2.4		0.903		Valid
X2.5		0.913		Valid
X2.6		0.881		Valid
X2.7		0.867		Valid
X2.8		0.903		Valid
X2.9		0.896		Valid
X2.10		0.907		Valid
Y.1			0.876	Valid
Y.2			0.898	Valid
Y.3			0.901	Valid
Y.4			0.926	Valid
Y.5			0.924	Valid
Y.6			0.944	Valid
Y.7			0.909	Valid
Y.8			0.917	Valid
Y.9			0.918	Valid
Y.10			0.915	Valid

Source: Data analysis results using Smart-PLS 4 (2026)

Based on table 4 the results of the convergent validity test conducted via an outer model evaluation using SmartPLS4, all indicator items for the variables Trust (X1), Perceived Safety (X2), and Purchase Decision (Y) were found to be valid and met the ideal validity criteria. The factor loadings for the ten indicator items of the Trust variable ranged from 0.865 to 0.925, while the ten indicator items of the Perceived Safety variable showed values ranging from 0.867 to 0.913, and the ten indicator items of the Purchase Decision variable recorded values between 0.876 and 0.944. Given that all factor loadings for the total of 30 indicator items are well above the critical threshold required in PLS-SEM namely 0.70 it can be concluded that every item in this instrument possesses a very high level of validity and is capable of accurately representing and explaining each latent construct under study without any measurement bias.

Tabel 5. Cross-Loadings Validity Test

Variable	Trust (X1)	Perception of Security (X2)	Buying decision (Y)	Description
X1.1	0.925	0.783	0.686	Valid
X1.2	0.907	0.789	0.668	Valid
X1.3	0.875	0.776	0.697	Valid
X1.4	0.872	0.731	0.663	Valid
X1.5	0.901	0.750	0.666	Valid
X1.6	0.892	0.807	0.695	Valid
X1.7	0.910	0.750	0.699	Valid
X1.8	0.865	0.777	0.693	Valid
X1.9	0.885	0.798	0.655	Valid
X1.10	0.886	0.777	0.640	Valid
X2.1	0.779	0.887	0.676	Valid
X2.2	0.793	0.899	0.715	Valid
X2.3	0.791	0.884	0.687	Valid
X2.4	0.751	0.903	0.693	Valid
X2.5	0.809	0.913	0.727	Valid
X2.6	0.764	0.881	0.713	Valid
X2.7	0.767	0.867	0.651	Valid
X2.8	0.723	0.903	0.628	Valid
X2.9	0.786	0.896	0.716	Valid
X2.10	0.788	0.907	0.681	Valid
Y.1	0.690	0.712	0.876	Valid
Y.2	0.682	0.679	0.898	Valid
Y.3	0.685	0.693	0.901	Valid
Y.4	0.639	0.680	0.926	Valid
Y.5	0.692	0.715	0.924	Valid
Y.6	0.716	0.726	0.944	Valid

Y.7	0.775	0.761	0.909	Valid
Y.8	0.678	0.671	0.917	Valid
Y.9	0.695	0.683	0.918	Valid
Y.10	0.662	0.714	0.915	Valid

Source: Data analysis results using Smart-PLS 4 (2026)

Table 5 shows that the results of the discriminant validity test, based on the cross-loading matrix values in SmartPLS, indicate that all research indicator items are valid and demonstrate excellent construct differentiation. The test criteria were met because each indicator item recorded the highest correlation coefficient with its own latent construct (the target variable) compared to the correlation values when cross-loaded with other constructs. The indicators for the Trust variable (X1.1 through X1.10) had item loadings ranging from 0.865 to 0.925, which were significantly higher than their cross-correlation values with the Security Perception (X2) and Purchase Decision (Y) variables. A similar pattern of consistency is also evident across all items of the Perceived Safety (X2) and Purchase Decision (Y) indicators. This pattern holds true for all indicators without exception; therefore, it can be concluded that discriminant validity based on the cross-loading criterion has been met in this study.

Average Variance Extracted (AVE)

Average Variance Extracted (AVE) is a statistical parameter estimated to measure the ability and efficiency of a set of manifest indicators in explaining the variance of the latent construct they represent. Within the framework of Partial Least Squares Structural Equation Modeling (PLS-SEM), the AVE matrix is used as a tool for testing convergent validity. This procedure is crucial for confirming that all empirically evaluated indicators are highly aligned and truly extract the conceptual dimensions of the same theoretical variable.

Table 6. Average variance extracted (AVE)

Variabel	Average variance extracted (AVE)	Description
Trust (X1)	0.796	Valid
Perception of Security (X2)	0.799	Valid
Purchase Decision (Y)	0.834	Valid

Source: Data analysis results using Smart-PLS 4 (2026)

Based on the outer model parameter estimates using SmartPLS 4 software, as summarized in Table 6, the Average Variance Extracted (AVE) values obtained were 0.796 for the Trust variable (X1), 0.799 for the Perceived Security variable (X2), and 0.834 for the Purchase Decision variable (Y). In accordance with PLS-SEM methodological conventions, all of these AVE coefficients significantly met the required threshold of 0.50. These results indicate that all constructs in this research model have met the criteria for convergent validity with excellent performance. These high AVE values indicate that more than 70% of the variance in each indicator can be extracted and explained by its respective latent construct. These data prove that the questionnaire instrument used has a high level of accuracy and

homogeneity in representing the variables under study, so this structural model is deemed highly suitable to proceed to the next stage of hypothesis testing.

Discriminant Validity Test (HTMT)

Table 7. HTMT Test Results

Variabel	Trust (X1)	Perception of Security (X2)	Purchase Decision (Y)
Trust (X1)	—		
Perception of Security (X2)	0,892	—	
Purchase Decision (Y)	0,777	0,789	—

Source: Data analysis results using Smart-PLS 4 (2026)

Based on the results of the discriminant validity test using the Heterotrait-Monotrait Ratio (HTMT) approach, this research model was found to meet the criteria for valid inter-construct validity. Discriminant validity is considered met if the HTMT ratio between variables is below 0.90. The data in the table show that the highest HTMT value was recorded in the relationship between the Trust (X1) and Perceived Safety (X2) variables, at 0.892; although this reflects a high degree of conceptual closeness, the value remains below 0.90. Meanwhile, the HTMT values for the relationship between Purchase Decision (Y) and Trust (X1) at 0.777 and between Purchase Decision (Y) and Perceived Safety (X2) at 0.789 are clearly below 0.90. Thus, these combined estimates confirm that there is no overlap among the latent variables; consequently, each construct validly measures a distinct specific phenomenon and is ready for use in subsequent structural modeling.

Table 8. Fornell-Larcker Validity Test

Variabel	Trust (X1)	Perception of Security (X2)	Purchase Decision (Y)
Trust (X1)	0.892		
Perception of Security (X2)	0.867	0.894	
Purchase Decision (Y)	0.758	0.771	0.913

Source: Data analysis results using Smart-PLS 4 (2026)

Table 6 presents the results of the discriminant validity test using the Fornell-Larcker criterion, which involves comparing the square root of the Average Variance Extracted (AVE) for each construct shown on the diagonal of the table with the interconstruct correlation values in the same rows and columns. The test results show that the square root of the AVE for the Trust construct is 0.892, Perceived Safety at 0.894, and Purchase Decision at 0.913, all of which are greater than the correlation values between the other constructs: 0.867 between Trust and Perceived Safety, 0.758 between Trust and Purchase Decision, and 0.771 between Perceived Safety and Purchase Decision. Thus, the Fornell-Larcker criteria are met, and the discriminant validity among constructs in this study is deemed good.

Uji Reliabilitas

A reliability test is a test conducted to determine whether a research instrument (such as a questionnaire) yields consistent and reliable results when used to measure the same variable.

It is conducted to assess the consistency of respondents' answers, ensure the reliability of the research instrument, and reduce the likelihood of measurement error.

Table 9. Composite reliability (rho_c)

Variabel	Composite reliability (rho_c)		Description
Trust (X1)	0.975		Reliable
Perception of Security (X2)	0.976		Reliable
Purchase Decision (Y)	0.980		Reliable

Source: Data analysis results using Smart-PLS 4 (2026)

Based on the results of the internal consistency test summarized in Table 9, the estimated composite reliability (rho_c) values indicate that all variables under study meet the requirement of > 0.70 . The Trust Construct (X1) recorded a reliability coefficient of 0.975, followed by the Safety Perception variable (X2) at 0.976, and the Purchase Decision variable (Y), which achieved the highest value of 0.980. According to the Structural Equation Modeling (SEM) methodology, all of these parameters have exceeded the required minimum standard of 0.70; thus, overall, the constructs in this research model exhibit a very high level of reliability.

Tabel 10. Cronbach's Alpha

Variabel	Cronbach's alpha	Description
Trust (X1)	0.971	Reliable
Perception of Security (X2)	0.972	Reliable
Purchase Decision (Y)	0.978	Reliable

Source: Data analysis results using Smart-PLS 4 (2026)

Table 10 presents the results of the reliability test, using a Cronbach's Alpha value > 0.70 for each construct to evaluate the instrument's internal consistency. The test results show that the Cronbach's Alpha values for the Trust (X1) were 0.971, for the Perceived Safety (X2) were 0.972, and for the Purchase Decision (Y) were 0.978. Since all these values are above 0.70, and the reliability prerequisite has been met through Cronbach's Alpha which aligns with the previous Composite Reliability value this research model possesses strong methodological legitimacy to proceed to the structural analysis (inner model) stage for testing the causality hypotheses. It can be concluded that this research instrument has an excellent level of internal consistency and is suitable for use as a measurement tool in this study.

Test of Classical Assumptions

The Classical Assumptions Test is a series of tests conducted prior to linear regression analysis to ensure that the data meet the statistical requirements so that the resulting regression estimates are valid, unbiased, and reliable. The purpose of the Classical Assumptions Test is to determine whether the regression model used satisfies the basic assumptions of linear regression analysis.

Normality Test

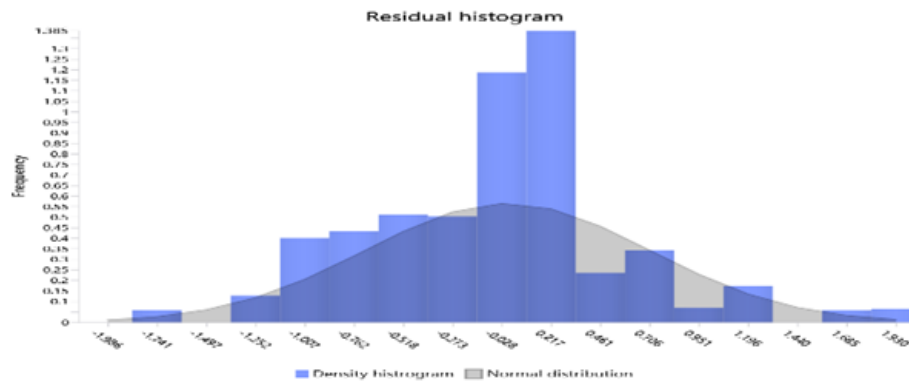


Figure 1. Residual Histogram for the Normality Test

Figure 1 presents the residual histogram used to test the assumption of normality in the regression model of this study. Data can be said to be normally distributed if the residual histogram forms a symmetrical bell curve centered around zero, and if the distribution of data points follows the diagonal line on the normal probability plot. Based on the visualization in Figure 2, the resulting residual pattern tends to form a symmetrical curve resembling a normal distribution. Therefore, it can be concluded that the assumption of normality in this study's regression model is met and the data are suitable for further hypothesis testing.

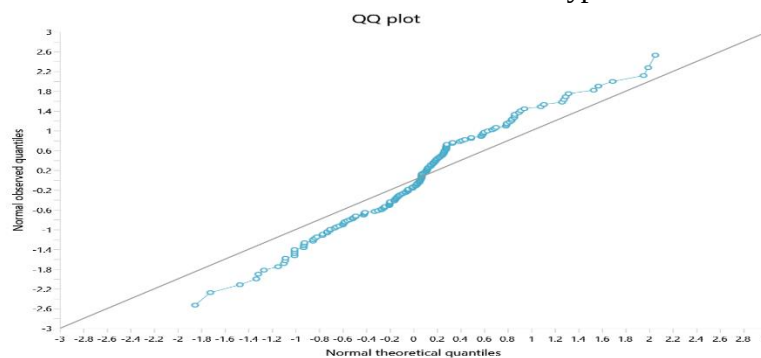


Figure 2. QQ Plot for the Normality Test

Figure 2 presents a Q-Q plot of a normal regression model, in which the data is said to satisfy the assumption of normality if the observation points consistently follow the diagonal line. Based on the visualization results, the data points are tightly clustered along the diagonal line in the middle, with slight, reasonable deviations at the ends (tails) of the graph. This phenomenon of data clustering along the linear line provides visual confirmation that the variance of the disturbance term or residuals is random and evenly distributed around zero. Meanwhile, the minor fluctuations or slight scatter occurring at the ends (tails of the graph) represent a fat-tailed phenomenon that remains within reasonable statistical tolerance limits and does not systematically disrupt the model's structure. Thus, this Q-Q plot can be deemed valid and indicates that the residuals in this study's regression model are normally distributed. Visual confirmation of the normality assumption is a crucial prerequisite that ensures the resulting parameter estimates are Best Linear Unbiased Estimators (BLUE), making the model highly reliable and sufficiently accurate for use in subsequent hypothesis testing stages.

Multicolony Test

Table 11. Results of the Multicollinearity Test (VIF) for the Outer Model

Variabel	VIF
Trust (X1) > Purchase Decision (Y)	4.031
Perception of Security (X2) > Purchase Decision (Y)	4.031

Source: Data analysis results using Smart-PLS 4 (2026)

Table 11 presents the results of data analysis for the multicollinearity test, based on estimates of the Variance Inflation Factor (VIF) in the structural model, which aims to detect and confirm the absence of excessive linear correlation among the independent variables. The test results show that the VIF values for the path of Trust on Purchase Decision (X1 - Y) and the path of Perceived Safety on Purchase Decision (X2 - Y) exhibit identical coefficients, namely 4.031. This value is below the maximum threshold required in this study, which is < 10. The fact that the VIF coefficient is 4.031 indicates that the variance of the predictors is not inflated by extreme information overlap among the independent variables. Thus, the results of this test are deemed valid and prove that there are no serious multicollinearity issues between the Trust and Perceived Safety constructs. The absence of multicollinearity ensures that each independent variable explains the variability of the dependent variable, making this entire structural regression model highly stable and well-suited for hypothesis testing.

Heteroscedasticity Test

Table 12. Heteroscedasticity Test Results

	Test-Statistic	df	P value
Breusch-Pagan Test	0.725	2	0.696

Source: data analysis results using Smart-PLS 4 (2026)

Table 12 presents the results of the heteroscedasticity test using the Breusch-Pagan test to confirm that the residual variances in the regression model are homogeneous. Based on the data analysis output using SmartPLS 4, the test statistic was 0.725 with 2 degrees of freedom (df), and the P-value was 0.696. According to statistical decision-making criteria, since the P-value is > 0.05, the presence of heteroscedasticity is rejected. This indicates that the regression model in this study is entirely free from heteroscedasticity, meaning that the variability of the residuals from one observation to another is constant. The model's freedom from this disturbance has important methodological implications, as it ensures that the standard errors of the regression coefficients are unbiased. Thus, the model has met the absolute requirements of the classical assumptions of regression validity, ensuring the efficiency of parameter estimation, and possesses excellent validity for use in hypothesis testing (t-tests and F-tests) in subsequent stages.

Evaluation of the Structural Model (Inner Model)

Table 13. Coefficient of Determination (R²) Test

	Pembelian (Y)
R-square adjusted	0,621
R-square	0,625
Durbin-Watson test	1,997

Source: data analysis results using Smart-PLS 4 (2026)

Based on the SmartPLS 4 analysis in Table 13 above, a structural model was obtained with an adjusted R-squared value for the Purchase Decision (Y) variable of 0.621; an R² value above 0.50 is classified as moderate to strong. This coefficient indicates that the simultaneous contribution of the independent variables studied Trust (X1) and Perceived Safety (X2) explains 62.1% of the variability or variation in the Purchase Decision (Y) construct, while the remaining 37.9% of the variance is explained by other factors outside the regression model that were not examined in this study.

Hypothesis Testing

Hypothesis testing is a statistical procedure used to test the validity of a research hypothesis based on the data obtained. The purpose of this test is to determine whether there is a significant effect or relationship between the variables under study, which can then serve as a basis for research decision-making.

T-test (Parsial)

Table 14. Results of the t-test

Variabel	Unstandardize d coefficients	Standardized coefficients	SE	T value	P value	2.5 %	97.5 %
Trust (X1)	0.402	0.362	0.104	3.852	0.000	0.196	0.608
Perception of Security (X2)	0.520	0.456	0.107	4.855	0.000	0.308	0.731
Intercept	0.243	0.000	0.191	1.276	0.204	-0.133	0.620

Source: Data analysis results using Smart-PLS 4 (2026)

The data analysis in Table 10 above presents the results of the t-test, which was used to test the significance of the partial effects of each independent variable on the Purchase Decision (Y). The results of the data analysis using SmartPLS 4 indicate that the Trust variable (X1) has a regression coefficient of 0.402 with a T-value of 3.852 > t-table of 1.973 and a P-value of 0.000. Meanwhile, the Safety Perception variable (X2) recorded a regression coefficient of 0.520 with a T-value of 4.855 > t-table of 1.973 and a P-value of 0.000. Since the P-values for both independent variables are below the significance level of 0.05 and the calculated t-values exceed the critical T-value, this study concludes that Trust (X1) and Perceived Safety (X2) each have a positive and significant influence on the Purchase Decision (Y).

F-test (Simultan)

Table 14. Results of the f-test

	Sum square	df	Mean square	F	P value
Total	230.008	173	0.000	0.000	0.000
Error	86.272	171	0.505	0.000	0.000
Regression	143.737	2	71.868	142.451	0.000

Source: Data analysis results using Smart-PLS 4 (2026)

Based on the table 14 presents the results of the F-test (simultaneous test) used to examine the combined effect of Trust (X1) and Perceived Safety (X2) on Purchase Decision (Y). The test results show an F-value of 142.451 with a P-value of 0.000, which is less than 0.05. Thus, it can be concluded that the constructed regression model is significant and that the two independent variables Trust and Perceived Safety simultaneously have a significant

effect on Purchase Decision. The larger value of the regression sum of squares 143.737 compared to the error sum of squares 86.272 further indicates that this research model is able to explain the data variation well.

Discussion Of Structural Result

H1: The Effect of Trust (X1) on Consumer Purchase Decisions on Shopee

Based on the results of testing the first hypothesis (H1), the t-value from the data analysis indicates that the Trust variable (X1) has a positive and statistically significant partial effect on Purchase Decision (Y). This causal relationship is validated by a t-value of $3.852 > t\text{-table of } 1.973$ and a p-value of 0.000, which is less than the significance level of 0.05. This positive contribution is further supported by an unstandardized regression coefficient of 0.402 and a standardized coefficient of 0.362. Thus, methodologically, it can be concluded that H1 in this study is accepted. Substantively, the acceptance of this hypothesis confirms that the consumer trust variable acts as a primary driver capable of increasing the probability of a purchase decision on the Shopee e-commerce platform. This aligns with Consumer Behavior Theory, in which the element of trust functions as a psychological bridge that reduces uncertainty and mitigates the perceived risk of transaction failure inherent in online shopping. When consumers have high confidence in the platform's integrity such as the accuracy of product descriptions, the reliability of services, the ease of returns, and Shopee's brand reputation buyers' psychological barriers are eroded, which in turn subconsciously encourages them to purchase products.

H2: The Effect of Perceived Safety (X2) on Consumer Purchase Decisions on Shopee

Based on the results of the hypothesis testing, which refer to the data in Table 14, the Security Perception variable has a positive and significant partial effect on Consumer Purchase Decisions on the Shopee platform. The validity of this causal relationship is demonstrated by comparing the t-value of 4.855, which significantly exceeds the critical t-table of 1.973, and is supported by a p-value of 0.000 which is smaller than the significance threshold of 0.05. Consequently, the hypothesis proposed in this study (H2) is accepted. The substantive meaning of these analysis results confirms that an increase in the perceived safety variable will linearly strengthen consumers' commitment to making transactions on Shopee. In the e-commerce context, perceived safety serves as a crucial stimulus in mitigating perceived risk such as the threat of identity theft, failed payment processing, or fraud by third parties that often looms over consumers. The presence of credible protection guarantees from Shopee gradually dispels users' doubts. Consequently, this transactional comfort acts as a catalyst that transforms passive interest (purchase intention) into actual purchasing behavior (purchase behavior).

These results are in line with the study by Abrar et al. (2025), which confirms that security is a key factor influencing consumer behavior when transacting on e-commerce platforms, indicating that online security behavior has a positive effect on the intention to use e-payments. The security features provided by Shopee such as ShopeePay, joint accounts, refund guarantees, seller verification systems, and cash on delivery (COD) options have been shown to enhance consumers' perceptions of security, which ultimately drives purchasing decisions. Furthermore, Singh et al. (2024) found that information integrity and information confidentiality significantly influence e-commerce users' trusting beliefs, confirming that security is a key antecedent in consumers' decisions to transact digitally.

H3: The Simultaneous Effect of Trust and Perceived Security on Purchase Decisions Shopee

Based on the results of the simultaneous test (F-test), it was found that the variables Trust (X1) and Perceived Security (X2) collectively have a positive and significant influence on consumers' Purchase Decisions (Y) on the Shopee platform in Mataram City. The linear nature of this relationship indicates that the strengthening of purchasing decisions cannot be viewed from a single aspect alone but is rather the result of a harmonious integration between consumers' trust in the platform and the perceived assurance of security during transactions. The results of the data analysis show that the variables Trust (X1) and Perceived Security (X2) jointly have a significant effect on Purchase Decision (Y), as evidenced by an F-value of 142.451 and a P-value of $0.000 < 0.05$. The large value of the Sum of Squares for Regression 143.737, which is significantly greater than the Sum of Squares for Error 86.272, indicates that this study effectively explains the variation in the data. The adjusted R-squared value of 0.621 indicates that these two independent variables account for 62.1% of the variation in Shopee consumers' Purchase Decisions in Mataram City, while the remaining 37.9% is influenced by other variables outside the scope of this study.

The study's findings theoretically support the applicability of consumer behavior theory in the ecosystem of digital commerce, or e-commerce. Compared to traditional markets, customers in virtual markets face significantly more information and transaction risks. The simultaneous acceptance of these factors shows that the Perceived Security variable (X2) serves as a structural mechanism that reduces the physical operational risks associated with transactions, such as data breaches or payment system failures, while the Trust variable (X1) serves as the psychological basis that fosters consumer confidence. Customers' obstacles or reluctance to shopping are decreased when these two independent factors are present together and at optimal levels. The interactive combination of a trusted platform and a secure transaction system foster consumer comfort, which ultimately encourages them to make continuous or repeat purchasing decisions.

This study indicates that consumer purchasing behavior on the Shopee e-commerce platform is determined by two main factors: the level of trust in the platform and subjective assessments of security during transactions. Compared to the trust factor, the dimension of perceived security plays a slightly more dominant role in driving purchasing behavior. This phenomenon has crucial management implications for Shopee management to consistently improve the quality of transaction protection and enhance their reputation through operational service transparency. In order to reduce transaction risks, which will ultimately and successfully increase the frequency of purchasing decisions and promote long-term customer loyalty, strategic measures like bolstering payment encryption systems, tightening personal data privacy protections, and improving responsive refund mechanisms are critical priorities that must be addressed.

CONCLUSION AND RECOMMENDATINS

Based on the results of the hypothesis testing, the following conclusions can be drawn. Trust (X1) has a positive and significant effect on Shopee consumers' purchase decisions in Mataram City, as evidenced by a coefficient value of 0.402, a t-value of $3.852 > t\text{-table } 1.973$, and a p-value of $0.000 < 0.05$; therefore, H1 is accepted. This indicates that the higher consumers' trust in the integrity, reliability, and credibility of the Shopee platform, the greater

their motivation to make digital purchasing decisions. Perceived Security (X2) has a positive and significant effect on Shopee consumers' purchasing decisions in Mataram City, with a coefficient of 0.520, a t-value of $4.855 > t_{table} 1.973$, and a p-value of $0.000 < 0.05$; therefore, H2 is accepted. Perceived Security was proven to be a factor with a relatively greater influence compared to Trust coefficient $0.456 > 0.362$, indicating that a sense of security in transactions is the primary consideration for Shopee consumers in Mataram City before deciding to make a purchase. Trust and Perceived Safety together have a significant effect on Purchase Decisions, as evidenced by an F-value of 142.451 and a P-value of $0.000 < 0.05$. The adjusted R-squared value of 0.621 indicates that these two variables account for 62.1% of the variation in consumers' purchasing decisions, while the remaining 37.9% is influenced by other factors outside the scope of this study. This value falls within the category of moderate to strong influence in the context of social and business research. Overall, it can be concluded that consumer trust in the platform and perceptions of security in digital payment transactions are the two main factors driving consumer purchasing decisions on Shopee, with Perceived Security being the relatively more dominant factor.

Shopee is advised to continue strengthening payment transaction security features, such as two-step verification and consumer data protection, given that the perception of security has proven to be the factor with the greatest influence on purchasing decisions. On the other hand, consumer trust must be maintained through service transparency and prompt complaint resolution. For future researchers, it is recommended to include additional variables such as digital service quality or electronic word of mouth (e-WOM), as well as to expand the research sample area so that the findings can be generalized more broadly.

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