

Technology Acceptance and Consumer Loyalty on Carousell: The Mediating Role of Consumer Trust

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ABSTRACT

This study examines the effect of Technology Acceptance on Consumer Loyalty in the Carousell consumer-to-consumer (C2C) preloved marketplace, with Consumer Trust serving as a mediating variable. A quantitative explanatory and cross-sectional design was employed using survey data from 196 Indonesian Carousell users who had completed at least one transaction on the platform. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.1.1.8. The findings show that Technology Acceptance has a positive and significant effect on both Consumer Trust and Consumer Loyalty, while Consumer Trust also has a positive and significant effect on Consumer Loyalty. In addition, Consumer Trust partially mediates the relationship between Technology Acceptance and Consumer Loyalty. These results indicate that perceived usefulness and perceived ease of use not only encourage continued platform use directly but also strengthen loyalty by increasing consumers' confidence in the platform. This study extends the Technology Acceptance Model into a post-adoption C2C preloved commerce context and highlights the importance of combining platform usability with security, privacy protection, and trust-building mechanisms.

Keywords: *Technology Acceptance, Consumer Trust, Consumer Loyalty, C2C E-Commerce, Carousell*

I. INTRODUCTION

The continued development of digital technology has transformed how consumers search for, exchange, and purchase goods through online marketplaces. The scale of this transformation is reflected in the substantial growth of global e-commerce, with business e-commerce sales across 43 developed and developing economies increasing from approximately USD 17 trillion in 2016 to USD 27 trillion in 2022 (UNCTAD, 2024). Alongside conventional business-to-consumer commerce, digitalization has also facilitated the expansion of consumer-to-consumer (C2C) platforms, where



individuals can directly exchange goods through technology-enabled marketplaces. These platforms have become particularly relevant to the growing second-hand economy by improving access to preloved products and enabling consumers to extend the useful life of existing goods.

Nevertheless, C2C preloved marketplaces possess characteristics that distinguish them from conventional e-commerce. Transactions occur between individual users, while the platform primarily facilitates product discovery, communication, and interaction between buyers and sellers. Consequently, consumers may face greater uncertainty regarding seller credibility, product condition, and transaction reliability. This challenge is particularly relevant in second-hand markets, where information asymmetry between buyers and sellers can increase perceived risk and reduce consumer trust (Negash & Akhbar, 2024). Previous evidence from second-hand markets further demonstrates that reducing uncertainty through credible product and seller information contributes to stronger consumer trust and greater engagement.

Carousell represents a relevant context for examining these challenges because it operates as a C2C marketplace that facilitates the buying and selling of preloved goods. In the Indonesian Carousell context examined in this study, buyers and sellers frequently communicate and arrange transactions directly, and some transactions may proceed through external communication and payment arrangements rather than a fully integrated platform transaction process. Such conditions can increase exposure to transaction uncertainty, including concerns regarding fraud, product misrepresentation, and disputes, thereby making trust an important consideration in consumers' continued relationship with the platform. This concern is consistent with broader research on Indonesian C2C e-commerce, which shows that trust in the platform provider can directly influence consumers' willingness to make repeat purchases (Shihab et al., 2018).

Beyond transaction-related concerns, continued consumer engagement with a digital marketplace also depends on how users perceive and accept the technology itself. The Technology Acceptance Model (TAM) explains technology acceptance primarily through perceived usefulness and perceived ease of use (Davis, 1989). A platform that is perceived as useful and easy to operate is more likely to generate favorable user responses and continued engagement. However, in an online transaction environment characterized by uncertainty, technological acceptance alone may be insufficient to explain long-term consumer behavior. Gefen et al. (2003) demonstrate that trust is as important as perceived usefulness and perceived ease of use in explaining online consumer behavior, while Pavlou (2003) integrates trust into the technology acceptance perspective to account for the uncertainty inherent in electronic commerce. Thus, consumers' positive evaluations of technology may contribute to sustained relationships not only directly but also by strengthening their confidence in the platform.

Consumer trust is particularly important when the research focus moves beyond initial adoption toward long-term consumer loyalty. Trust reduces uncertainty and provides consumers with greater confidence in maintaining relationships with digital platforms. In electronic commerce, security and privacy concerns are among the important antecedents of consumer trust (Kim et al., 2008). From a relationship perspective, trust encourages consumers to maintain valued relationships and reduces their tendency to pursue alternative relationships, making it closely connected with longer-term relational outcomes (Morgan & Hunt, 1994). Consumer loyalty therefore represents a more advanced post-adoption outcome than initial purchase intention because it reflects an enduring tendency to maintain a relationship with and continue preferring a particular platform rather than merely completing a single transaction (Oliver, 1999).

Previous studies provide substantial evidence regarding technology acceptance and trust in online consumer behavior, yet important gaps remain. Research conducted specifically on Carousell Indonesia by Wijaya et al. (2023) found that service quality, security, and privacy positively influence trust, while trust, ease of use, and word of mouth positively influence consumers' actual purchase decisions. Although these findings establish the importance of technological convenience and trust in the Carousell environment, the study focuses primarily on actual purchase decisions and does not explain how these factors contribute to consumer loyalty as a long-term relational outcome. Similarly, broader studies applying TAM to online shopping have primarily examined adoption, purchase intention, repurchase intention, or continued usage, leaving comparatively less understanding of how technology acceptance develops into long-term loyalty within C2C preloved marketplaces characterized by greater transaction uncertainty.

This study addresses this gap by examining the relationship between Technology Acceptance, Consumer Trust, and Consumer Loyalty among Indonesian users of the Carousell C2C preloved marketplace. Specifically, it investigates whether Technology Acceptance directly influences Consumer Trust and Consumer Loyalty, whether Consumer Trust influences Consumer Loyalty, and whether Consumer Trust mediates the relationship between Technology Acceptance and Consumer Loyalty. By positioning Consumer Trust as the psychological mechanism linking consumers' technological perceptions with their long-term relationship with the platform, this study extends the application of TAM from initial technology adoption toward post-adoption loyalty in a C2C preloved e-commerce context. The study consequently contributes to understanding how platform usefulness and ease of use can translate into sustained consumer loyalty when trust remains critical to managing the uncertainty inherent in peer-to-peer digital transactions.

II. LITERATURE REVIEW

A. Technology Acceptance Model

The Technology Acceptance Model (TAM) explains individuals' acceptance of information technology through two central beliefs: perceived usefulness and perceived ease of use. Perceived usefulness reflects the degree to which users believe that using a technology improves their performance, whereas perceived ease of use represents the extent to which the technology can be used with minimal effort (Davis, 1989). These perceptions influence users' evaluation of a technological system and their willingness to adopt and continue interacting with it. Davis (1989) empirically established both constructs as fundamental determinants of technology acceptance, providing the theoretical basis for examining how consumers respond to digital platforms.

Although TAM was initially developed to explain technology adoption, technology acceptance remains relevant after users have gained experience with a system. Bhattacharjee (2001) distinguishes initial acceptance from continuance behavior and emphasizes that the long-term success of an information system depends on continued rather than first-time use. In digital commerce, consumers who perceive a platform as useful and easy to navigate may therefore be more willing to maintain their relationship with the platform. This perspective is particularly applicable to Carousell, where users independently search for products, communicate with sellers, and coordinate transactions, making platform usefulness and usability relevant to sustained engagement.

B. Consumer Trust

Consumer trust refers to consumers' confidence that an online platform can facilitate transactions reliably and reduce the uncertainty associated with digital exchanges. Trust becomes particularly important in electronic commerce because transactions occur without conventional face-to-face interactions and often involve uncertainty regarding the behavior of other parties. Pavlou (2003) integrated trust and perceived risk with TAM, arguing that technological acceptance alone is insufficient to explain electronic commerce behavior when transactions involve uncertainty. Similarly, Gefen et al. (2003) demonstrated that trust is as important as perceived usefulness and perceived ease of use in explaining the behavior of experienced online consumers.

In this study, Consumer Trust is reflected through perceived security and perceived privacy protection. These dimensions are particularly relevant because confidence in a digital platform depends partly on whether consumers believe that their information and transaction activities are adequately protected. Kim et al. (2008) found that privacy and security concerns are important antecedents of online consumer trust and that trust and perceived risk strongly influence electronic

commerce decisions. In C2C environments, trust becomes even more critical because consumers transact with other individual users. Research in the Indonesian C2C context further shows that trust in the platform provider directly contributes to consumers' repurchase intention (Shihab et al., 2018).

C. Consumer Loyalty

Consumer loyalty represents a sustained commitment toward a preferred product, service, or provider rather than merely a single purchase decision. Oliver (1999) emphasizes that loyalty constitutes a deeper post-consumption outcome and that even satisfaction does not automatically translate into true loyalty. In a digital platform context, loyalty may therefore be reflected in consumers' intention to continue using the platform and their preference for it over competing alternatives.

The distinction between initial acceptance and continued behavior is particularly important in the present research. A consumer may successfully use a platform once without subsequently developing a long-term preference for it. Bhattacharjee (2001) similarly argues that continuance constitutes a distinct stage from initial technology acceptance and is central to the long-term viability of digital services. Accordingly, Consumer Loyalty in this study captures a post-adoption relationship in which users intend to continue using Carousell and maintain a preference for the platform.

D. Relationship of Variables

1. Technology Acceptance and Consumer Loyalty

Technology acceptance can contribute to loyalty because consumers are more likely to maintain relationships with digital platforms that provide useful functions and require relatively little effort to operate. In a study of computer consumers, Wilson et al. (2021) found that perceived usefulness and perceived ease of use positively and significantly influence customer loyalty, both directly and through relational mechanisms such as trust and satisfaction. Similarly, Limsarun et al. (2021) found a significant relationship between technology acceptance and loyalty among food-delivery application users, suggesting that favorable acceptance of technological services can extend into longer-term consumer relationships.

The relevance of technological perceptions is also evident in the Carousell context. Wijaya et al. (2023) found that ease of use positively influences actual purchase decisions among Indonesian Carousell users, demonstrating that consumers' evaluations of platform convenience affect their behavioral responses. While purchase decisions and loyalty are distinct outcomes, these findings indicate that positive technological experiences may provide a foundation for sustained platform engagement. Therefore, the following hypothesis is proposed:

H1: Technology Acceptance has a positive and significant effect on Consumer Loyalty.

2. Technology Acceptance and Consumer Trust

A digital platform that is perceived as useful and easy to use may also strengthen consumer trust. Ease of interaction can reduce complexity and uncertainty, while perceived usefulness indicates that the platform can effectively support consumers in achieving their transactional objectives. Gefen et al. (2003) established an important theoretical connection between TAM and trust by showing that ease of use contributes to trust-building processes in online commerce.

More recent empirical evidence reinforces this relationship. Wilson et al. (2021) found that both perceived usefulness and perceived ease of use positively and significantly affect consumer trust. Su et al. (2022) similarly demonstrated that perceived usefulness and perceived ease of use positively influence trust in mobile food-delivery applications. Although these studies were conducted in different digital contexts, they suggest that positive evaluations of platform technology can provide users with greater confidence in the reliability of digital services. Accordingly:

H2: Technology Acceptance has a positive and significant effect on Consumer Trust.

3. Consumer Trust and Consumer Loyalty

Trust provides the relational foundation required for consumers to maintain long-term engagement with a digital platform. When consumers believe that a platform is reliable and capable of protecting their interests, uncertainty is reduced and continued interaction becomes more likely. Morgan and Hunt's (1994) commitment-trust perspective similarly positions trust as a central mechanism supporting successful long-term relational exchanges.

Empirical studies provide consistent evidence for the trust-loyalty relationship. Su et al. (2022) found that customer trust positively influences loyalty toward mobile food-delivery applications. More importantly for the present research context, Putri et al. (2021) found that Consumer Trust has a significant positive influence on Consumer Loyalty among Carousell users. Evidence from Indonesian C2C e-commerce also indicates that trust in the platform provider directly affects consumers' repurchase intentions (Shihab et al., 2018), reinforcing the importance of platform-level trust for maintaining post-purchase relationships. Thus:

H3: Consumer Trust has a positive and significant effect on Consumer Loyalty.

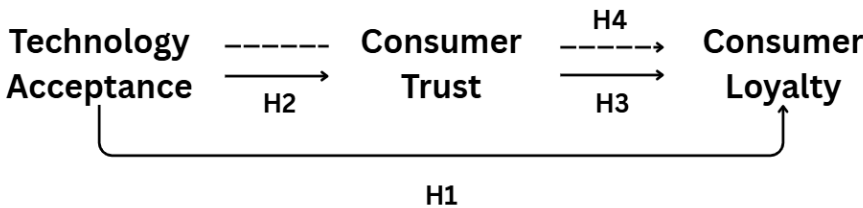
4. The Mediating Role of Consumer Trust

Technology acceptance may influence Consumer Loyalty directly, but part of this relationship may occur through the formation of trust. Consumers who perceive a platform as useful and easy to use may interpret these positive technological experiences as signals of platform competence and reliability. These perceptions can subsequently strengthen trust and encourage a longer-term relationship with the platform. In this sense, Consumer Trust functions as a psychological bridge between consumers' evaluation of technology and their willingness to remain loyal.

This mediating mechanism has received empirical support in previous digital contexts. Wilson et al. (2021) found that trust significantly mediates the relationships between perceived usefulness, perceived ease of use, and customer loyalty, with trust demonstrating a stronger mediating role than satisfaction. Su et al. (2022) likewise showed that customer trust mediates the effects of TAM factors on customer loyalty. In an Indonesian post-adoption context, Sutrisno (2023) further demonstrated the mediating role of trust between technology-related attributes and repurchase intention, reinforcing the relevance of trust as an intermediary mechanism in continued digital behavior.

The role of trust may be especially important on C2C preloved platforms because positive platform usability does not completely eliminate transaction uncertainty. A consumer may perceive Carousell as convenient and useful but still hesitate to maintain a long-term relationship with the platform when security or privacy concerns remain unresolved. Accordingly, the effect of Technology Acceptance on Consumer Loyalty is expected to operate both directly and indirectly through Consumer Trust. Therefore:

H4: Consumer Trust mediates the effect of Technology Acceptance on Consumer Loyalty.



Source: Developed by the authors, 2026

Figure 1. Proposed Research Model

III. METHOD

A. Research Design and Sample

This study employed a quantitative approach with an explanatory and cross-sectional research design to examine the direct and indirect relationships among Technology Acceptance, Consumer Trust, and Consumer Loyalty in the context of the Carousell C2C preloved marketplace. Technology Acceptance was specified as the independent variable, Consumer Trust as the mediating variable, and Consumer Loyalty as the dependent variable. The cross-sectional design enabled respondents' perceptions and behavioral evaluations to be measured at a single point in time.

The population consisted of Carousell users in Indonesia who had experience purchasing or transacting through the platform. Because the exact number of eligible Carousell users was unknown, this study employed non-probability purposive sampling. Respondents were required to meet two criteria: they were active users of Carousell and had completed at least one transaction through the platform. These criteria ensured that respondents had sufficient experience to evaluate the technological characteristics, trustworthiness, and continued use of the platform.

The study ultimately obtained 196 valid responses after respondent screening and data preparation. The sample size was considered adequate for Partial Least Squares Structural Equation Modeling (PLS-SEM) and exceeded the minimum sample requirement established during the research design stage. Data were collected through an online questionnaire developed using Google Forms and distributed through digital channels, including social media and university-related networks. Although the survey was accessible to Indonesian Carousell users, the resulting sample was predominantly concentrated in Java, particularly East Java.

B. Measurement Instrument

The questionnaire consisted of demographic and screening questions followed by 14 measurement items representing the three research constructs. All items were measured using a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. The operationalization of Technology Acceptance was grounded in the Technology Acceptance Model proposed by Davis (1989), while Consumer Trust was conceptually based on electronic-commerce trust research emphasizing security and privacy (Kim et al., 2008). Consumer Loyalty was operationalized through continuance intention and preference over competing platforms, drawing on the post-adoption and loyalty perspectives of Bhattacharjee (2001) and Oliver (1999).

Table 1. Measurement of Research Constructs

Construct	Dimension	Initial Indicator Codes	Number of Items
Technology Acceptance	Perceived Ease of Use	X1.1–X1.4	4
	Perceived Usefulness	X2.1–X2.3	3
Consumer Trust	Perceived Security	Z1.1–Z1.2	2
	Perceived Privacy Protection	Z2.1–Z2.2	2
Consumer Loyalty	Continuance Intention	Y1.1–Y1.2	2
	Preference Over Other Platforms	Y2.1	1
Total			14

Source: Primary data processed by the authors, 2026

The dimensions used to operationalize each construct were selected based on established theoretical foundations and their relevance to the Carousell C2C preloved context. Technology Acceptance was represented through Perceived Ease of Use and Perceived Usefulness, which constitute the central beliefs of the Technology Acceptance Model (Davis, 1989). Perceived Ease of Use reflects the extent to which users perceive Carousell as understandable and requiring minimal effort, whereas Perceived Usefulness represents the extent to which the platform provides functional benefits and supports users in accomplishing their purchasing activities. Together, these dimensions capture users' evaluations of both the usability and functional value of the platform.

Consumer Trust was represented through Perceived Security and Perceived Privacy Protection because both dimensions are particularly relevant to online transactions characterized by uncertainty. Perceived Security reflects users' confidence in the safety and reliability of the digital transaction environment, while Perceived Privacy Protection captures users' confidence that their personal and transactional information is adequately protected from unauthorized access or misuse (Kim et al., 2008). These dimensions are especially relevant in the C2C context, where transactions occur between individual users and concerns regarding transaction

safety and information protection may influence consumers' confidence in the platform.

Consumer Loyalty was represented through Continuance Intention and Preference over Other Platforms. Continuance Intention captures users' willingness to maintain platform usage over time and reflects post-adoption behavior (Bhattacharjee, 2001), whereas Preference over Other Platforms reflects consumers' tendency to favor Carousell over competing alternatives. Together, these dimensions capture both continued behavioral engagement and comparative platform preference, which represent important manifestations of sustained consumer loyalty (Oliver, 1999).

The questionnaire was preceded by screening questions to ensure that only respondents who satisfied the predetermined eligibility criteria proceeded to the main survey. The measurement statements were adapted to the Carousell context to capture users' perceptions and experiences with the platform.

C. Data Analysis

The data were analyzed using PLS-SEM with SmartPLS 4.1.1.8. PLS-SEM was selected because the study aimed to simultaneously evaluate the measurement model and structural relationships, including the mediating role of Consumer Trust.

The analysis was conducted in two stages. First, the measurement model was evaluated to assess construct validity and reliability. Convergent validity was examined using outer loadings and Average Variance Extracted (AVE), with recommended thresholds of 0.70 and 0.50, respectively. Internal consistency reliability was evaluated using Cronbach's alpha and composite reliability, with values above 0.70 considered acceptable. Discriminant validity was examined through the relationships among indicators and constructs, including the Heterotrait-Monotrait Ratio (HTMT), for which values below 0.90 indicate satisfactory discriminant validity.

Second, the structural model was evaluated using the Variance Inflation Factor (VIF), coefficient of determination (R^2), predictive relevance (Q^2), effect size (f^2), and Standardized Root Mean Square Residual (SRMR). Direct and indirect relationships were subsequently tested using bootstrapping with 5,000 resamples. Hypotheses were considered statistically supported when the t-statistic exceeded 1.96 and the p-value was below 0.05. The indirect effect of Technology Acceptance on Consumer Loyalty through Consumer Trust was examined to determine the presence and type of mediation.

IV. RESULTS AND DISCUSSION

A. Respondent Characteristics

A total of 196 respondents who satisfied the screening criteria were included in the final analysis. As presented in Table 2, female respondents represented 64.8% of the sample, while male respondents accounted for 35.2%. In terms of age, most

respondents were between 18 and 25 years old (51.0%), followed by those aged 26–30 years (43.4%), while respondents above 30 years represented 5.6% of the sample.

Table 2. Respondent Characteristics

Respondent Characteristic	Category	Frequency	Percentage
Gender	Male	69	35.2%
	Female	127	64.8%
Total		196	100%
Age	18-25 Years	100	51.0%
	26-30 Years	85	43.4%
	Above 30 Years	11	5.6%
Total		196	100%

Source: Primary data processed by the authors, 2026

The demographic distribution indicates that the study sample was predominantly composed of younger consumers, particularly those below 30 years of age, while the gender distribution was relatively unbalanced, with female respondents representing 64.8% of the sample compared with 35.2% male respondents. This profile is relevant to the research context because the study examines consumer behavior within a digital C2C marketplace, where interaction with platform features and online transactions forms an integral part of the user experience. However, the stronger representation of female users should be considered when interpreting the demographic representativeness of the findings.

B. Measurement Model Assessment

The measurement model was evaluated through convergent validity, discriminant validity, and reliability assessments. During the initial measurement model evaluation, five indicators (X1.4, X2.1, X2.2, Z1.2, and Z2.1) produced outer loading values below the recommended threshold of 0.70, indicating insufficient contribution to the convergent validity of their respective constructs. Therefore, these indicators were removed from the measurement model. Following the indicator elimination process, nine indicators were retained for further analysis. As presented in Table 3, all retained indicators demonstrated outer loading values above 0.70, while the AVE values of all measurement dimensions exceeded the recommended threshold of 0.50, indicating adequate convergent validity.

Table 3. Convergent Validity Assessment of the Measurement Model

Construct	Dimension	Indicator	Outer Loading	AVE
Technology Acceptance	Perceived Ease Of Use	X1.1	0.712	0.661
		X1.2	0.879	
		X1.3	0.800	
Consumer Trust	Perceived Usefulness	X2.3	0.780	0.608
	Perceived Security	Z1.1	0.965	0.931
	Perceived Privacy Protection	Z2.2	0.969	0.939
Consumer Loyalty	Continuance Intention	Y1.1	0.905	0.827
		Y1.2	0.914	
	Preference Over Other Platform	Y2.1	0.957	0.916

Source: Primary data processed by the authors using SmartPLS 4.1.1.8, 2026.

Following the indicator elimination process, Perceived Usefulness, Perceived Security, and Perceived Privacy Protection were each represented by retained indicator. The remaining indicators respectively, and remained conceptually aligned with the dimensions they were intended to represent. Their retention therefore allowed these theoretically relevant dimensions to remain represented in the final measurement model. Nevertheless, the use of a single retained indicator for these dimensions may limit the breadth of their measurement and is acknowledged as a limitation of this study.

C. Construct Reliability and Discriminant Validity

The reliability assessment further demonstrated that Technology Acceptance, Consumer Trust, and Consumer Loyalty achieved Cronbach's alpha and composite reliability values above 0.70. Therefore, all constructs demonstrated satisfactory internal consistency.

Table 4. Construct Reliability

Construct	Cronbach's Alpha	Composite Reliability	Criterion
Technology Acceptance	0.814	0.872	Reliable
Consumer Loyalty	0.917	0.947	Reliable
Consumer Trust	0.930	0.966	Reliable

Source: Primary data processed by the authors using SmartPLS 4.1.1.8, 2026

Table 5. HTMT Criterion

Construct	Technology Acceptance	Consumer Loyalty	Consumer Trust
Technology Acceptance	—		
Consumer Loyalty	0.429	—	
Consumer Trust	0.448	0.499	—

Source: Primary data processed by the authors using SmartPLS 4.1.1.8, 2026

All HTMT values ranged from 0.429 to 0.499 and were below the recommended threshold of 0.90, confirming adequate discriminant validity among Technology Acceptance, Consumer Trust, and Consumer Loyalty. Overall, the measurement model demonstrated sufficient validity and reliability and was therefore considered appropriate for subsequent structural model analysis.

D. Structural Model Assessment

The structural model was assessed through collinearity, explanatory power, predictive relevance, effect size, and model fit. The VIF values ranged from 1.000 to 1.238, indicating no problematic multicollinearity among the predictor constructs. Technology Acceptance and Consumer Trust jointly explained 27.7% of the variance in Consumer Loyalty, while Technology Acceptance explained 19.2% of the variance in Consumer Trust.

Table 6. Multicollinearity Test of the Structural Model

Relationship	VIF	Description
Technology Acceptance → Consumer Loyalty	1.238	No collinearity issue
Technology Acceptance → Consumer Trust	1.000	No collinearity issue
Consumer Trust → Consumer Loyalty	1.238	No collinearity issue

Source: Primary data processed by the authors using SmartPLS 4.1.1.8, 2026

Table 7. Coefficient of Determination

Endogenous Construct	R ²	Adjusted R ²
Consumer Loyalty	0.277	0.270
Consumer Trust	0.192	0.188

Source: Primary data processed by the authors using SmartPLS 4.1.1.8, 2026

Table 8. Predictive Relevance of the Structural Model

Endogenous Construct	Q ² predict	RMSE	MAE
Consumer Trust	0.163	0.941	0.741
Consumer Loyalty	0.138	0.947	0.715

Source: Primary data processed by the authors using SmartPLS 4.1.1.8, 2026

Table 9. Effect Size

Relationship	f^2	Effect Size
Technology Acceptance → Consumer Loyalty	0.082	Small
Technology Acceptance → Consumer Trust	0.238	Medium
Consumer Trust → Consumer Loyalty	0.135	Small

Source: Primary data processed by the authors using SmartPLS 4.1.1.8, 2026

Table 10. Model Fit Assessment

Model-Fit Criterion	Saturated Model	Estimated Model
SRMR	0.096	0.096

Source: Primary data processed by the authors using SmartPLS 4.1.1.8, 2026

Both endogenous constructs produced Q^2 predict values greater than zero, demonstrating that the model possessed predictive relevance. The effect-size analysis showed that Technology Acceptance had a medium effect on Consumer Trust but relatively smaller direct effects were observed for the relationships predicting Consumer Loyalty. The SRMR value of 0.096 was below the more lenient threshold of 0.10 for variance-based structural equation modeling and therefore indicated an acceptable model fit, although it did not meet the stricter threshold of 0.08

E. Hypothesis Testing

The direct relationships among the research constructs were tested based on path coefficients, t-statistics, and p-values. As shown in Table 6, all three direct relationships were positive and statistically significant.

Table 11. Hypothesis Testing

Hypothesis	Relationship	Path Coefficient (β)	t-statistic	p-value	Decision
H1	Technology Acceptance → Consumer Loyalty	0.271	3.105	0.002	Accepted

H2	Technology Acceptance → Consumer Trust	0.438	5.605	<0.001	Accepted
H3	Consumer Trust → Consumer Loyalty	0.348	4.100	<0.001	Accepted

Source: Primary data processed by the authors using SmartPLS 4.1.1.8, 2026

The path coefficient results demonstrate that Technology Acceptance directly influenced both Consumer Loyalty and Consumer Trust, while Consumer Trust also directly influenced Consumer Loyalty. Among the direct relationships, Technology Acceptance had the strongest coefficient toward Consumer Trust ($\beta = 0.438$).

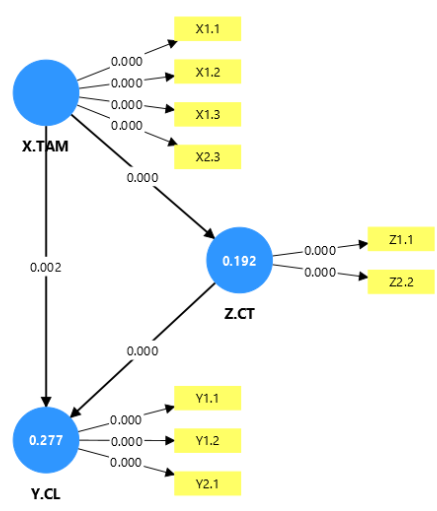


Figure 2. Path Coefficient and T-Statistics of the Research Model

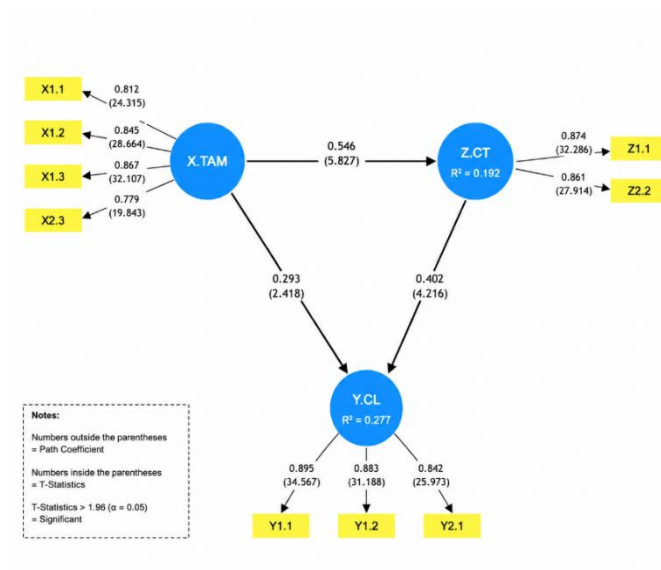


Figure 3. Path Coefficient and T-Statistics of the Structural Research Model

F. Mediation Analysis

The indirect effect of Technology Acceptance on Consumer Loyalty through Consumer Trust was also statistically significant, as shown in Table 7.

Table 12. Mediation Analysis

Hypothesis	Indirect Relationship	Indirect Effect	t-statistic	p-value	Mediation Type	Decision
H4	TA → CT → CL	0.152	2.795	0.005	Partial mediation	Supported

Source: Primary data processed by the authors using SmartPLS 4.1.1.8, 2026

The indirect effect coefficient of 0.152 was positive and statistically significant. Since the direct relationship between Technology Acceptance and Consumer Loyalty also remained statistically significant, Consumer Trust represented a partial mediator rather than a full mediator. Thus, Technology Acceptance contributed to Consumer Loyalty both directly and indirectly through the development of Consumer Trust.

G. Discussion

Technology Acceptance and Consumer Loyalty

The results support H1, demonstrating that Technology Acceptance has a positive and significant effect on Consumer Loyalty ($\beta = 0.271$; $p = 0.002$). This finding indicates that consumers who perceive Carousell as useful and relatively easy to use are more likely to maintain their engagement with the platform and develop longer-term loyalty. Technology therefore plays a role beyond facilitating initial platform adoption; positive technological experiences can also contribute to consumers' willingness to continue using and preferring a digital marketplace.

This result is consistent with Limsarun et al. (2021), who demonstrated a significant relationship between technology acceptance and consumer loyalty in digital food-delivery services. Their findings similarly indicate that positive acceptance of platform technology can translate into sustained consumer relationships. Wilson et al. (2021) also found that perceived usefulness and perceived ease of use contribute to consumer loyalty, reinforcing the relevance of TAM-related perceptions in explaining post-adoption behavioral outcomes.

In the Carousell context, this finding extends previous research that has primarily examined technological perceptions in relation to more immediate behavioral outcomes. Wijaya et al. (2023), for example, found that ease of use significantly influenced actual purchase decisions among Carousell users. The present study extends this perspective by demonstrating that positive technology acceptance also contributes to long-term loyalty, rather than only influencing a single purchase decision. This suggests that maintaining an effective, intuitive, and useful platform experience remains important even after consumers have already adopted the platform.

Accordingly, Technology Acceptance should not be understood solely as an antecedent of initial system usage. Within a C2C preloved marketplace, technological convenience can become part of the continuing value consumers associate with the platform. The direct significance of this relationship also explains why Consumer Trust only partially mediates the overall effect: some consumers may remain loyal because the platform itself provides sufficient functional usefulness and ease of interaction, even when trust is not the only mechanism driving their loyalty.

Technology Acceptance and Consumer Trust

H2 is also supported, with Technology Acceptance positively and significantly affecting Consumer Trust ($\beta = 0.438$; $p < 0.001$). This relationship had the strongest direct path coefficient in the research model and also produced the largest effect size among the tested relationships. The result indicates that consumers' favorable

evaluations of the usefulness and ease of use of Carousell contribute substantially to their confidence in the platform.

The finding is consistent with Su et al. (2022), who found that perceived usefulness and perceived ease of use positively contribute to customer trust in digital applications. Wilson et al. (2021) similarly demonstrated that TAM-related perceptions contribute to trust formation, supporting the argument that users may interpret an effective and accessible technological environment as an indication of platform competence and reliability.

This mechanism is particularly relevant in the C2C preloved context. Because users interact directly with other users and may experience uncertainty surrounding transactions, an understandable and functional technological system can help reduce some of the complexity associated with the process. Clear platform navigation, useful product information, and effective communication features can consequently provide users with greater confidence when interacting within the marketplace.

The relatively stronger effect of Technology Acceptance on Consumer Trust compared with its direct effect on Consumer Loyalty is an important finding of this study. It suggests that one of the main ways through which technological quality creates longer-term value is by strengthening consumers' confidence in the platform. Therefore, usability and usefulness are not merely functional attributes; within uncertain digital transaction environments, they may also contribute to the psychological process of trust formation.

Consumer Trust and Consumer Loyalty

This result is directly consistent with Putri et al. (2021), who found that Consumer Trust significantly influences Customer Loyalty among Carousell users. The consistency between the two studies strengthens the argument that trust remains a particularly important determinant of loyalty within the Carousell environment. However, while Putri et al. examined trust primarily as a direct antecedent of loyalty, the present study extends this relationship by positioning trust within a broader technology acceptance mechanism.

The result also corresponds with Su et al. (2022), whose findings demonstrate that customer trust positively influences customer loyalty and serves as an important relational mechanism in digital services. Similarly, Shihab et al. (2018) found that trust in platform providers contributes to post-purchase behavior in Indonesian C2C e-commerce, emphasizing that platform-level trust remains important even when transactions are conducted between individual consumers.

Within C2C preloved marketplaces, trust is particularly relevant because consumers encounter uncertainty not only regarding the platform but also regarding sellers, product conditions, communication, and transaction arrangements. Consumers who believe that the platform can provide a sufficiently secure and

dependable environment are therefore more willing to maintain their relationship with it. The present findings consequently support the view that strengthening trust is essential for transforming individual transaction experiences into sustained consumer loyalty.

The Mediating Role of Consumer Trust

H4 is supported because the indirect relationship between Technology Acceptance and Consumer Loyalty through Consumer Trust was positive and significant ($\beta = 0.152$; $p = 0.005$). The continued significance of the direct Technology Acceptance–Consumer Loyalty relationship indicates partial mediation. This means that favorable technological perceptions can directly encourage loyalty, while simultaneously strengthening loyalty indirectly by increasing Consumer Trust.

This finding is consistent with Wilson et al. (2021), who showed that trust acts as an important intermediary between technology-related perceptions and loyalty. Su et al. (2022) also demonstrated that customer trust mediates the effects of TAM factors on customer loyalty. The present findings therefore reinforce previous evidence that trust functions as a psychological mechanism through which positive technological experiences are translated into longer-term relational outcomes.

However, the partial rather than full mediation identified in this study is theoretically important. It demonstrates that consumers do not become loyal exclusively because technology acceptance increases trust. Some consumers may directly value Carousell because it provides useful functions, easy navigation, communication convenience, and access to preloved products. At the same time, other consumers may require those positive technological perceptions to develop sufficient confidence in the platform before stronger loyalty can emerge.

The mediation finding represents an important contribution of this research to the Carousell literature. Previous Carousell studies have examined purchase decisions through factors such as ease of use and trust (Wijaya et al., 2023), while other studies have directly linked Consumer Trust with Customer Loyalty (Putri et al., 2021). The present study integrates these previously separated relationships by demonstrating that Technology Acceptance contributes to Consumer Loyalty both directly and through Consumer Trust.

More broadly, the findings extend the application of TAM from an initial-adoption perspective toward post-adoption consumer relationships in a C2C preloved marketplace. In a context where peer-to-peer transactions may involve relatively greater uncertainty, technological functionality alone remains important but is not sufficient to fully explain loyalty. The development of trust provides an additional relational mechanism that helps convert consumers' positive technological experiences into sustained platform commitment.

Overall, the findings demonstrate a sequential mechanism in which positive perceptions of platform technology strengthen trust, while both technology acceptance and trust contribute to loyalty. This integrated mechanism provides the main novelty of the study by explaining not only whether Technology Acceptance affects Consumer Loyalty, but also how part of this effect operates through Consumer Trust within the Carousell C2C preloved marketplace.

The results support H3, showing that Consumer Trust has a positive and significant effect on Consumer Loyalty ($\beta = 0.348$; $p < 0.001$). Consumers who feel more confident about the platform are therefore more likely to continue using Carousell and prefer it over alternative preloved marketplaces.

V. CONCLUSION AND RECOMMENDATION

A. Conclusion

This study examined the relationship between Technology Acceptance, Consumer Trust, and Consumer Loyalty among users of the Carousell C2C preloved marketplace. The findings demonstrate that Technology Acceptance has a positive and significant effect on Consumer Loyalty, indicating that consumers who perceive Carousell as useful, convenient, and easy to use are more likely to continue using and preferring the platform. Technology Acceptance also has a positive and significant effect on Consumer Trust, showing that favorable perceptions of platform technology can strengthen users' confidence in its reliability.

Consumer Trust was also found to have a positive and significant effect on Consumer Loyalty. Users who perceive the platform as secure, reliable, and capable of protecting their information are more likely to maintain a long-term relationship with Carousell. Furthermore, Consumer Trust significantly mediates the relationship between Technology Acceptance and Consumer Loyalty. Because the direct effect of Technology Acceptance on Consumer Loyalty remained significant, the mediation was categorized as partial mediation. Therefore, positive technological perceptions contribute to loyalty both directly and indirectly through the development of trust. These conclusions correspond to the four relationships established and tested in the original study.

Overall, the findings extend the Technology Acceptance Model from an initial-adoption perspective toward post-adoption loyalty in a C2C preloved marketplace. Technology Acceptance is not only important for encouraging consumers to use a digital platform but also contributes to the formation of trust and sustained consumer loyalty. In the Carousell context, effective platform technology and strong consumer trust therefore represent complementary foundations for maintaining long-term consumer engagement.

B. Recommendation

From a practical perspective, Carousell should continuously improve the usefulness, ease of use, effectiveness, and convenience of its platform features. Product discovery, navigation, communication, and transaction-related features should be

designed to minimize user effort and provide clear information throughout the purchasing process. Because Technology Acceptance demonstrated a stronger effect on Consumer Trust than on Consumer Loyalty directly, improvements in technological functionality should also be viewed as part of the platform's trust-building strategy.

Carousell should also strengthen transaction security, privacy protection, and transparency. The platform could improve user verification, provide clearer transaction guidance, strengthen fraud-reporting mechanisms, and communicate how personal and transactional information is protected. The implementation of an integrated payment gateway or buyer-protection mechanism, similar to features already implemented by Carousell in several markets, may further reduce perceived transaction risk and increase consumer confidence. Responsive customer service and effective dispute-resolution procedures should also be prioritized to protect users and maintain long-term loyalty.

The findings also suggest that platform managers should not treat usability and trust as separate priorities. A useful and easy-to-operate platform can improve users' experiences, but technological convenience may not fully produce loyalty when security and privacy concerns remain unresolved. Carousell should therefore integrate technological development with transparent security practices, consumer protection, and reliable transaction support.

This study has several limitations. First, it examined only Carousell users and included only Technology Acceptance, Consumer Trust, and Consumer Loyalty, although other variables may also influence post-adoption consumer behavior. Second, the research relied on self-reported questionnaire responses, which may be affected by subjectivity and differences in respondents' interpretations. In addition, because all constructs were measured using data collected from the same respondents through a single questionnaire at one point in time, the study may also be susceptible to common method bias. As no specific statistical assessment of common method bias was conducted, this potential source of bias should be considered when interpreting the findings. Third, although the target population covered Indonesian Carousell users, the final sample was predominantly concentrated in Java, particularly East Java. The sample was also characterized by an unequal gender distribution, with female respondents accounting for 64.8% and male respondents for 35.2%. This imbalance may limit the demographic representativeness of the sample and should therefore be considered when generalizing the findings to the broader population of Carousell users. Consequently, the findings should be generalized to all Indonesian users with caution.

Future research should expand the geographical coverage and include respondents from different Indonesian regions through broader distribution networks or probability-based sampling. Future studies should also seek a more balanced gender distribution to improve demographic representativeness and, where appropriate, examine whether the relationships among Technology Acceptance, Consumer Trust, and Consumer Loyalty differ across demographic groups. Subsequent

studies may also compare Carousell with other C2C or preloved platforms and examine additional constructs such as Customer Satisfaction, Perceived Risk, Electronic Word of Mouth, Service Quality, and Repurchase Intention. Researchers are also encouraged to apply appropriate procedural or statistical techniques to assess and minimize potential common method effects. Future studies may further integrate TAM with other theoretical perspectives to provide a more comprehensive explanation of trust and loyalty in C2C digital commerce.

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