

UNDERSTANDING CUSTOMER LOYALTY IN QRIS PAYMENT SYSTEMS: THE MEDIATING ROLES OF SATISFACTION AND TRUST AMONG GENERATION Z USERS OF ONLINE TRANSPORTATION SERVICES

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Abstract: This study aims to examine the effects of perceived usefulness and perceived ease of use on customer loyalty in the use of QRIS payment systems within online transportation services, while considering the mediating roles of customer satisfaction and trust among Generation Z users. A survey method was employed, with data collected through an online questionnaire distributed to Generation Z users of QRIS payment systems in online transportation services. A total of 409 valid responses were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4 software. The findings reveal that perceived usefulness has a positive and significant effect on customer satisfaction and trust, while perceived ease of use positively and significantly influences perceived usefulness, customer satisfaction, and trust. Furthermore, customer satisfaction and trust were found to have positive and significant effects on customer loyalty. However, perceived usefulness and perceived ease of use did not exhibit significant direct effects on customer loyalty. The mediation analysis further indicates that customer satisfaction and trust fully mediate the relationships between perceived usefulness, perceived ease of use, and customer loyalty. This study contributes to the advancement of the Technology Acceptance Model (TAM) by providing empirical evidence on how customer loyalty toward QRIS payment systems is developed through satisfaction and trust mechanisms in the context of online transportation services.

Keywords: Customer Loyalty; Customer Satisfaction; Perceived Ease of Use; Perceived Usefulness; Trust.

INTRODUCTION

The rapid advancement of digital technology has transformed payment systems across various sectors, particularly through the growing adoption of QRIS-based payment systems in online transportation services (Haikal et al., 2020). This transformation is closely aligned with the increasing adoption of information and communication technologies, which have fundamentally reshaped how individuals interact, conduct transactions, and access services in digital environments (Haikal et al., 2020; Kaur et al., 2023). Furthermore, advancements in digital service innovation have encouraged organizations to continuously improve service quality in order to enhance customer satisfaction and

strengthen customer trust (Ajina et al., 2023). In this context, customer loyalty has emerged as a strategic factor, as it plays a crucial role in enhancing business sustainability, profitability, and competitive advantage (Latif et al., 2021; Wilson, 2019). However, despite the continued growth in digital payment adoption, customer loyalty has not consistently developed in parallel with usage rates. This phenomenon suggests a gap between initial adoption and long-term user commitment, where increased technology usage does not necessarily translate into strong customer loyalty, particularly in highly competitive service sectors such as online transportation services (Bhat et al., 2023; Peng et al., 2020; Wilson, 2019). Accordingly, the practical

novelty of this study lies in its attempt to identify the psychological mechanisms that bridge the gap between initial technology adoption and long-term customer loyalty through the mediating roles of satisfaction and trust. The findings are expected to provide valuable insights for online transportation service providers and digital payment system operators in designing strategies that not only encourage the initial adoption of QRIS but also strengthen long-term customer loyalty, particularly among Generation Z users.

From a theoretical perspective, this study is grounded in the Technology Acceptance Model (TAM), which posits that perceived usefulness and perceived ease of use are the primary determinants of technology acceptance and usage (Davis, 1989). TAM has been widely applied to explain user behavior in the adoption of various technologies, including mobile services and e-commerce platforms (Ajina et al., 2023). Perceived usefulness refers to the extent to which users believe that a particular technology can enhance their performance or effectiveness, whereas perceived ease of use reflects the degree to which the technology is perceived as easy to learn and use (Davis, 1989). Moreover, prior studies have demonstrated that these two constructs play a significant role in shaping users' trust in technology and influencing their overall usage experience (Peng et al., 2020). In the context of digital payment adoption, empirical evidence from Pasaman & Hutaaruk (2025) indicates that Generation Z and Millennials represent the most active user groups in QRIS transactions. The survey was conducted between March and August 2024 and involved 1,500 respondents, comprising 750 Generation Z respondents and 750 Millennial respondents. The

findings revealed that approximately 38% of Generation Z respondents, equivalent to around 285 individuals, used QRIS in their daily activities. In comparison, approximately 25% of Millennial respondents, or about 188 individuals, reported using QRIS on a daily basis. These findings suggest that Generation Z exhibits a higher level of QRIS usage than Millennials, reflecting the generation's strong acceptance of digital payment technologies. Furthermore, the dominance of platforms such as GoPay, OVO, and ShopeePay reflects variations in users' perceptions of usefulness, ease of use, and trust across digital payment platforms. These findings underscore the strategic role of younger generations in accelerating the diffusion of digital payment systems and highlight the importance of understanding psychological factors, such as perceived ease of use, satisfaction, and trust, that contribute to the development of customer loyalty within the digital payment ecosystem. On the other hand, customer satisfaction is defined as a post-consumption evaluation that reflects users' experiences with a service (Wilson et al., 2021), whereas trust refers to the belief that a service provider is capable of fulfilling its promises and delivering reliable services (Bhat et al., 2023; Garepasha et al., 2021). Previous studies have also demonstrated that customer satisfaction and trust significantly influence customer loyalty across various digital service contexts (Bhat et al., 2023; Garepasha et al., 2021). However, most existing studies have examined these relationships in isolation and have yet to integrate TAM with relationship marketing constructs to comprehensively explain the formation of customer loyalty. Therefore, the theoretical novelty of this study lies in the development of an integrated framework

that combines the perspectives of TAM and relationship marketing through a dual mediation mechanism involving customer satisfaction and trust to explain customer loyalty formation in the context of QRIS-based digital payment systems.

Based on these research gaps, this study aims to examine the effects of perceived usefulness and perceived ease of use on customer loyalty toward QRIS payment systems in online transportation services, while considering the mediating roles of customer satisfaction and trust among Generation Z users. Conceptually, perceived usefulness and perceived ease of use not only influence technology usage intentions but also contribute to the development of customer satisfaction and trust, which ultimately shape customer loyalty (Keni, 2020; Wilson, 2019). Furthermore, prior research has shown that customer satisfaction serves as a key determinant of loyalty by fostering sustained positive experiences (Garepasha et al., 2021), while trust strengthens long-term relationships between users and service providers (Bhat et al., 2023). This study seeks to explain how perceived usefulness and perceived ease of use contribute to customer loyalty through the mediating mechanisms of satisfaction and trust. Therefore, this research not only investigates the direct effects of technology-related perceptions but also explores the underlying psychological processes that drive customer loyalty in the context of digital payment systems. The methodological novelty of this study lies in the examination of a TAM-based structural model through a dual mediation framework involving customer satisfaction and trust within the context of QRIS payment system usage among Generation Z users. This approach is expected to provide more contextualized empirical insights into the

determinants of customer loyalty in digital payment technologies.

Technology Acceptance Model and Customer Loyalty in QRIS Payment Systems among Generation Z

The Technology Acceptance Model (TAM) remains one of the most prominent theoretical frameworks for explaining the adoption of digital payment technologies, particularly the use of QRIS payment systems in online transportation services. Within this framework, perceived usefulness (PU) and perceived ease of use (PEOU) are conceptualized as core cognitive beliefs that shape users' evaluations of a technological system (Davis, 1989). In the context of app-based services, PU extends beyond functional benefits such as transaction efficiency and speed to encompass instrumental value that enhances a more convenient and integrated travel experience within the mobile payment ecosystem (Agarwal & Chua, 2020; Chen et al., 2023). This perspective is consistent with the evolution of QRIS payment systems, which enable the integration of multiple payment methods within a single digital platform, thereby improving transaction convenience and flexibility for users (Chen et al., 2023). On the other hand, PEOU serves as a facilitating factor that reduces usage barriers and strengthens users' perceived control over the system. Previous studies have indicated that PU tends to exert a more dominant influence than PEOU in shaping positive user evaluations, although both constructs remain complementary in establishing the perceived value of technology (Nuralam et al., 2024; Wilson et al., 2021). In the case of Generation Z, whose preferences are strongly characterized by speed, application integration, and instant system responsiveness, the perceived benefits of QRIS are likely to play a more

decisive role than interface simplicity alone in influencing technology evaluations and adoption decisions (Keni, 2020; Wilson, 2019).

Beyond the utilitarian dimensions of technology adoption, the relationship between technology perceptions and customer loyalty is not always direct. Consequently, customer satisfaction and trust serve as important mediating mechanisms that explain how cognitive evaluations are transformed into relational commitment. Customer satisfaction reflects a post-usage evaluation of the extent to which actual experiences meet users' expectations, whereas trust refers to confidence in the reliability, integrity, and security of a payment system (Morgan & Hunt, 1994). More critically, within digital payment environments characterized by inherent risks, trust often possesses greater explanatory power than satisfaction because it is closely associated with balance security, transaction accuracy, and personal data protection. Previous studies by Amin et al., (2014), Sitorus & Yustisia, (2018), and Wilson et al., (2021) demonstrated that perceived usefulness and perceived ease of use enhance trust and customer satisfaction by reducing uncertainty, increasing users' sense of control, and ensuring consistent system performance. For Generation Z users, heightened sensitivity to application errors, delayed notifications, and potential data breaches makes trust not merely an outcome of technology usage but a fundamental psychological prerequisite for the sustained development of customer satisfaction (Keni, 2020; Wilson, 2019).

Customer loyalty in QRIS-based digital payment services is defined as a recurring commitment to continue using the same payment method despite the availability of

alternative options, such as digital wallets, instant bank transfers, and cash payments (Oliver, 1999). From a critical perspective, customer loyalty among Generation Z is not solely derived from rational evaluations of usefulness and ease of use, but also from the accumulation of positive experiences that reinforce usage habits, psychological attachment, and resistance to switching to alternative payment methods. Empirical studies have shown that the direct effects of perceived usefulness and perceived ease of use on customer loyalty tend to diminish when customer satisfaction and trust are incorporated as mediating variables, suggesting that affective-relational pathways possess greater explanatory power than direct cognitive pathways (Keni, (2020); Nuralam et al., (2024); Wilson et al., (2021)). In the context of QRIS payment systems within online transportation services, customer loyalty is more likely to emerge from consistently fast, secure, seamless, and widely accepted transaction experiences across multiple merchants rather than from users' initial perceptions of technological features alone (George & Kumar, (2013); Wilson, (2019)). Therefore, customer loyalty is shaped not only by cognitive perceptions of technological usefulness and ease of use but also through mediation processes involving customer satisfaction and trust as affective-relational mechanisms. This perspective provides a more comprehensive understanding of Generation Z's loyalty behavior toward QRIS payment systems within the context of online transportation services.

The Effect of Perceived Usefulness on Customer Satisfaction

Within the Technology Acceptance Model (TAM), perceived usefulness (PU) is

conceptualized as users' cognitive evaluation of the benefits derived from using a particular technology (Davis, 1989). When a system provides tangible functional value, users are more likely to develop favorable evaluations of their usage experience, which can ultimately enhance their level of satisfaction. Customer satisfaction itself refers to an affective evaluation that emerges when individuals compare the actual performance of a product or service with their initial expectations (Kotler & Keller, 2016). Empirical evidence has consistently shown that users who perceive substantial benefits from a technological system tend to evaluate their overall experience more positively. Wilson et al. (2021) found that perceived usefulness significantly enhances customer satisfaction in technology-based service settings. Similar findings were reported by Amin et al. (2014), who demonstrated that perceived usefulness positively influences customer satisfaction in the context of mobile website services. However, Nuralam et al. (2024) suggested that under certain circumstances, perceived usefulness may not serve as the primary determinant of satisfaction, as its influence can be affected by contextual factors such as service quality and user characteristics. Nevertheless, based on the dominant empirical evidence and the theoretical rationale provided by the Technology Acceptance Model, greater perceived benefits from a technology are expected to lead to higher levels of customer satisfaction. Therefore, the following hypothesis is proposed:

H1: Perceived Usefulness positively affects Customer Satisfaction.

The Effect of Perceived Usefulness on Trust

From the perspective of integrating the Technology Acceptance Model (TAM) and trust theory, perceived usefulness functions

as a value signal that reduces uncertainty and strengthens users' confidence in a technological system. When a technology consistently delivers tangible benefits, users are more likely to perceive the system as reliable, secure, and trustworthy. Nuralam et al. (2024) found that perceived usefulness positively influences trust in the context of mobile commerce. Similarly, Amin et al. (2014) reported that perceived benefits have a significant impact on the development of trust in mobile service users. Furthermore, Kenyta (2022) demonstrated that perceived usefulness contributes to strengthening users' confidence in online transactions. Nevertheless, several studies have suggested the existence of a reciprocal relationship, whereby users' initial level of trust may also influence the formation of perceived usefulness toward a technology. Despite this possibility, the majority of the literature identifies perceived usefulness as a key antecedent of trust, making this relationship particularly relevant to examine in the context of QRIS payment system usage within online transportation services. Therefore, the following hypothesis is proposed:

H2: Perceived Usefulness positively affects Trust.

The Effect of Perceived Ease of Use on Perceived Usefulness

Within the Technology Acceptance Model (TAM), perceived ease of use (PEOU) refers to the extent to which a technology can be used effortlessly and without requiring substantial effort from its users. The easier a system is to operate, the more likely users are to perceive the tangible benefits offered by the technology (Davis, 1989). In TAM, perceived ease of use not only directly influences users' behavioral intentions but also affects perceived usefulness. From a theoretical perspective, a

system that is easier to use enables users to focus more effectively on task completion, thereby making its benefits more apparent and easier to recognize. Davis (1989) demonstrated that ease of use contributes significantly to the enhancement of perceived usefulness. This finding is further supported by Nuralam et al. (2024) and Amin et al. (2014), who identified perceived ease of use as a significant predictor of perceived usefulness in the contexts of mobile commerce and online shopping. Nevertheless, under certain conditions, such as technical limitations, system disruptions, or features that do not align with users' needs, ease of use may not automatically translate into greater perceived usefulness. This suggests that the relationship between perceived ease of use and perceived usefulness may also be influenced by the usage context and the characteristics of the adopted technology. However, the existing literature generally demonstrates a positive and consistent relationship between perceived ease of use and perceived usefulness. Therefore, the following hypothesis is proposed:

H3: Perceived Ease of Use positively affects Perceived Usefulness.

The Effect of Perceived Ease of Use on Customer Satisfaction

Perceived ease of use contributes to the development of a positive user experience, as systems that are easy to use reduce frustration, operational errors, and users' cognitive burden. In technology-based service environments, ease of use enables users to interact with the system more efficiently, thereby fostering more favorable evaluations of their overall experience (Davis, 1989). Customer satisfaction is achieved when actual experiences meet or

exceed users' expectations (Kotler & Keller, 2016). Within the context of technology-enabled services, ease of use represents a critical factor shaping users' overall evaluations of a service. Nuralam et al. (2024) found that perceived ease of use positively influences customer satisfaction in online service settings. Similarly, Amin et al. (2014) reported that ease of use significantly enhances customer satisfaction in the context of mobile website services. Furthermore, Wilson et al. (2021) demonstrated that system usability contributes positively to users' evaluations of technology-based services. However, Ashfaq et al. (2019) found that the effect of perceived ease of use on customer satisfaction is not always significant and may vary depending on user characteristics and research contexts. Despite these variations in empirical findings, the majority of the literature suggests that perceived ease of use remains a key determinant of positive user experiences and higher levels of customer satisfaction in technology-based services. Therefore, the positive relationship between perceived ease of use and customer satisfaction remains relevant for examination in the context of QRIS payment system usage within online transportation services. Accordingly, the following hypothesis is proposed:

H4: Perceived Ease of Use positively affects Customer Satisfaction.

The Effect of Perceived Ease of Use on Trust

In the context of digital services, perceived ease of use (PEOU) is regarded as a factor that reduces uncertainty, enhances users' sense of control, and minimizes perceived risks during interactions with a technological system. When a technology is easy to understand and operate, users are

more likely to perceive it as reliable and worthy of trust (Davis, 1989). Trust theory in online environments suggests that trust develops when users perceive a system as dependable and free from complexity or ambiguity (Gefen et al., 2003). Empirical evidence has consistently demonstrated that perceived ease of use contributes positively to the development of trust. Wilson et al. (2021) found that ease of use enhances user trust in mobile commerce settings. Similarly, Amin et al. (2014) reported that perceived ease of use has a significant positive effect on trust in mobile website services. Furthermore, Kenyta (2022) showed that systems that are easier to use tend to strengthen users' confidence in the integrity and competence of service providers. Nevertheless, several studies have suggested that in high-risk environments, trust may be influenced more strongly by factors such as security and organizational reputation than by ease of use alone. Despite this, the majority of the literature identifies perceived ease of use as an important mechanism in trust formation because it reduces cognitive barriers, enhances users' sense of control, and lowers perceived risk. Therefore, the positive relationship between perceived ease of use and trust remains relevant for examination in the context of QRIS payment system usage within online transportation services. Accordingly, the following hypothesis is proposed:

H5: Perceived Ease of Use positively affects Trust.

The Effect of Customer Satisfaction on Customer Loyalty

From a relationship marketing perspective, customer satisfaction reflects users' positive evaluations of their service experiences after comparing actual performance with their initial expectations (Kotler & Keller, 2016). Within this

theoretical framework, customer satisfaction is regarded as one of the primary antecedents of customer loyalty, as positive experiences encourage repurchase intentions and foster long-term commitment to a brand or service provider. Consistently positive experiences strengthen users' intentions to continue using a service and reinforce their long-term relationships with the provider. Oliver (1999) argued that customer loyalty develops through cognitive, affective, and conative stages that are rooted in sustained satisfaction experiences. Empirical evidence has widely supported the positive relationship between customer satisfaction and customer loyalty across various service contexts. Amin et al. (2014) found that customer satisfaction significantly influences customer loyalty in mobile service environments. Similarly, Wilson et al. (2021) demonstrated that customer satisfaction serves as a key determinant of loyalty in mobile commerce. Nevertheless, several studies suggest that satisfaction alone may not always be sufficient to generate customer loyalty, particularly when users have access to numerous comparable alternatives or when switching costs are relatively low. In the context of digital payment services, such conditions may encourage users to switch to competing platforms despite being satisfied with their current service. Despite these considerations, the mainstream literature consistently identifies customer satisfaction as a fundamental prerequisite for the development of customer loyalty. Therefore, the following hypothesis is proposed:

H6: Customer Satisfaction positively affects Customer Loyalty.

The Effect of Trust on Customer Loyalty

From a relationship marketing perspective, trust reflects users' confidence that a service provider will act consistently, reliably, and in accordance with customers'

expectations (Gefen et al., 2003). Trust serves as a fundamental basis for building long-term relationships because it reduces perceived risk and strengthens customers' commitment to the services they use. According to Morgan & Hunt (1994) Commitment-Trust Theory, trust is a key variable in maintaining enduring relational exchanges. Empirical evidence has consistently demonstrated the positive influence of trust on customer loyalty. Gefen et al. (2003) found that trust enhances repurchase intentions in e-commerce settings. Similarly, Amin et al. (2014) reported that trust significantly influences customer loyalty in mobile service environments. Furthermore, studies in electronic commerce have shown that higher levels of trust encourage stronger commitment and sustained intentions toward service providers. Nevertheless, several studies suggest that the influence of trust on customer loyalty may operate through mediating mechanisms, such as customer satisfaction or commitment, meaning that its direct effect is not always the most dominant pathway. Despite this, the majority of the literature continues to identify trust as one of the primary determinants of customer loyalty, particularly in digital service environments characterized by uncertainty and perceived risk. Therefore, the following hypothesis is proposed:

H7: Trust positively affects Customer Loyalty.

The Effect of Perceived Usefulness on Customer Loyalty

From the perspective of technology-driven consumer behavior, perceived usefulness (PU) refers to the tangible benefits that users derive from

utilizing a technological system, which may ultimately encourage continued usage and long-term commitment to a service. When a technology consistently delivers functional value, users are more likely to maintain their use of the service despite the availability of alternative options (Davis, 1989). Customer loyalty itself is defined as a deeply held commitment to repurchase or consistently reuse a preferred product or service in the future, despite situational influences and competing alternatives (Oliver, 1999). Empirical studies have provided evidence that perceived usefulness contributes directly to customer loyalty. Amin et al. (2014) found that perceived benefits exert a positive and significant effect on customer loyalty in the context of mobile services. Similarly, Wilson et al. (2021) demonstrated that perceived usefulness enhances continuance intention, which represents a behavioral manifestation of customer loyalty. Furthermore, in the e-commerce context, Gefen et al. (2003) indicated that when users perceive high utilitarian value from a system, they are more likely to maintain their relationship with the service provider. Nevertheless, several studies suggest that the influence of perceived usefulness on customer loyalty often operates through mediating mechanisms such as customer satisfaction or trust, causing the direct relationship to weaken in certain structural models. Despite this, perceived usefulness remains conceptually recognized as an important determinant of customer commitment and the continued use of digital services. Therefore, the following hypothesis is proposed:

H8: Perceived Usefulness positively affects Customer Loyalty.

The Effect of Perceived Ease of Use on Customer Loyalty

In the context of digital services, perceived ease of use (PEOU) reflects the extent to which users perceive a system as easy to interact with, thereby creating a more convenient, efficient, and seamless user experience. When a technology can be used easily and consistently, users are more likely to continue using the service over time (Davis, 1989). Customer loyalty is reflected in users' willingness to continue using a service and recommend it to others (Oliver, 1999). Several studies have supported the existence of a positive relationship between perceived ease of use and customer loyalty. Wilson et al. (2021) found that ease of use contributes to continuance intention in mobile commerce environments. Similarly, Amin et al. (2014) reported that perceived ease of use significantly influences customer loyalty in mobile service settings.

Furthermore, Nuralam et al. (2024) demonstrated that simple and frictionless user experiences increase the likelihood of customers remaining loyal to the same platform. Nevertheless, some studies suggest that the effect of perceived ease of use on customer loyalty is often mediated by perceived usefulness, trust, or customer satisfaction, causing its direct effect to become weaker when these variables are simultaneously incorporated into a structural model. Despite this, perceived ease of use remains theoretically recognized as a fundamental factor that fosters user attachment and supports the continuity of relationships with digital services. Therefore, the positive relationship between perceived ease of use and customer loyalty remains relevant for examination in the context of QRIS payment system usage within online transportation services. Accordingly, the following hypothesis is proposed:

H9: Perceived Ease of Use positively affects Customer Loyalty.

Based on the theoretical review and hypothesis development, the research model employed in this study is presented in Figure 1.

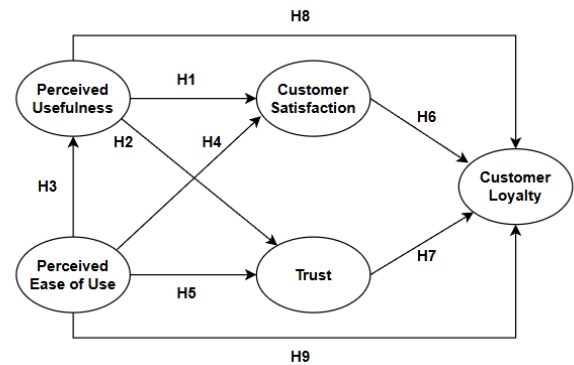


Figure 1 Research Model

METHODOLOGY

This study employed a quantitative approach using a survey method. The sampling process was conducted through a non-probability sampling technique, specifically purposive sampling. This technique was selected because respondents were required to meet specific criteria relevant to the objectives of the study. The respondents were Generation Z users of online transportation services, aged between 14 and 29 years, who had used the QRIS payment feature at least three times within the previous three months. Data were collected through an online survey using a structured questionnaire distributed via social media platforms, including WhatsApp and Instagram. An online survey method was chosen due to its effectiveness in reaching Generation Z, a demographic group characterized by high levels of internet and digital platform usage. Prior to completing the questionnaire, respondents were screened through a set of filtering questions to ensure that they met all research criteria.

According to Hair et al. (2010), the minimum sample size for SEM-based studies can be determined based on the number of indicators used, ranging from five to ten times the total number of indicators. This study employed 19 indicators; therefore, the recommended minimum sample size was 133 respondents (19×7). Through the data collection process, a total of 409 valid responses were obtained and included in the analysis. This sample size exceeded the recommended minimum threshold and was considered adequate for PLS-SEM analysis, which is relatively robust when applied to small-to-medium sample sizes.

Data were collected using a structured questionnaire adapted from relevant prior studies. All measurement items were assessed using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The details of the measurement indicators and their corresponding sources are presented in Table 1. The measurement instrument was adapted from Wilson et al. (2021).

Table 1 Measurement Indicators

Variable	Indicator	Description
Perceived Usefulness (PU)	PU1	The QRIS payment system in online transportation services makes my transaction process more effective.
	PU2	The QRIS payment system in online transportation services helps me complete payments more quickly and efficiently.
	PU3	The QRIS payment system in online transportation services provides tangible benefits that I experience in my daily transactions.
Perceived Ease of Use (PEOU)	PEOU1	I find the QRIS payment system in online transportation services easy to understand from the first time I use it.
	PEOU2	I do not experience difficulties in learning how to use the QRIS payment system in online transportation services.
	PEOU3	Overall, the QRIS payment system in online transportation services is easy to use.
Trust (TRU)	TRU1	I believe that the QRIS payment system in online transportation services is secure to use.

Variable	Indicator	Description
Customer Satisfaction (SAT)	TRU2	The information provided about the QRIS payment system in online transportation services is clear and trustworthy.
	TRU3	The QRIS payment system in online transportation services performs as promised.
	TRU4	I consider the QRIS payment system in online transportation services to have a good reputation.
	SAT1	My experience with the QRIS payment system in online transportation services meets my expectations.
	SAT2	I am satisfied with my experience of using the QRIS payment system in online transportation services.
	SAT3	My experience of using the QRIS payment system in online transportation services exceeds my expectations.
	SAT4	I believe that choosing to use the QRIS payment system in online transportation services was the right decision.
	LOY1	I intend to continue using the QRIS payment system in online transportation services in the future.
Customer Loyalty (LOY)	LOY2	I am willing to recommend the QRIS payment system in online transportation services to my friends.
	LOY3	I am willing to recommend the QRIS payment system in online transportation services to my family members.
	LOY4	I share positive opinions about the QRIS payment system in online transportation services with others.
	LOY5	I encourage others to use the QRIS payment system in online transportation services.

Data Analysis Method

The collected data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with the assistance of the latest version of SmartPLS software. This method was selected because of its ability to analyze complex relationships among latent variables, including direct effects, indirect effects, and mediation relationships (Hair et al., 2011).

The analysis was conducted through the evaluation of the measurement model (outer model) to assess construct validity and reliability, followed by the evaluation of the structural model (inner model) to

examine the relationships among the latent variables. Hypothesis testing was performed based on path coefficients, t-statistics, and p-values. Relationships were considered statistically significant when the t-statistic exceeded 1.96 and the p-value was below 0.05 (Hair et al., 2011). Furthermore, mediation effects were assessed using the bootstrapping procedure to evaluate the significance of indirect effects.

RESULTS AND DISCUSSION

Respondent Characteristics

This study involved 409 respondents who met the criteria of being Generation Z users of QRIS payment systems within online transportation services. Based on gender, the majority of respondents were female (79%), while male respondents accounted for 21% of the sample. In terms of birth year, most respondents were born between 2001 and 2004 (72%), followed by those born between 2005 and 2009 (22%) and between 1997 and 2000 (6%). A detailed summary of the respondents' characteristics is presented in Table 2.

Table 2 Respondent Characteristics

Characteristics	Criteria	Frequency	Percentage
Gender	Male	84	21%
	Female	325	79%
Year of Birth	1997-2000	27	6%
	2001-2004	292	72%
	2005-2009	90	22%

Measurement Model

Following the analysis of respondent characteristics, the data were evaluated through the measurement model (outer model) to ensure that all constructs satisfied the required validity and reliability criteria. The measurement model was assessed by examining convergent validity and construct reliability based on outer loading values, Average Variance Extracted (AVE), Cronbach's Alpha, and Composite Reliability (Hair et al. 2011). An indicator was considered to have adequate convergent

validity if its outer loading exceeded 0.70 and the corresponding construct achieved an AVE value greater than 0.50. Furthermore, a construct was deemed reliable when both its Cronbach's Alpha and Composite Reliability values exceeded the recommended threshold of 0.70.

Table 3. Measurement Model Analysis

Variable	Indicator	Factor Loading	Cronbach's Alpha	Composite Reliability	AVE
Perceived Usefulness	PU1	0.789	0.708	0.837	0.631
	PU2	0.786			
	PU3	0.809			
Perceived Ease of Use	PEOU1	0.748	0.710	0.837	0.632
	PEOU2	0.821			
	PEOU3	0.815			
Trust	TRU1	0.774	0.769	0.852	0.590
	TRU2	0.768			
	TRU3	0.768			
	TRU4	0.763			
Customer Satisfaction	SAT1	0.816	0.726	0.845	0.646
	SAT2	0.780			
	SAT4	0.814			
Customer Loyalty	LOY1	0.711	0.749	0.841	0.570
	LOY2	0.786			
	LOY3	0.783			
	LOY4	0.739			
	LOY5	0.739			

Table 3 presents the results of the measurement model evaluation conducted to assess the validity and reliability of the research constructs. During the initial stage of analysis, two indicators exhibited outer loading values below the recommended threshold of 0.70, namely SAT3 (0.686) and LOY4 (0.645). Consequently, these indicators were removed from the research model to satisfy the requirements of convergent validity. Following the elimination process, all remaining indicators demonstrated outer loading values above 0.70, while all constructs achieved Average Variance Extracted (AVE) values exceeding 0.50, thereby meeting the criteria for convergent validity. Furthermore, the Cronbach's Alpha and Composite Reliability values for all constructs were above the recommended threshold of 0.70, indicating satisfactory construct reliability. Therefore, all constructs were considered valid and reliable and were deemed suitable for subsequent structural model analysis. In addition to convergent validity and construct reliability, discriminant validity was also assessed to

ensure that each construct was empirically distinct from the others. Discriminant validity was evaluated using the Fornell–Larcker criterion, and the results are presented in Table 4.

Table 4 Discriminant Validity Analysis (Fornell–Larcker Criterion)

	LOY	PEOU	PU	SAT	TRU
LOY	0.755				
PEOU	0.370	0.795			
PU	0.369	0.431	0.795		
SAT	0.523	0.518	0.491	0.804	
TRU	0.435	0.435	0.423	0.507	0.768

Based on Table 4, the results indicate that all constructs satisfy the Fornell–Larcker criterion, confirming that discriminant validity is established and acceptable.

In addition to the Fornell–Larcker criterion, discriminant validity was further assessed using the Heterotrait–Monotrait Ratio (HTMT), with a recommended threshold value of $< 0,90$ (Hair et al., 2019). The results of the discriminant validity assessment using HTMT are presented in Table 5.

Table 5 Discriminant Validity Analysis (HTMT)

	LOY	PEOU	PU	SAT	TRU
LOY					
PEOU	0.504				
PU	0.502	0.598			
SAT	0.702	0.715	0.686		
TRU	0.568	0.585	0.572	0.670	

Based on Table 5, all HTMT values are below the recommended threshold of 0.90. The highest HTMT value is observed between Perceived Ease of Use and Customer Satisfaction (0.715), whereas the lowest value is found between Perceived Usefulness and Customer Loyalty (0.502). These results indicate that all constructs satisfy the discriminant validity criterion and are empirically distinct from one another within the research model.

Structural Model Evaluation

After the measurement model (outer model) satisfied the validity and reliability

requirements, the next step involved evaluating the structural model (inner model) to examine the relationships among the constructs in the proposed research model. The structural model evaluation included assessments of model fit, path coefficients, coefficients of determination (R^2), and mediation effects using the bootstrapping procedure. The results of these analyses are presented in Tables 6, 7, and 8.

Table 6 Model Fit Analysis

Indicator	Value	Criterion	Interpretation
SRMR	0.080	< 0.10	Fit
NFI	0.720	Close to 1	Fit

Table 7 Path Coefficient Result

Path Coefficient	Original sample (O)	T statistics ($ O/STDEV $)	P values	Result
PU → SAT	0.328	5.543	0.000	Significant
PU → TRU	0.290	4.718	0.000	Significant
PEOU → PU	0.431	5.421	0.000	Significant
PEOU → SAT	0.377	6.432	0.000	Significant
PEOU → TRU	0.311	5.091	0.000	Significant
SAT → LOY	0.347	6.258	0.000	Significant
TRU → LOY	0.192	3.736	0.000	Significant
PU → LOY	0.089	1.523	0.064	No Significant
PEOU → LOY	0.068	1.189	0.117	No Significant

Table 8 Coefficient of Determination (R^2)

Dependent Variable	R-square	Adjusted
PU	0.186	0.184
TRU	0.258	0.254
SAT	0.356	0.353
LOY	0.323	0.316

Based on the model fit assessment presented in Table 6, the SRMR value of 0.080 indicates that the proposed model satisfies the recommended model fit criterion. In addition, the NFI value of 0.720 suggests an acceptable level of model fit. Therefore, the proposed research model is

considered adequate for examining the relationships among the constructs included in this study.

The path coefficient results presented in Table 7 indicate that perceived usefulness has a positive and significant effect on both customer satisfaction and trust. Furthermore, perceived ease of use exerts a positive and significant influence on perceived usefulness, customer satisfaction, and trust. The findings also reveal that customer satisfaction and trust have positive and significant effects on customer loyalty. However, the direct effects of perceived usefulness on customer loyalty and perceived ease of use on customer loyalty are not statistically significant.

Based on the coefficient of determination (R²) results presented in Table 8, the R² values for Perceived Usefulness, Trust, Customer Satisfaction, and Customer Loyalty are 0.186, 0.258, 0.356, and 0.323, respectively. These values indicate that the model explains 18.6% of the variance in Perceived Usefulness, 25.8% of the variance in Trust, 35.6% of the variance in Customer Satisfaction, and 32.3% of the variance in Customer Loyalty, while the remaining variance is attributable to factors not included in the research model. According to Hair et al. (2010), R² values 0.75, 0.50, and 0.25 are categorized as substantial, moderate, and weak, respectively. Based on these criteria, the R² values for Trust (0.258), Customer Satisfaction (0.356), and Customer Loyalty (0.323) fall within the weak category, as they range between 0.25 and 0.50. In contrast, the R² value for Perceived Usefulness (0.186) falls below the weak threshold, indicating that the explanatory power of the independent variables for this construct is relatively limited. Nevertheless, the variables included in the model demonstrate predictive relevance in explaining the dependent constructs,

suggesting that additional factors beyond those examined in this study may also influence QRIS usage behavior within online transportation services.

Hypothesis Testing

Hypothesis testing was conducted to determine whether the relationships proposed in the research model were supported by the PLS-SEM analysis results. The acceptance or rejection of each hypothesis was based on the t-statistic value, with a minimum threshold of 1.96 at a significance level of 5% ($\alpha = 0.05$). A hypothesis was considered supported when the t-statistic exceeded 1.96 and the p-value was less than 0.05 (Hair et al., 2011). Conversely, a hypothesis was considered unsupported when the t-statistic was below 1.96 and the p-value exceeded 0.05. The results of the hypothesis testing are presented in Table 9.

Table 9 Hypothesis Testing Results

	Hypothesis	Original sample (O)	T statistics (O /STDEV I)	P values	Result
H1	Perceived Usefulness → Customer Satisfaction.	0.328	5.543	0.000	H1 Supported
H2	Perceived Usefulness → Trust.	0.290	4.718	0.000	H2 Supported
H3	Perceived Ease of Use → Perceived Usefulness.	0.431	5.421	0.000	H3 Supported
H4	Perceived Ease of Use → Customer Satisfaction.	0.377	6.432	0.000	H4 Supported
H5	Perceived Ease of Use → Trust.	0.311	5.091	0.000	H5 Supported
H6	Customer Satisfaction → Customer Loyalty.	0.347	6.258	0.000	H6 Supported
H7	Trust → Customer Loyalty.	0.192	3.736	0.000	H7 Supported
H8	Perceived Usefulness → Customer Loyalty.	0.089	1.523	0.064	H8 Not Supported
H9	Perceived Ease of Use → Customer Loyalty.	0.068	1.189	0.117	H9 Not Supported

Based on the hypothesis testing results presented in Table 9, seven out of the nine proposed hypotheses are supported, as their t-statistics exceed 1.96 and their p-values are below 0.05. The supported hypotheses include H1, H2, H3, H4, H5, H6, and H7. In contrast, H8 and H9 are not supported because their t-statistics are below 1.96 and their p-values exceed 0.05. These findings indicate that the direct effects of perceived usefulness and perceived ease of use on

customer loyalty are not statistically significant in the context of this study.

Mediation Effect Testing

In addition to examining the direct relationships among the variables, this study also investigated indirect effects through mediation mechanisms. Mediation effect testing was conducted using the bootstrapping procedure to evaluate the roles of customer satisfaction and trust in mediating the relationships among the constructs in the proposed research model. The results of the mediation analysis are presented in Table 10.

Indirect Effect	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Result
PU→SAT→LOY	0.114	0.114	0.030	3.797	0.000	Supported
PU→TRU→LOY	0.056	0.056	0.020	2.751	0.003	Supported
PEOU→PU→SAT	0.141	0.140	0.044	3.215	0.001	Supported
PEOU→PU→TRU	0.125	0.124	0.043	2.872	0.002	Supported
PEOU→PU→LOY	0.038	0.037	0.027	1.400	0.081	Not Supported
PEOU→SAT→LOY	0.131	0.129	0.027	4.826	0.000	Supported
PEOU→TRU→LOY	0.060	0.059	0.020	2.994	0.001	Supported
PEOU→PU→SAT→LOY	0.049	0.049	0.019	2.587	0.005	Supported
PEOU→PU→TRU→LOY	0.024	0.024	0.012	2.037	0.021	Supported

Based on the results presented in Table 10, customer satisfaction and trust are found to mediate the relationships between perceived usefulness and customer loyalty, as well as between perceived ease of use and customer loyalty. The findings indicate that the indirect effects through these mediating variables are statistically significant, whereas the direct effects of perceived usefulness and perceived ease of use on customer loyalty are not significant. These results suggest that customer satisfaction and trust serve as important mechanisms through which perceived usefulness and perceived ease of use influence customer loyalty. Overall, the findings demonstrate that customer satisfaction and trust function as full mediators in the relationship between perceived usefulness and customer loyalty,

and between perceived ease of use and customer loyalty, as evidenced by significant indirect effects alongside non-significant direct effects.

The findings indicate that perceived usefulness has a positive and significant effect on both customer satisfaction and trust in the use of QRIS payment systems within online transportation services. These results are consistent with the Technology Acceptance Model (TAM) proposed by Davis (1989), which posits that the greater the perceived benefits of a technology, the more favorable users' acceptance and evaluations of that technology will be. In the context of this study, users who perceive QRIS as enabling faster, more convenient, and more efficient transactions are more likely to experience higher levels of satisfaction and trust toward the service. These findings are also consistent with prior studies conducted by George & Kumar (2013), Wilson et al. (2021), Nuralam et al. (2024), and Amelia & Simanjuntak (2024), which demonstrated that the tangible benefits provided by a technology enhance user satisfaction. Furthermore, Orrange et al. (2021) dan Malhan et al. (2023) argued that positive user experiences and perceived benefits contribute significantly to the development of trust in digital services. Therefore, the ability of QRIS payment systems within online transportation services to deliver added value and improve transaction efficiency represents a critical factor in fostering both customer satisfaction and trust toward digital payment services.

The results further reveal that perceived ease of use has a positive and significant effect on perceived usefulness, customer satisfaction, and trust. These findings are consistent with the Technology Acceptance Model (TAM) proposed by Davis

(1989), which suggests that technologies that are easy to understand and operate are more readily accepted by users and enhance perceptions of their usefulness. In the context of this study, the ease of using QRIS payment systems within online transportation services enables users to perceive the service as practical, efficient, and supportive of their daily transaction activities. Consequently, ease of use not only strengthens users' perceptions of the benefits offered by QRIS but also contributes to the development of customer satisfaction and trust toward the digital payment service. These findings are in line with previous studies by Wilson et al. (2021), Amin et al. (2014), Nuralam et al. (2024), Orrange et al. (2021), and Malhan et al. (2023), which demonstrated that the ease of using a technology enhances perceived usefulness, customer satisfaction, and trust in digital service environments.

The findings further indicate that customer satisfaction and trust have positive and significant effects on customer loyalty. These results suggest that users who are satisfied with and trust the QRIS payment system within online transportation services are more likely to continue using the service and maintain a long-term relationship with the provider. The findings are consistent with the view of Kotler & Keller (2016), who argued that customer satisfaction arising from service experiences that meet or exceed expectations contributes to the development of customer loyalty. Furthermore, Amelia & Simanjuntak (2024) and Malhan et al. (2023) emphasized that a high level of trust enhances customer commitment and increases the likelihood of continued service usage. The present findings are also in line with previous studies conducted by Wilson et al. (2021), Sitorus & Yustisia (2018), Nuralam et al. (2024), Kenyta (2022), Ajina et al. (2023), and Daud & Razak (2018), which

highlighted the critical roles of satisfaction and trust in fostering customer loyalty toward digital services. In the context of this study, transaction experiences characterized by speed, convenience, security, and reliability through QRIS payment systems contribute to higher levels of customer satisfaction and trust, which subsequently strengthen customer loyalty toward digital payment services.

Another important finding of this study is that perceived usefulness and perceived ease of use do not exert direct effects on customer loyalty. However, both variables influence customer loyalty indirectly through customer satisfaction and trust. This finding suggests that the perceived benefits and ease of use of QRIS payment systems within online transportation services are not sufficient to directly foster user loyalty. Instead, these attributes first create positive user experiences that enhance satisfaction and trust, which subsequently translate into loyalty. This result supports the notion that the relationship between technology-related perceptions and loyalty is not solely driven by cognitive evaluations but also depends on affective and relational mechanisms. Therefore, the findings underscore the pivotal roles of customer satisfaction and trust as mediating mechanisms through which perceived usefulness and perceived ease of use contribute to the development of customer loyalty in the context of QRIS payment systems within online transportation services.

CONCLUSION

This study aimed to examine the effects of perceived usefulness and perceived ease of use on customer loyalty toward QRIS payment systems within online transportation services, while considering the mediating roles of customer satisfaction

and trust among Generation Z users. The findings indicate that perceived usefulness has positive and significant effects on customer satisfaction and trust, whereas perceived ease of use positively and significantly influences perceived usefulness, customer satisfaction, and trust. In addition, customer satisfaction and trust are found to have positive and significant effects on customer loyalty. However, the direct effects of perceived usefulness and perceived ease of use on customer loyalty are not statistically significant. These findings suggest that the development of customer loyalty toward QRIS payment systems is influenced not only by the perceived benefits and ease of use of the technology but also by psychological processes reflected in users' satisfaction and trust. Accordingly, customer satisfaction and trust serve as full mediators in the relationships between perceived usefulness and customer loyalty, as well as between perceived ease of use and customer loyalty.

The findings suggest that enhancing customer loyalty toward QRIS payment systems requires more than simply improving the perceived usefulness and ease of use of the technology. Efforts to strengthen customer satisfaction and trust are equally important in fostering long-term loyalty. Therefore, providers of online transportation services should ensure that QRIS payment systems deliver secure, convenient, reliable, and user-centered transaction experiences that align with users' needs and expectations. By fostering higher levels of satisfaction and trust, service providers can strengthen customer loyalty, particularly among Generation Z, a demographic characterized by a high level of digital technology adoption.

Despite its contributions to understanding the formation of customer loyalty toward QRIS payment systems within online transportation services, this study has several limitations that should be considered when interpreting the findings and designing future research. First, the study focuses exclusively on Generation Z respondents, which limits the generalizability of the findings to other generational cohorts. Second, the research model incorporates only perceived usefulness, perceived ease of use, customer satisfaction, and trust as determinants of customer loyalty. Therefore, other factors that may influence loyalty toward QRIS payment systems remain unexplored. Future research is encouraged to broaden the respondent base by including different generational groups and to extend the model by incorporating additional relevant variables, such as perceived security, perceived risk, social influence, customer experience, and promotional incentives (e.g., discounts and cashback offers). Such efforts may provide a more comprehensive understanding of the factors influencing customer loyalty in the context of digital payment systems.

REFERENCES

- Agarwal, S., & Chua, Y. H. (2020). FinTech and household finance: a review of the empirical literature. *China Finance Review International*, 10(4), 361–376.
<https://doi.org/10.1108/CFRI-03-2020-0024>
- Ajina, A. S., Joudeh, J. M. M., Ali, N. N., Zamil, A. M., & Hashem, T. N. (2023). The effect of mobile-wallet service dimensions on customer satisfaction and loyalty: An empirical study. *Cogent Business and Management*,

- 10(2).
<https://doi.org/10.1080/23311975.2023.2229544>
- Amelia, R., & Simanjuntak, M. (2024). The Role of Perceived Usefulness, Social Influence, Data Security, and Consumer Trust Toward Satisfaction of Telemedicine. *Malaysian Journal of Consumer and Family Economics*, 33, 126–156.
<https://doi.org/10.60016/majcafe.v33.05>
- Amin, M., Rezaei, S., & Abolghasemi, M. (2014). User satisfaction with mobile websites: the impact of perceived usefulness (PU), perceived ease of use (PEOU) and trust. *Nankai Business Review International*, 5(3), 258–274.
<https://doi.org/10.1108/NBRI-01-2014-0005>
- Ashfaq, M., Yun, J., Waheed, A., Khan, M. S., & Farrukh, M. (2019). Customers' Expectation, Satisfaction, and Repurchase Intention of Used Products Online: Empirical Evidence From China. *Sage Open*, 9(2).
<https://doi.org/10.1177/2158244019846212>
- Bhat, J. R., AlQahtani, S. A., & Nekovee, M. (2023). FinTech enablers, use cases, and role of future internet of things. *Journal of King Saud University - Computer and Information Sciences*, 35(1), 87–101.
<https://doi.org/10.1016/j.jksuci.2022.08.033>
- Chen, F., Jiang, G., & Xiao, J. J. (2023). Mobile payment use and payment satisfaction: mediation and moderation analyses. *International Journal of Bank Marketing*, 41(4), 727–748.
<https://doi.org/10.1108/IJBM-09-2022-0406>
- Daud, A., & Razak, M. (2018). Impact of customer trust toward loyalty: the mediating role of perceived usefulness and satisfaction. In *www.jbrmr.com A Journal of the Academy of Business and Retail Management* (Vol. 13). ABRM. www.jbrmr.com
- Davis, F. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, Vol. 13, No. 3, 319–340.
- Garepasha, A., Aali, S., Bafandeh Zende, A. R., & Iranzadeh, S. (2021). Relationship dynamics in customer loyalty to online banking services. *Journal of Islamic Marketing*, 12(4), 830–863.
<https://doi.org/10.1108/JIMA-09-2019-0183>
- Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in Online Shopping: An Integrated Model. *MIS Quarterly*, 27(1), 51–90.
<https://doi.org/10.2307/30036519>
- George, A., & Kumar, G. S. G. (2013). Antecedents of Customer Satisfaction In Internet Banking: Technology Acceptance Model (TAM) Redefined. *Global Business Review*, 14(4), 627–638.
<https://doi.org/10.1177/0972150913501602>
- Haikal, E. K., Mohammed Freihat, S., Moh, D., Homs, A., M Joudeh, J. M., & Hashem, T. N. (2020). The Role of Supply Chain Strategy and Affiliate Marketing in Increasing the Demand for E-Commerce-Social Media POV. In *International Journal of Supply Chain Management IJSCM* (Vol. 9, Number 1). Online. <http://excelingtech.co.uk/>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis* (7th ed.). England: Pearson Education Limited.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver

- bullet. *Journal of Marketing Theory and Practice*, 19(2), 139-152.
<https://doi.org/10.2753/MTP1069-6679190202>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24.
<https://doi.org/10.1108/EBR-11-2018-0203>
- Kaur, B., Kaur, J., Pandey, S. K., & Joshi, S. (2023). E-service Quality: Development and Validation of the Scale. *Global Business Review*, 24(5), 953-971.
<https://doi.org/10.1177/0972150920920452>
- Keni, K. (2020). How Perceived Usefulness and Perceived Ease of Use Affecting Intent to Repurchase? *Jurnal Manajemen*, 24(3), 481.
<https://doi.org/10.24912/jm.v24i3.680>
- Kenyta, C. (2022). Analysis of the Effect of Perceived Usefulness, Perceived Ease of Use, and Trust of Security on Customer Loyalty through Customer Satisfaction on the OVO Application. *International Journal of Review Management Business and Entrepreneurship (RMBE)*, 2(2), 14-25.
<https://doi.org/10.37715/rmbe.v2i2.3347>
- Kotler, P., & Keller, K. L. (2016). *Marketing Management* (15th ed.). Pearson Education.
- Latif, K. F., Bunce, L., & Ahmad, M. S. (2021). How can universities improve student loyalty? The roles of university social responsibility, service quality, and "customer" satisfaction and trust. *International Journal of Educational Management*, 35(4), 815-829.
<https://doi.org/10.1108/IJEM-11-2020-0524>
- Malhan, S., Mewafarosh, R., & Agnihotri, S. (2023). The Role of Artificial Intelligence Constructs of Perceived Usefulness and Perceived Ease-Of-Use Towards Satisfaction and Trust, Which Influence Consumers' Loyalty and Repurchase Intention of Sports Shoes in India. In *International Journal of Computer Information Systems and Industrial Management Applications* (Vol. 15). www.mirlabs.net/ijcism/index.html
- Morgan, R. M., & Hunt, S. D. (1994). The Commitment-Trust Theory of Relationship Marketing. *Journal of Marketing*, 58(3), 20.
<https://doi.org/10.2307/1252308>
- Nuralam, I. P., Yudiono, N., Fahmi, M. R. A., Yuliaji, E. S., & Hidayat, T. (2024). Perceived ease of use, perceived usefulness, and customer satisfaction as driving factors on repurchase intention: the perspective of the e-commerce market in Indonesia. *Cogent Business and Management*, 11(1).
<https://doi.org/10.1080/23311975.2024.2413376>
- Oliver, R. L. (1999). Whence Consumer Loyalty? *Journal of Marketing*, 63, 33.
<https://doi.org/10.2307/1252099>
- Orrange, S., Patel, A., Mack, W. J., & Cassetta, J. (2021). Patient satisfaction and trust in telemedicine during the COVID-19 pandemic: Retrospective observational study. *JMIR Human Factors*, 8(2).
<https://doi.org/10.2196/28589>
- Pasaman, K. A., & Hutaauruk, Y. G. (2025). *Indonesia Millennial and Gen Z Report 2025*.
- Peng, Y., Yin, P., Deng, Z., & Wang, R. (2020). Patient-physician interaction and

trust in online health community:
The role of perceived usefulness of
health information and services.
International Journal of
Environmental Research and Public
Health, 17(1).
<https://doi.org/10.3390/ijerph17010139>

Sitorus, T., & Yustisia, M. (2018). The influence of Service Quality and Customer Trust toward Customer Loyalty: The role of customer satisfaction. *International Journal for Quality Research*, 12(3), 639–654. <https://doi.org/10.18421/IJQR12.03-06>

Wilson, N. (2019). THE IMPACT OF PERCEIVED USEFULNESS AND PERCEIVED EASE-OF-USE TOWARD REPURCHASE INTENTION IN THE INDONESIAN E-COMMERCE INDUSTRY. *Jurnal Manajemen Indonesia*, 19(3), 241–249. <https://doi.org/10.25124/jmi.v19i3.2412>

Wilson, N., Keni, K., Henriette, P., & Tan, P. (2021). The Role of Perceived Usefulness and Perceived Ease-of-Use Toward Satisfaction and Trust which Influence Computer Consumers' Loyalty in China. *Gadjah Mada International Journal of Business*, 23(3), 262–294. <http://journal.ugm.ac.id/gamaijb>