



DOI: <https://doi.org/10.38035/gmbr.v2i2>
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The Effect of Customer Experience and Trust on Loyalty in Using QRIS with Satisfaction as an Intervening Variable among Generation Z

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Abstract: This study aims to examine the effect of Customer Experience and Trust on QRIS Usage Loyalty, with Customer Satisfaction as an intervening variable among Generation Z. The rapid growth of digital payment systems encourages service providers to enhance customer experience and build trust to foster user loyalty. This study employed a quantitative research method with an associative approach. The population consisted of Generation Z users of QRIS in Indonesia. The sampling technique used was purposive sampling, involving 200 respondents. Data were collected through a questionnaire using a five-point Likert scale. The data were analyzed using Structural Equation Modeling (SEM) based on the Partial Least Squares (PLS) approach with the assistance of SmartPLS 4 software. The findings indicate that Customer Experience has a positive and significant effect on QRIS Usage Loyalty, Customer Experience has a positive and significant effect on Customer Satisfaction, Trust has a positive and significant effect on QRIS Usage Loyalty, Trust has a positive and significant effect on Customer Satisfaction, and Customer Satisfaction has a positive and significant effect on QRIS Usage Loyalty. Furthermore, Customer Satisfaction mediates the relationship between Customer Experience and QRIS Usage Loyalty, whereas Customer Satisfaction does not mediate the relationship between Trust and QRIS Usage Loyalty. These findings suggest that positive user experiences play an important role in enhancing customer satisfaction and fostering loyalty toward QRIS usage, while trust has a more direct influence on user loyalty than an indirect influence through customer satisfaction.

Keywords: Customer Experience, Trust, Customer Satisfaction, Loyalty, QRIS, Generation Z

INTRODUCTION

The rapid development of digital technology has fundamentally transformed the payment system landscape in Indonesia. One of the most significant innovations is the emergence of the Quick Response Code Indonesian Standard (QRIS), a QR code-based payment system established by Bank Indonesia as the national standard since 2019. Within a short period, QRIS has become the most widely adopted digital payment method among Indonesians, with the number of merchants continuing to grow to more than 50 million by

2024.

Among the various groups of QRIS users, Generation Z — born between 1997 and 2009 — is the most dominant segment. Bank Indonesia data show that Generation Z is the largest group of QRIS users in Indonesia, accounting for up to 27.94 percent of all national QRIS users. As a generation that grew up in the digital era, Generation Z has unique characteristics in its digital consumption behavior, namely prioritizing convenience, speed, security, and an enjoyable experience in every transaction (Seemiller & Grace, 2019).

Although QRIS adoption continues to increase, user loyalty is not necessarily guaranteed. Many users still switch between payment methods depending on the situation. In this context, two main factors thought to influence user loyalty are customer experience and trust. Positive customer experience — encompassing the dimensions of sense, feel, think, act, and relate (Schmitt, 2011) — can foster satisfaction, which ultimately creates loyalty. Meanwhile, trust in the security and reliability of the QRIS system also plays a crucial role in shaping users' long-term commitment (Morgan & Hunt, 2016).

Several previous studies have partially examined the relationships among customer experience, trust, satisfaction, and loyalty. However, not many studies have integrated these four variables into a single comprehensive model with Satisfaction as an intervening variable in the specific context of QRIS and Generation Z. Therefore, this study aims to fill this gap with the following objectives: (1) to analyze the effect of Customer Experience on Loyalty; (2) to analyze the mediating role of Satisfaction between Customer Experience and Loyalty; (3) to analyze the effect of Trust on Loyalty; (4) to analyze the mediating role of Satisfaction between Trust and Loyalty; and (5) to analyze the effect of Satisfaction on the Loyalty of QRIS users among Generation Z.

METHOD

This study used a quantitative research method with an associative approach, that is, an approach aimed at determining the relationship and influence between two or more variables (Sugiyono, 2019). The population in this study consisted of all Generation Z individuals using QRIS payment services in Indonesia, the exact number of which is unknown.

The sampling technique used was purposive sampling with three criteria: (1) Indonesian citizen; (2) born between 1997–2009 (aged 17–29 years); and (3) had used QRIS as a payment method at least five times in the last three months. The sample size was determined based on the formula by Lemeshow et al. (1997), which yielded a minimum of 100 respondents. However, to improve the accuracy and representativeness of the data, the sample size was set at 200 respondents, in line with the recommendation of Hair et al. (2014) in the context of PLS-SEM analysis.

Data were collected through an online questionnaire distributed via Google Form using a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). The research variables consisted of: Customer Experience (X1), measured using 10 statement items based on Schmitt's (2011) dimensions; Trust (X2), measured using 8 statement items; Loyalty (Y), measured using 8 statement items; and Satisfaction (Z), as the intervening variable, measured using 6 statement items.

Data were analyzed using Structural Equation Modeling (SEM) based on the Partial Least Squares (PLS) approach with the assistance of SmartPLS 4 software. Model evaluation included: (1) the outer model, covering tests of convergent validity (outer loading and AVE), discriminant validity (HTMT), and reliability (Cronbach's Alpha and Composite Reliability); and (2) the inner model, covering the coefficient of determination (R^2), effect size (F^2), and hypothesis testing through bootstrapping with 5,000 subsamples.

RESULTS AND DISCUSSION

Respondent Characteristics

This study involved 200 Generation Z respondents who were QRIS users in Indonesia. By gender, the majority of respondents were female, at 144 people (72.0%), and male, at 56 people (28.0%). By age group, the largest number of respondents came from the 21–24 age group, at 97 people (48.5%), followed by the 17–20 age group, at 71 people (35.5%), and the 25–29 age group, at 32 people (16.0%). In terms of QRIS usage frequency, the majority of respondents had used QRIS more than 10 times in the last three months, at 91 people (45.5%), indicating that all respondents had sufficient experience using QRIS payment services.

Outer Model Evaluation (Measurement Model)

Outer model evaluation was conducted to assess the validity and reliability of the research instrument. The outer loading test results show that all indicators had loading factor values that met the required threshold, ranging from 0.646–0.812 for the Customer Experience variable (X1), 0.708–0.839 for Trust (X2), 0.774–0.856 for Loyalty (Y), and 0.785–0.873 for Satisfaction (Z). Although indicator X1.9 had a loading factor value of 0.646 (below 0.70), this indicator was retained because the AVE value of the X1 variable still met the minimum requirement of 0.50, as recommended by Hair et al. (2019).

Table 1. Outer Loading and Reliability Test Results

Variable	Outer Loading	Cronbach's Alpha	CR	AVE
Customer Experience (X1)	0.646 – 0.812	0.913	0.928	0.563
Trust (X2)	0.708 – 0.839	0.914	0.930	0.626
Loyalty (Y)	0.774 – 0.856	0.923	0.937	0.651
Satisfaction (Z)	0.785 – 0.873	0.916	0.934	0.704

Source: SmartPLS 4 Output, 2026

The reliability test results show that all variables had Cronbach's Alpha values above 0.90 and Composite Reliability values above 0.92, well exceeding the required minimum value of 0.70. The AVE values for all variables were also above 0.50, indicating that convergent validity was satisfied. The discriminant validity test using HTMT (Heterotrait-Monotrait Ratio) showed that all HTMT values were below 0.90, so discriminant validity was considered satisfied (Henseler et al., 2015).

Inner Model Evaluation

The evaluation of the coefficient of determination (R^2) shows that the Loyalty (Y) variable obtained an R^2 value of 0.604 and an Adjusted R^2 of 0.597, meaning that 59.7% of the variation in Loyalty can be explained by the Customer Experience, Trust, and Satisfaction variables in the model. The Satisfaction (Z) variable obtained an R^2 value of 0.594 and an Adjusted R^2 of 0.590, meaning that 59.0% of the variation in Satisfaction can be explained by Customer Experience and Trust. Both values fall into the moderate category according to Hair et al. (2019).

The effect size (F^2) test results show that the Customer Experience → Satisfaction path had the largest effect size, at 0.451, which is classified as large (Cohen, 1988). The other paths had small effect sizes, namely $X1 \rightarrow Y = 0.098$; $X2 \rightarrow Z = 0.064$; $X2 \rightarrow Y = 0.118$; and $Z \rightarrow Y = 0.052$. This indicates that Customer Experience is the most dominant predictor of QRIS users' Satisfaction.

Hypothesis Testing

Hypothesis testing was conducted using the bootstrapping method with 5,000 subsamples. The results of testing the direct and indirect effects are presented in Table 2 below.

Table 2. Hypothesis Test Results

H	Path	β	T-Statistic	P-Value	Decision
H1	Customer Experience $\rightarrow$ Loyalty (Y)	0.332	3.161	0.002	Accepted
H2	CX $\rightarrow$ Satisfaction (Z) $\rightarrow$ Loyalty (Y)*	0.134	2.424	0.015	Accepted
H3	Trust $\rightarrow$ Loyalty (Y)	0.311	2.732	0.006	Accepted
H4	Trust $\rightarrow$ Satisfaction (Z) $\rightarrow$ Loyalty (Y)*	0.051	1.409	0.159	Rejected
H5	Satisfaction (Z) $\rightarrow$ Loyalty (Y)	0.225	2.464	0.014	Accepted
—	Customer Experience $\rightarrow$ Satisfaction (Z)	0.597	7.182	0.000	Accepted
—	Trust $\rightarrow$ Satisfaction (Z)	0.225	2.305	0.021	Accepted

*Indirect effect | Source: SmartPLS 4 Output, 2026

Based on Table 2, the hypothesis test results show the following:

First, Customer Experience has a positive and significant effect on Loyalty ($\beta=0.332$; $T=3.161$; $p=0.002$), so H1 is accepted. This finding confirms that user experience, which includes the dimensions of sense, feel, think, act, and relate (Schmitt, 2011), directly drives QRIS user loyalty. This result is consistent with the study by Barbu et al. (2022), which found that customer experience has a significant effect on loyalty in fintech services, as well as Danurdara & Masatiff (2025), who demonstrated a similar finding in the context of QRIS in Indonesia.

Second, Satisfaction is shown to mediate the effect of Customer Experience on Loyalty ($\beta=0.134$; $T=2.424$; $p=0.015$), so H2 is accepted. The coefficient values for H1 (direct) and H2 (indirect), both of which are significant, indicate that the mediation occurring is partial mediation. This means that Customer Experience influences Loyalty both directly and through Satisfaction as an intermediary. This finding aligns with Oliver's (2015) Expectancy Disconfirmation Theory, which states that a positive experience shapes satisfaction, which in turn drives loyalty.

Third, Trust has a positive and significant effect on Loyalty ($\beta=0.311$; $T=2.732$; $p=0.006$), so H3 is accepted. This finding supports the Commitment-Trust Theory of Morgan & Hunt (2016), which states that trust directly shapes customer commitment and loyalty. Users' confidence in data security, transaction reliability, privacy protection, and fraud prevention in QRIS services has been shown to directly drive usage loyalty.

Fourth, Satisfaction is not shown to mediate the effect of Trust on Loyalty ($\beta=0.051$; $T=1.409$; $p=0.159$), so H4 is rejected. This is an interesting finding that can be explained by the more cognitive and rational nature of trust. Once users already believe that QRIS is safe and reliable, they tend to become loyal directly without first going through satisfaction. This is consistent with the Commitment-Trust Theory, which states that trust can directly shape commitment without necessarily being mediated by satisfaction (Morgan & Hunt, 2016).

Fifth, Satisfaction has a positive and significant effect on Loyalty ($\beta=0.225$; $T=2.464$; $p=0.014$), so H5 is accepted. This finding confirms that users who are satisfied with QRIS services — whether in terms of the fulfillment of expectations, the feeling of pleasure after

transacting, or the overall experience — tend to be more loyal in using QRIS. This result is in line with Oliver (2015) and Zeithaml et al. (2018), who assert that satisfaction is an important predictor of customer loyalty.

CONCLUSION

Based on the research results and discussion, it can be concluded that: (1) Customer Experience has a positive and significant effect on the Loyalty of QRIS users among Generation Z; (2) Satisfaction is shown to partially mediate the effect of Customer Experience on Loyalty; (3) Trust has a positive and significant effect on the Loyalty of QRIS users among Generation Z; (4) Satisfaction is not shown to mediate the effect of Trust on Loyalty; and (5) Satisfaction has a positive and significant effect on the Loyalty of QRIS users among Generation Z.

The findings of this study have important practical implications for QRIS service providers. Given that Customer Experience has the largest effect size ($F^2=0.451$) on

Satisfaction, QRIS service providers need to prioritize improving the user experience through an intuitive interface, fast and seamless transaction processes, and a personal and memorable experience. In addition, trust in the security and reliability of the system needs to be continuously strengthened, as it has been shown to directly influence the loyalty of Generation Z users.

For future research, it is recommended to add variables such as perceived ease of use or service quality to the research model. In addition, further in-depth study is needed on the factors that explain why satisfaction fails to mediate the effect of trust on loyalty, as well as expanding the scope of research to other demographic segments to obtain more comprehensive findings.

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