
Analysis Of The Level Of Acceptance And Satisfaction Of QRIS Payment Technology Users Using TAM And EUCS

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Abstract

The rapid development of digital payment technology has accelerated the adoption of the Indonesian Quick Response Code Standard (QRIS) as a practical and efficient payment method. Generation Z, particularly students, is one of the main user groups due to their high level of digital literacy and technology adoption. This study aims to analyze the acceptance of QRIS technology using the Technology Acceptance Model (TAM), evaluate user satisfaction through the End User Computing Satisfaction (EUCS) model, and examine the relationship between technology acceptance and user satisfaction among students at Nusa Putra University. A quantitative research approach was employed using Partial Least Squares-Structural Equation Modeling (PLS-SEM) with SmartPLS software. Data were collected through questionnaires distributed to 155 Generation Z students who had experience using QRIS. The findings indicate that both technology acceptance and user satisfaction are categorized as very high. Perceived Usefulness, Behavioral Intention, Accuracy, and Format significantly influence user satisfaction, whereas Perceived Ease of Use, Content, Ease of Use, and Timeliness show no significant effect. The model demonstrates moderate explanatory power of Behavioral Intention ($R^2=0,589$) and strong explanatory power for User Satisfaction ($R^2=0,839$). Furthermore, Behavioral Intention positively mediates the relationship between technology acceptance and user satisfaction.

Keywords: *QRIS, Technology Acceptance Model, End User Computing Satisfaction, User Satisfaction, Generation Z.*

INTRODUCTION

The rapid growth of digital payment technology has significantly transformed financial transaction systems, encouraging the adoption of cashless payments through the Quick Response Code Indonesian Standard (QRIS), a national QR code standard developed by Bank Indonesia to improve transaction efficiency, interoperability, and financial inclusion (Sitanggang et al., 2024). Among various user groups, Generation Z, particularly university students, represents one of the most active users of QRIS due to their high level of digital literacy and familiarity with mobile technology (Zahra, 2024). However, the increasing adoption of QRIS does not necessarily indicate high technology acceptance or user satisfaction, as users' perceptions regarding usefulness, ease of use, information quality, and overall service experience may influence their continued usage. The Technology Acceptance Model (TAM) developed by Davis 1989 explains technology acceptance through perceived usefulness, perceived ease of use, and behavioral intention (Hervilia et al., 2022), whereas the End User Computing Satisfaction (EUCS) model proposed by Doll and Torkzadeh 1988 evaluates user satisfaction based on content, accuracy, format, ease of use, and timeliness (Rifai Katili et al., 2025). Previous studies have generally applied TAM or EUCS separately, while studies integrating both models have mainly focused on digital wallet applications such as LinkAja, DANA, and OVO (Asher & Rachmawati, 2024; Fitratul Aini et al., 2023; Saragih & Kurniawan, 2025). Research that simultaneously examines technology acceptance and user satisfaction toward QRIS, particularly among Generation Z university students, remains limited. Therefore, this study aims to analyze the acceptance of QRIS technology using TAM, evaluate user satisfaction using EUCS, and examine the relationship between technology acceptance and user satisfaction among Generation Z students at Nusa Putra University using the Partial Least Squares–Structural Equation Modeling (PLS-SEM) approach.

RESEARCH METHODS

This study employed a quantitative research approach to examine the acceptance of QRIS payment technology and user satisfaction among Generation Z students at Nusa Putra University. The research population consisted of active undergraduate students aged 18–25 years who had previously used QRIS as a digital payment method. A purposive sampling technique was applied to select respondents based on predefined criteria, resulting in a total sample of 155 respondents.

The research model integrated the Technology Acceptance Model (TAM) and the End User Computing Satisfaction (EUCS) model. The TAM constructs included Perceived Ease of Use (PEOU), Perceived Usefulness (PU), and Behavioral Intention (BI), while the EUCS constructs consisted of Content, Accuracy, Format, Ease of Use, and Timeliness. User Satisfaction (US) was treated as the dependent variable, whereas Behavioral Intention served as a mediating variable between technology acceptance and user satisfaction. Primary data were collected through an online questionnaire using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire items were adapted from the original TAM developed by Davis 1989 and the EUCS instrument proposed by Doll and Torkzadeh 1988.

Data analysis was performed using Partial Least Squares–Structural Equation Modeling (PLS-SEM) with SmartPLS software, as this method is appropriate for simultaneously analyzing complex relationships among latent variables and does not require strict assumptions of multivariate normality. The analysis consisted of descriptive statistics, measurement model (outer model) evaluation, including convergent validity, discriminant validity, and reliability tests, followed by structural model (inner model) evaluation through coefficient of determination (R^2), effect size (f^2), predictive relevance (Q^2), PLSpredict, and hypothesis testing using the bootstrapping procedure to determine the significance of the proposed relationships. The research process as a whole is shown in Figure 1.

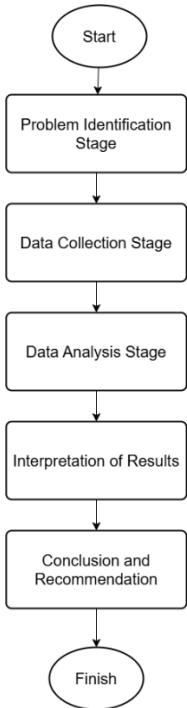


Figure 1. Proposed Research Methods

RESULTS AND DISCUSSION

A total of 155 valid questionnaires were collected from Generation Z students at Nusa Putra University who have experience using QRIS as a digital payment method. The respondents consisted of students from various study programs, with the majority coming from the Information Systems study program. This condition indicates that students with higher exposure to information technology tend to be more familiar with digital payment services. Most respondents were aged between 18-23 years, representing the dominant age group of Generation Z. Additionally, almost all respondents had used QRIS more than once, indicating that they had sufficient experience to evaluate both technology acceptance and user satisfaction. The detailed evaluation results can be seen in Table 1.

Table 1. Respondent Characteristics

Characteristics	Category	Percentage (%)
Gender	Male	40%
	Female	60%
Age	18-20 years	68%
	21-23 years	30%
	>23 years	2%
Study Program	Information Systems	27%
	Other Study Programs	73%
QRIS Experience	More than one year	98%
	Do not use	2%

The respondent profile demonstrates that the collected data adequately represent active QRIS users within the university environment. Consequently, the responses provide a reliable basis for evaluating technology acceptance and user satisfaction.

The measurement model was evaluated to ensure that each construct accurately measured its corresponding latent variable. The evaluation included indicator reliability, convergent validity, discriminant validity, and construct reliability. The outer loading values indicate that all indicators exceeded the recommended threshold, demonstrating satisfactory indicator reliability. Likewise, the Average Variance Extracted (AVE) values were above the acceptable criterion, confirming that each construct explained more than half of the variance of its indicators.

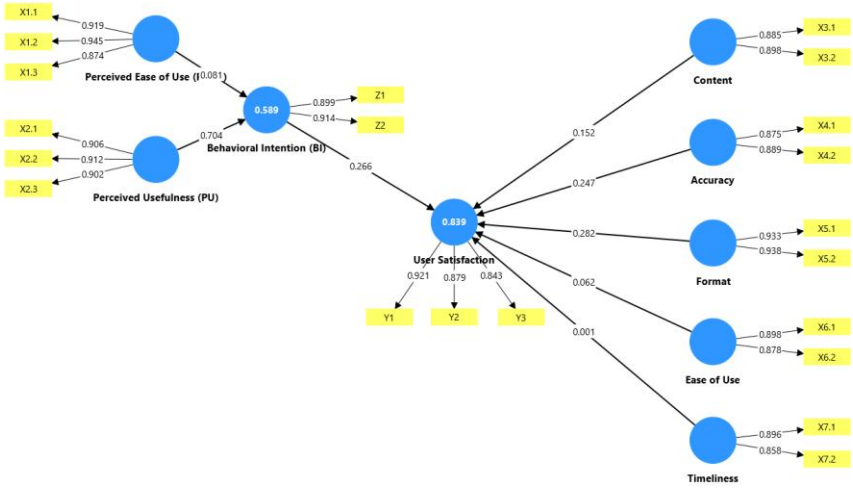


Figure 2. Measurement Model

Figure 2 the measurement model after estimation using SmartPLS. All indicators exhibit loading values above the recommended threshold, indicating satisfactory indicator reliability. Convergent validity is confirmed through AVE values above 0.50, while discriminant validity is supported by the Fornell–Larcker criterion and cross-loading analysis. Furthermore, Composite Reliability and Cronbach's Alpha values indicate good internal consistency for all constructs.

Discriminant validity was assessed using the Fornell–Larcker criterion and supported by cross-loading analysis. The results indicate that each construct was empirically distinct from the others. Furthermore, Cronbach's Alpha and Composite Reliability values exceeded the recommended threshold, confirming the internal consistency of all constructs.

Table 2. Construct Validity and Reliability

Construct	Cronbach’s Alpha	Composite Reliability (rhoc)	Average Variance Extracted (AVE)	Conclusion
Perceived Ease of Use (PEOU)	0.899	0.937	0.822	Reliable and Valid
Perceived Usefulness (PU)	0.892	0.933	0.824	Reliable and Valid
Behavioral Intention (BI)	0.783	0.902	0.821	Reliable and Valid
Content	0.742	0.886	0.795	Reliable and Valid
Accuracy	0.715	0.875	0.778	Reliable and Valid
Format	0.857	0.933	0.875	Reliable and Valid
Ease of Use (EUCS)	0.732	0.882	0.788	Reliable and Valid
Timeliness	0.702	0.87	0.77	Reliable and Valid
User Satisfaction	0.856	0.913	0.777	Reliable and Valid

Based on Table 2, the measurement model demonstrates satisfactory validity and reliability, indicating that the proposed constructs are appropriate for evaluating QRIS acceptance and user satisfaction.

The structural model is evaluated to examine the predictive ability of the proposed model. The coefficient of determination (R²) shows that Behavioral Intention reaches a moderate explanatory power, while User Satisfaction shows a strong explanatory power.

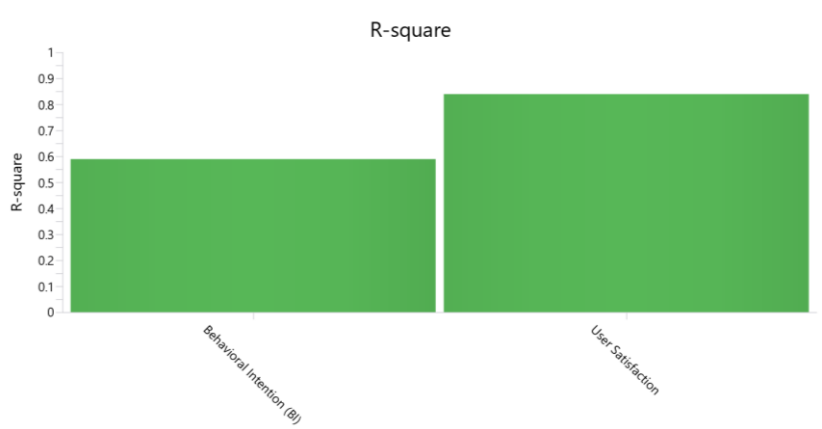


Figure 3. R-Square Values

Based on Figure 3, These findings indicate that the integration of TAM and EUCS successfully explains user behavioral intention and satisfaction toward QRIS among Generation Z students, with a behavioral intention R-square value of 0.589 (Moderate) and a User Satisfaction R-square value of 0.839 (Strong).

Table 3. Hypothesis Testing

Hypothesis	Relationship	Path Coefficient	T-Statistic	P-Value	Conclusion
H1	Perceived Ease of Use (X1) → Behavioral Intention (Z)	0.081	0.526	0.599	Not Supported
H2	Perceived Usefulness (X2) → Behavioral Intention (Z)	0.704	4.57	0	Supported
H3	Behavioral Intention (Z) → User Satisfaction (Y)	0.266	2.876	0.004	Supported
H4	Content (X3) → User Satisfaction (Y)	0.152	1.265	0.206	Not Supported
H5	Accuracy (X4) → User Satisfaction (Y)	0.247	2.226	0.026	Supported
H6	Format (X5) → User Satisfaction (Y)	0.282	2.982	0.003	Supported
H7	Ease of Use (X6) → User Satisfaction (Y)	0.062	0.624	0.533	Not Supported
H8	Timeliness (X7) → User Satisfaction (Y)	0.001	0.013	0.99	Not Supported

Based on Table 3, The hypothesis testing demonstrates that Perceived Usefulness positively influences Behavioral Intention. Students tend to continue using QRIS when they perceive that it improves transaction efficiency and convenience. This finding supports the Technology Acceptance Model, which emphasizes that perceived usefulness is a major determinant of technology adoption.

Similarly, Behavioral Intention has a positive influence on User Satisfaction. Users who intend to continue using QRIS generally report higher satisfaction because repeated use strengthens familiarity and confidence in the payment system. Among the EUCS dimensions, Accuracy and Format significantly influence user satisfaction. Accurate transaction information enhances user trust, while a clear and attractive interface improves the overall user experience. These findings indicate that both information quality and interface presentation contribute to satisfaction.

Conversely, Content, Ease of Use, and Timeliness do not significantly influence user satisfaction. Since Generation Z is already familiar with digital payment applications, these characteristics may be considered basic system requirements rather than factors that increase satisfaction. In other words, users expect QRIS to provide complete information, simple operation, and fast response by default. Therefore, improvements in these aspects do not necessarily lead to higher satisfaction.

Overall, the findings demonstrate that technology acceptance and user satisfaction are closely related. The integration of TAM and EUCS provides a comprehensive framework for explaining QRIS adoption by combining behavioral factors with users' evaluations of system quality. Behavioral Intention also serves as an important mediator linking technology acceptance with user satisfaction, indicating that users who perceive QRIS as useful are more likely to continue using the technology and ultimately experience greater satisfaction.

Table 4. PLSpredict LV Summary

	Q² Predict	RMSE	MAE
Behavioral Intention (BI)	0,545	0,690	0,464
User Satisfaction	0,782	0,475	0,336

Based on Table 4, presents the predictive assessment results of the proposed model using the PLSpredict procedure. The Behavioral Intention construct achieved a Q² Predict value of 0.545, while User Satisfaction obtained a value of 0.782. Since both values are greater than zero, the model demonstrates acceptable predictive relevance for both endogenous constructs. In addition, the RMSE and MAE values are relatively low, indicating that the prediction errors are small and that the model provides good predictive accuracy. Overall, these findings suggest that the integrated TAM and EUCS model has satisfactory predictive capability in explaining technology acceptance and user satisfaction toward QRIS among Generation Z students.

CONCLUSIONS

This study concludes that the integration of the Technology Acceptance Model (TAM) and End User Computing Satisfaction (EUCS) provides a comprehensive understanding of the acceptance and satisfaction of QRIS users among Generation Z students at Nusa Putra University. The findings indicate that students generally demonstrate a high level of acceptance of QRIS, as they perceive it as beneficial for supporting their daily payment activities and show a strong intention to continue using the technology. User satisfaction is primarily influenced by the perceived usefulness of QRIS, the accuracy of transaction information, and the clarity of the system interface, which contribute to a positive user experience. Meanwhile, aspects related to ease of use, content, and timeliness are not the primary determinants of satisfaction, suggesting that users already consider these features as basic

expectations of digital payment services. Furthermore, technology acceptance and user satisfaction are positively related through behavioral intention, indicating that users who recognize the benefits of QRIS and intend to continue using it are more likely to experience greater satisfaction. These findings highlight the importance of improving system quality and maintaining user trust to encourage the sustainable adoption of QRIS.

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