Proceeding The 2nd International Conference of Sustainable Innovation (ICSI), February 2026
https://journal.das-institute.com/index.php/proceeding

INFLUENCE OF PERCEPTIONS OF EASE, USEFULNESS, AND SECURITY ON THE DECISION TO USE QRIS

Regita Aulia Eka Sunarya[1], Langgeng Prayitno Utomo[2]
Undergraduate Student, Faculcity Economic and Bussiness, Institute Teknologi dan Bisnis PGRI Dewantara Jombang[1]
Postgraduate Lecture, Faculcity Economic and Bussiness, Institute Teknologi dan Bisnis PGRI Dewantara Jombang[2]
E-mail: regitaauliaeka@gmail.com[1], lan99eng9.pu36@gmail.com[2]

Abstract:
Technology has significantly transformed payment systems, particularly through the adoption of financial technology (fintech) based on digital payments. One of the most prominent fintech innovations in Indonesia is the Quick Response Code Indonesian Standard (QRIS), introduced by Bank Indonesia as a unified national QR-based payment system. QRIS integrates various digital payment applications, enabling transactions to be conducted more efficiently, conveniently, and quickly. Despite the increasing adoption of QRIS, several challenges remain, especially related to users' perceptions of ease of use, usefulness, and security. This study aims to examine the influence of perceived ease of use, perceived usefulness, and perceived security on students' decisions to use QRIS as a digital payment method. The study employs a quantitative approach and adopts the Technology Acceptance Model (TAM) as its theoretical framework. Data were collected through questionnaires distributed to university students and analyzed using statistical testing. The results indicate that perceived ease of use, perceived usefulness, and perceived security have a significant effect on students' decisions to use QRIS. Perceived ease of use encourages adoption because QRIS is easy to learn and operate. Perceived usefulness enhances students' willingness to use QRIS due to its efficiency, time-saving benefits, and transactional flexibility. Meanwhile, perceived security plays a critical role in building trust, particularly in financial transactions involving personal and financial data. These findings suggest that the successful adoption of QRIS among students is not solely driven by technological advancement but also by users' confidence and perceived safety. Therefore, strengthening system security, enhancing digital literacy, and increasing public awareness are essential strategies to promote sustainable use of QRIS in the digital economy era.
Keyword*:* QRIS; Financial Technology; Ease Of Use; Usefulness; Security

1. Introduction

The development of information technology has driven significant changes in public financial transaction systems toward digital payments through financial technology (fintech). Digital payment systems such as electronic wallets and the Quick Response Code Indonesian Standard (QRIS) enable transactions to be conducted quickly, conveniently, and efficiently, while also supporting the growth of the digital economy and enhancing financial inclusion (Rahmawati & Sukardi, 2025). QRIS, as a national QR code based payment standard launched by Bank Indonesia in 2019, aims to simplify transaction processes and support the National Non-Cash Movement programme (Bank Indonesia, 2019).

The development of QRIS usage has shown a positive trend. The number of merchants adopting QRIS has increased significantly, and transaction values continue to grow annually (Kompas, 2023). However, this growth has been accompanied by various challenges, particularly concerning digital transaction security. Cases of QRIS code manipulation and digital fraud continue to occur, raising user concerns regarding payment system security (Bisnis, 2024). These conditions indicate that security has become an important factor influencing the decision to use QRIS.

Among university students, who represent a demographic highly familiar with digital technology, QRIS adoption has not yet reached its optimal level. Several studies indicate that although students recognize the benefits of QRIS, some still prefer cash payments due to perceptions related to ease of use, usefulness, and security that have not been fully satisfied (Rahmadi et al., 2025). Within the framework of the Technology Acceptance Model (TAM), technology adoption is influenced by perceived ease of use and perceived usefulness, while in digital financial systems, security also plays a crucial role in building user trust (Davis, 1989; Whitman & Mattord, 2013).

Differences in findings from previous studies regarding the influence of ease of use, usefulness,

and security on QRIS usage decisions indicate the existence of a research gap. Therefore, this study aims to analyse the influence of perceived ease of use, perceived usefulness, and perceived security on university students' decisions to use QRIS, particularly in Jombang Regency, in order to provide empirical evidence and enrich the literature on digital payment system adoption among students.

2. Research Method

This study employs a quantitative approach. Quantitative research involves the systematic process of collecting, managing, analysing, and presenting numerical data objectively to address research problems or test hypotheses in order to develop generalizable principles. The population refers to a generalization area consisting of objects or subjects with specific characteristics determined by the researcher for analysis and conclusion drawing (Sugiyono, 2017).

2.1. Object, Time, and Location

The object of this research is students of ITEBIS PGRI Dewantara Jombang who have the potential to use QRIS as a transaction tool. The study was conducted during the current academic year at the ITEBIS PGRI Dewantara Jombang campus.

2.2. Data Collection Technique

Data were collected through an online questionnaire. The questionnaire was developed based on indicators measuring perceived ease of use, perceived usefulness, perceived security, and the decision to use QRIS, utilizing a five-point Likert scale.

2.3. Data Analysis Technique

Data analysis was conducted using a quantitative approach through several stages of statistical testing. The initial stage involved instrument quality testing, including validity and reliability tests, to ensure that the questionnaire accurately and consistently measured the research variables. Subsequently, classical assumption tests were performed, including tests for normality, multicollinearity, and heteroscedasticity, to ensure that the data met the requirements for applying a linear regression model. After fulfilling all assumptions, multiple linear regression analysis was conducted to determine the influence of perceived ease of use, usefulness, and security on the decision to use QRIS. Hypothesis testing was performed partially using the t-test to assess the effect of each independent variable, and simultaneously using the R Square (R^2)-test to evaluate the combined effect of all independent variables. All statistical tests were conducted at a 5 per cent significance level to ensure the scientific validity of the findings.

3. Result and Discussion

3.1. Research Result

3.1.1 Descriptive Analysis

Descriptive analysis of respondent characteristics was conducted to provide a general overview of the profile of individuals participating in the study. This information is essential to ensure that the respondents are relevant to the research objective, namely to analyse perceptions of ease of use, usefulness, and security in relation to the decision to use QRIS.

Table 1. Respondent Characteristics by Gender

Gender	Frequency	Percentage
Male	23	25%
Female	70	75%
Total	93	100%

Source: Processed Primary Data, 2026

Based on Table 1, of the total 93 respondents, 23 (25%) were male and 70 (75%) were female. These data indicate that the respondents in this study were predominantly female students. This condition reflects the relatively higher participation of female students in research related to QRIS usage, without implying any specific assessment regarding gender-based differences in usage behavior.

Table 2. Respondent Characteristics by Study Program

Study Program	Frequency	Percentage
Management	40	43%
Accounting	49	53%
Digital Business	3	3%
Information Systems and Technology	1	1%
Total	93	100%

Source: Processed Primary Data, 2026

Table 2 shows that most respondents were from the Accounting Study Program (49 students; 53%), followed by Management (40 students; 43%). Respondents from Digital Business and

Information Systems and Technology were relatively few. These data indicate that the study predominantly involved students from economics and business disciplines, which are academically closely related to financial systems and digital transactions.

Table 3. Respondent Characteristics by Current Semester

Current Semester	Frequency	Percentage
1-2	4	4%
3-4	1	1%
5-6	6	6%
7-8	82	88%
Total	93	100%

Source: Processed Primary Data, 2026

Based on Table 3, the majority of respondents were in semesters 7-8 (82 students; 88%). This indicates that most respondents were senior students with longer academic experience. This condition is relevant to the study, as senior students tend to have higher intensity in using digital payment technologies for both academic activities and daily needs.

Table 4. Respondent Characteristics by Age

Age	Frequency	Percentage
18-23 Years	79	85%
24-30 Years	12	13%
31-40 Years	1	1%
> 40 Years	1	1%
Total	93	100%

Source: Processed Primary Data, 2026

Table 4 shows that most respondents were aged 18-23 years (79 respondents; 85%). This age range reflects the typical profile of university students and indicates that respondents belong to a generation relatively familiar with digital technology development, including the use of non-cash payment systems such as QRIS.

Table 5. Respondent Characteristics by Employment Status

Employed Status	Frequency	Percentage
Employed	59	63%
Not Employed	34	37%
Total	93	100%

Source: Processed Primary Data, 2026

Based on Table 5, 59 respondents (63%) were employed, while 34 respondents (37%) were not employed. These data indicate that most respondents had work activities alongside their studies. This condition may reflect more diverse transaction needs, both for personal and work-related purposes.

Table 6. Respondent Characteristics by QRIS Usage Experience

Have Used QRIS	Frequency	Percentage
Yes	93	100%
No	0	0%
Total	93	100%

Source: Processed Primary Data, 2026

Based on Table 6, all 93 respondents (100%) reported having used QRIS for transactions. This finding indicates that all respondents had direct experience with the QRIS payment system. This supports the research objective, as respondents were able to provide assessments based on actual experience regarding perceived ease of use, usefulness, and security.

3.1.2 Instrument Quality Testing

1) Validity Test

Table 7. Instrumen Validity Test Result

Variable	**r-count**
X1.1	.800
X1.2	.794
X1.3	.660
X1.4	.836
X2.1	.802
X2.2	.791
X2.3	.679
X2.4	.769

X3.1	.731
X3.2	.803
X3.3	.796
X3.4	.852
Y1.1	.797
Y1.2	.834
Y1.3	.844
Y1.4	.858

Source: Processed Primary Data, 2026

Based on Table 7, All questionnaire items measuring Perceived Ease of Use (X1), Perceived Usefulness (X2), Perceived Security (X3), and the Decision to Use QRIS (Y) showed r-calculated values greater than the r-table value of 0.203 (df = 91; α = 0.05), ranging from 0.660 to 0.858. These results indicate that all items met the validity criteria and were appropriate for measuring the research variables.

2) Reliability Test

Table 8. Instrumen Reliability Test Result

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
X1.1	68.0323	54.597	.778	.948
X1.2	68.0323	54.640	.771	.948
X1.3	68.2151	53.692	.608	.950
X1.4	68.0538	53.943	.816	.947
X2.1	68.0430	54.520	.780	.948
X2.2	68.1398	53.491	.762	.948
X2.3	68.4516	51.511	.611	.952
X2.4	68.2473	52.232	.729	.948
X3.1	68.6559	49.859	.664	.952
X3.2	68.5161	50.296	.760	.948
X3.3	68.1613	52.767	.765	.947
X3.4	68.1720	52.666	.829	.946
Y1.1	68.2688	52.112	.762	.947
Y1.2	68.1720	52.818	.810	.947
Y1.3	68.1828	52.716	.820	.946
Y.14	68.1075	53.532	.839	.947

Source: Processed Primary Data, 2026

Tabel 8 shows that all items demonstrated Cronbach's Alpha if Item Deleted values ranging from 0.946 to 0.952, exceeding the minimum threshold of 0.70. In addition, all corrected item total correlation values were above 0.60. These findings indicate that the research instrument possesses excellent internal consistency and is reliable for measuring the study variables.

3.1.3 Analysis Prerequisite Tests

1) Normality Test

Table 9. Normality Test Result

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		93
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.10590056

Most Extreme Differences	Absolute		.086
	Positive		.061
	Negative		-.086
Test Statistic			.086
Asymp. Sig. (2-tailed)[c]			.088
Monte Carlo Sig. (2-tailed)[d]	Sig.		.090
	99% Confidence Interval	Lower Bound	.083
		Upper Bound	.098

Source: Processed Primary Data, 2026

The normality test results show significance values greater than 0.05. Therefore, the residual data in the regression model are normally distributed and meet the normality assumption.

2) Multicollinearity Test

Table 10. Multicollinearity Test Result

Collinearity Statistics	
Tolerance	**VIF**
.884	1.131
.969	1.032
.902	1.108

Source: Processed Primary Data, 2026

All variables have tolerance values greater than 0.10 and VIF values less than 10. Thus, the regression model does not exhibit multicollinearity.

3) Heteroscedasticity Test

Tabel 11. Heteroscedasticity Test Result

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.286	.153		1.873	.064
	X1	.004	.028	.014	.130	.897
	X2	-.062	.034	-.188	-1.788	.077
	X3	-.025	.028	-.095	-.917	.362

Source: Processed Primary Data, 2026

The significance values of all variables are greater than 0.05. This indicates the absence of heteroscedasticity. These results are further supported by the scatterplot graph showing randomly distributed residuals.

3.1.4 Inferential Analysis

1) Multiple Linear Regression

The regression equation obtained is:

$$Y = 2{,}285 + 0{,}122X1 + 0{,}551X2 + 0{,}213X3 + e$$

The constant value of 2.285 indicates that when perceived ease of use, perceived usefulness, and perceived security are equal to zero, the decision to use QRIS remains at 2.285. The regression coefficient for perceived ease of use (X1) is 0.122, indicating that an increase in perceived ease of use leads to an increase in the decision to use QRIS. The coefficient for perceived usefulness (X2) is 0.551, which is the largest coefficient, indicating that perceived usefulness has the most dominant influence on the decision to use QRIS. Meanwhile, the security coefficient (X3) of 0.213 indicates that the higher the perceived security, the higher the students' decision to use QRIS.

2) Classical Assumption Testing

Classical assumption tests were conducted to ensure that the regression model met statistical requirements and was appropriate for use. The normality test using the One-Sample Kolmogorov-Smirnov method showed an Asymp. Sig. value of 0.088 and a Monte Carlo Sig. value of 0.090, both greater than 0.05, indicating that the residuals are normally distributed. The multicollinearity test results indicate that all independent variables have tolerance values above 0.10 and VIF values below

10, meaning there is no multicollinearity. Furthermore, the heteroscedasticity test using the Glejser method produced significance values above 0.05 for all independent variables and was supported by randomly distributed residual points in the scatterplot graph. Based on these results, it can be concluded that the regression model satisfies all classical assumptions and is appropriate for hypothesis testing.

3.1.5 Hypothesis Testing

1) t-Test

Table 12. t-Test Results

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	6.049	.289		20.930	.000
	X1	-.398	.053	-.460	-7.484	.000
	X2	-.176	.065	-.165	-2.691	.009
	X3	-.613	.053	-.710	-11.642	.000

Source: Processed Primary Data, 2026

All variables have significance values less than 0.05. Therefore, H1, H2, and H3 are accepted.

Coefficient of Determination Test

Table 13. Coefficient of Determination

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	.821[a]	.674	.663	.06637

Source: Processed Primary Data, 2026

Based on Table 13, the R Square (R^2) value is 0.674 and the Adjusted R Square value is 0.663. The R Square value of 0.674 indicates that 67.4% of the variation in the Decision to Use QRIS can be explained jointly by Perceived Ease of Use, Perceived Usefulness, and Perceived Security. The remaining 32.6% (100% - 67.4%) is explained by other variables outside this research model that were not examined, such as social factors, promotion, habits, digital literacy, or other relevant factors. Meanwhile, the Adjusted R Square value of 0.663 indicates that after adjusting for the number of independent variables in the model, the explanatory power of the model remains strong at 66.3%.

3.2 Discussion

The results of this study indicate that perceived ease of use, perceived usefulness, and perceived security significantly influence students' decisions to use QRIS. These findings are consistent with the Technology Acceptance Model (TAM) proposed by Davis (1989), which asserts that technology acceptance is influenced by perceived ease of use and perceived usefulness.

Perceived usefulness has the most dominant influence, indicating that students place greater emphasis on the practical value of QRIS such as efficiency and transaction convenience rather than on other technical aspects. This finding supports the study of Venkatesh and Davis (2000), which states that perceived usefulness is a primary factor driving technology usage decisions.

Perceived ease of use and perceived security were also found to have significant effects on the decision to use QRIS. Ease of use functions as a fundamental prerequisite for students who are already familiar with digital technology, in line with the findings of Gefen et al. (2003). Meanwhile, the influence of security demonstrates that data protection and trust remain important considerations in digital payment systems, as suggested by Kim et al. (2008).

Overall, the results of this study support all proposed hypotheses and indicate that the combination of these three variables explains a substantial portion of the decision to use QRIS, although other factors outside the model such as social influence and habitual behavior may also affect user behavior.

3.3 Relevance to Research Objectives

This study consistently addresses the research objective, namely to analyze the influence of perceived ease of use, perceived usefulness, and perceived security on students' decisions to use QRIS. The results show that all three variables significantly affect the decision to use QRIS, with perceived usefulness emerging as the most dominant factor. Therefore, these findings directly answer the research questions.

Furthermore, this study fills a gap in previous research that has been limited in examining the role of perceived security within the context of digital payments among university students, particularly in higher education settings. Thus, the findings not only align with the research objectives but also provide empirical contributions to strengthening the literature on QRIS-based digital payment system adoption.

4. Conclusion

This study concludes that perceived ease of use, perceived usefulness, and perceived security

significantly influence students' decisions to use QRIS, with perceived usefulness being the most dominant factor. These findings indicate that the decision to use QRIS is driven not only by ease and security aspects but primarily by the tangible benefits perceived in enhancing transaction efficiency and convenience. Theoretically, these results reinforce the application of the Technology Acceptance Model (TAM) in the context of digital payment systems by emphasizing the importance of perceived security as a supporting variable. Practically, the findings provide implications for service providers and related institutions to enhance both the functional value and security of QRIS. The limitation of this study lies in the scope of respondents, which was restricted to a single higher education institution, thereby limiting the generalizability of the findings. Future research is recommended to expand the research setting and incorporate additional variables, such as trust, perceived risk, and digital literacy, in order to obtain a more comprehensive understanding of the factors influencing digital payment system adoption.

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