

AN EXTENDED TECHNOLOGY ACCEPTANCE MODEL OF QRIS ADOPTION: THE ROLES OF PERCEIVED EASE OF USE AND FINANCIAL LITERACY

Syadin Alivia Yusuf¹, Adnan Kasofi², Osly Usman³, Ryna Parlyna⁴

¹ Universitas Negeri Jakarta, Indonesia

² Universitas Negeri Jakarta, Indonesia

³ Universitas Negeri Jakarta, Indonesia

⁴ Universitas Negeri Jakarta, Indonesia

Email: syadinaliviay@gmail.com¹, adnankasofi@unj.ac.id², oslyusman@unj.ac.id³, rynaparlyna@unj.ac.id⁴

Article Info

Article history:

Received: 29 December 2025;

Accepted: 19 January 2025;

Published: 01 February 2025.

Keyword:

Digital payment; financial literacy;

perceived ease of use; perceived

usefulness; QRIS

Abstract

This study examines the factors that drive consumers' intention to use QRIS by focusing on the effects of perceived ease of use and financial literacy on perceived usefulness. A quantitative survey was conducted using primary data collected through an online questionnaire from 110 QRIS users in Indonesia, selected through purposive sampling. Data analysis was carried out using IBM SPSS Statistics, covering respondent profiling, instrument validity and reliability assessment, classical assumption diagnostics, regression analysis, mediation testing, and hypothesis evaluation.

The empirical findings indicate that perceived ease of use and financial literacy significantly and positively influence perceived usefulness. Moreover, perceived usefulness is proven to be a significant predictor of intention to use QRIS. The mediation results further highlight perceived usefulness as a key mechanism through which perceived ease of use and financial literacy contribute to intention to use indirectly.

Overall, the study suggests that increasing QRIS adoption should be supported not only by improving system usability and convenience, but also by strengthening consumers' financial literacy to enhance their perceived value of using QR-based payments. These findings offer practical implications for payment service providers and policymakers in encouraging sustainable and inclusive digital payment usage.

1. INTRODUCTION

The digitalization of financial services has significantly transformed modern payment practices, gradually moving economic transactions away from cash-based methods toward cashless systems that emphasize efficiency and connectivity (Auer & Böhme, 2020). This shift has been accelerated by the increasing use of smartphones, the improvement of digital infrastructure, and the growing demand for payment solutions that are faster, more convenient, and secure (Ramayanti, 2024). As digital payments become more widely used, they are increasingly integrated into everyday economic activities by simplifying transaction flows and improving overall convenience for users (Sholihah et al., 2023).

In Indonesia, the development of digital payments has progressed alongside the expansion of QR-based payment mechanisms (Lolowang et al., 2024). One major innovation within the national payment system is the Quick Response Code Indonesian Standard (QRIS), a standardized QR payment platform introduced by Bank Indonesia in collaboration with the Indonesian Payment System Association (ASPI) (Ramayanti, 2024). QRIS promotes interoperability among payment providers, allowing transactions to be completed using a single QR code across multiple digital wallets and mobile banking applications. This approach helps reduce ecosystem fragmentation and supports a more integrated digital payment environment (Sholihah et al., 2023).

Since its launch, QRIS has shown substantial growth across Indonesia. Bank Indonesia reported that by October 2023, QRIS had been adopted by 29.6 million merchants, most of them categorized as micro, small, and medium enterprises, reflecting strong uptake among business actors (Bank Indonesia, 2023). The expansion continued in 2025, when QRIS was reportedly used by approximately 57 million users and 39.3 million merchants during the first half of the year, supported by a transaction volume of 6.05 billion. These figures highlight the increasingly strategic role of QRIS within Indonesia's payment system development (Bank Indonesia, 2025).

In addition to its rapid diffusion, QRIS is expected to support broader economic outcomes, particularly by improving transaction efficiency, strengthening financial inclusion, and lowering dependence on cash payments (Anggriani et al., 2023). Its practicality and accessibility also make QRIS suitable for routine transactions, especially in retail and consumption-related activities (Anggriani et al., 2023). Moreover, QR-based payments are often perceived as advantageous because they facilitate quicker transactions while generating automatic transaction records, which may support users in tracking expenses and managing personal finances more effectively (Pradianto et al., 2024).

Nevertheless, QRIS adoption cannot be fully explained by infrastructure availability alone. Consumers' perceptions, prior experiences, and readiness to engage with digital technology also play a key role in shaping adoption patterns (Lolowang et al., 2024). Differences in digital familiarity, frequency of transaction usage, and financial management capability may lead to varying levels of QRIS utilization across consumer groups (Ramayanti, 2024). This indicates that cognitive and behavioral aspects remain central in understanding why some consumers adopt QRIS more actively than others.

To explain individual technology adoption behavior, the Technology Acceptance Model (TAM) provides a widely accepted framework, highlighting perceived ease of use and perceived usefulness as core predictors of user acceptance (Davis, 1989). Perceived ease of use reflects users' assessment of how effortless a system is to learn and operate, whereas perceived usefulness refers to the extent to which the system is believed to improve performance and efficiency in completing tasks (Davis, 1989). In digital payment contexts, earlier studies have shown that when a system is perceived as easier to use, users are more likely to evaluate it as useful (Sholihah et al., 2023).

Beyond technological perceptions, personal capabilities such as financial literacy also influence consumer behavior in digital payment usage. Financial literacy relates to individuals' understanding of financial benefits and risks, as well as their ability to manage transactions responsibly (Anggriani et al., 2023). Consumers with stronger financial literacy tend to be more capable of evaluating the efficiency and security of digital transactions, which may strengthen their perceived usefulness of QRIS (Ramayanti, 2024).

Although TAM has been used in several studies examining QRIS adoption, much of the existing evidence focuses on specific groups, including students, business owners, or micro, small, and medium enterprises (Sholihah et al., 2023). Additionally, financial literacy has often been tested either as a standalone explanatory factor or as a direct determinant of intention to use, resulting in inconsistent empirical conclusions across studies (Pradianto et al., 2024). Limited research has explored perceived usefulness as a mediating mechanism that links both technological and individual factors to usage intention, particularly among consumers as the final end users of QRIS. Therefore, this study aims to analyze the effects of perceived ease of use and financial literacy on perceived usefulness, as well as the subsequent impact of perceived usefulness on consumers' intention to use QRIS in Indonesia.

2. LITERATURE REVIEW

This section summarizes the key theories and empirical studies relevant to the adoption of the Quick Response Code Indonesian Standard (QRIS). The discussion is primarily grounded in the Technology Acceptance Model (TAM) and supported by the concept of financial literacy to explain the relationships among perceived ease of use, financial literacy, perceived usefulness, and consumers' intention to use QRIS. These perspectives serve as the conceptual foundation for interpreting consumer behavior in digital payment adoption and for developing the hypotheses tested in this study.

2.1 Theoretical and Conceptual Background

The Quick Response Code Indonesian Standard (QRIS) represents Indonesia's national standard for QR-based payments aimed at ensuring interoperability across different digital payment providers. By applying this standard, users can complete transactions using a single QR code that is compatible with various digital wallet services and mobile banking applications. This interoperability reduces complexity in payment activities and increases flexibility for both users and merchants (Sholihah et al., 2023; Ramayanti, 2024). In addition, QRIS is expected to enhance the overall efficiency of the payment system, accelerate transaction processing, and support efforts to increase financial inclusion in Indonesia (Sholihah et al., 2023).

This study adopts the Technology Acceptance Model (TAM) to explain consumer acceptance of QRIS as a digital payment innovation. TAM proposes that technology adoption is largely influenced by users' perceptions of how easy a system is to use and how useful it is in supporting their activities (Davis, 1989). Due to its ability to explain users' cognitive evaluations during technology adoption, TAM has been widely used in studies examining acceptance of digital-based services, including fintech and digital payment systems (Sholihah et al., 2023).

Perceived ease of use refers to the degree to which individuals believe that a technology can be learned and operated without substantial effort (Davis, 1989). In the QRIS context, this includes the user's ability to understand payment instructions, navigate application features, and complete transactions smoothly without assistance (Sholihah et al., 2023). When a payment system is seen as complicated, users may become less motivated to adopt or repeatedly use it in daily transactions (Lolowang et al., 2024).

Digital payment adoption is also influenced by user characteristics beyond system-related perceptions. One important factor is financial literacy, which reflects an individual's capability to understand financial benefits and risks and to manage financial resources responsibly (Anggriani et al., 2023). Consumers with stronger financial literacy are generally more attentive to issues such as transaction efficiency and security, which may shape more favorable evaluations of QRIS as a payment method (Pradianto et al., 2024).

Perceived usefulness refers to the belief that using a technology can improve task performance and make activities more effective or efficient (Davis, 1989). In adopting QRIS, perceived usefulness can be reflected in consumers' evaluations of benefits such as faster payment processing, improved transaction efficiency, easier record-keeping, and increased transaction security (Sholihah et al., 2023). This perception is critical because consumers are more likely to adopt and continue using payment technologies when the benefits are clearly experienced in real transaction situations.

Intention to use describes an individual's willingness to continue using a technology in the future (Davis, 1989). In QRIS adoption, intention to use may be reflected through repeated QRIS usage, the likelihood of recommending QRIS to others, and a preference to use QRIS over cash transactions (Anggriani et al., 2023). Understanding intention to use is essential because it represents the sustainability aspect of digital payment adoption among consumers.

2.2 Empirical Review and Hypothesis

Empirical evidence frequently indicates that perceived ease of use plays a meaningful role in shaping perceived usefulness in digital payment adoption. When QRIS is perceived as easy to learn and convenient to operate, consumers tend to view it as more beneficial for supporting everyday transactions (Anggriani et al., 2023; Pradianto et al., 2024). This suggests that usability can strengthen the perceived functional value of digital payment services.

In addition, several studies identify financial literacy as a factor that influences how consumers assess the usefulness of digital payment systems. Individuals who have stronger knowledge of financial benefits, potential risks, and transaction security tend to report more positive perceptions of QRIS usefulness (Anggriani et al., 2023). However, previous research has produced inconsistent results, particularly when financial literacy is examined as a direct determinant of intention to use digital payments (Pradianto et al., 2024). These mixed findings indicate that the role of financial literacy may operate through other mechanisms and therefore requires further exploration.

Furthermore, research consistently shows that perceived usefulness is a strong predictor of digital payment adoption intention. When users experience concrete advantages, such as faster processing and better efficiency, they are more likely to maintain continued usage over time (Lolowang et al., 2024). This supports the position of perceived usefulness as an essential factor in explaining why individuals choose to adopt and sustain the use of digital payment technologies.

Although these relationships are generally supported, much of the existing research has focused on specific populations such as students, business actors, and micro, small, and medium enterprises (MSMEs). Moreover, financial literacy has often been treated either as an independent predictor or a direct determinant of intention, which may contribute to differences in findings across studies. As a result, fewer studies have examined perceived usefulness as a mediating pathway that links technological perceptions and personal capability to intention to use, particularly from the consumer perspective as the end user of QRIS.

Based on the theoretical discussion and prior evidence, the hypotheses proposed in this study are as follows:

H1: Perceived ease of use positively influences perceived usefulness of QRIS.

H2: Financial literacy positively influences perceived usefulness of QRIS.

H3: Perceived usefulness positively influences intention to use QRIS.

3. RESEARCH METHODOLOGY

This research adopts a quantitative explanatory design to analyze the effects of perceived ease of use and financial literacy on perceived usefulness, and to assess how perceived usefulness influences consumers' intention to use QRIS. The methodological structure is developed to examine the proposed hypotheses and to clarify the combined contribution of technology-related perceptions and individual capability in encouraging QRIS adoption among Indonesian users.



Figure 1. Conceptual Model of the Study
Source: Authors (2025)

3.1 Research Design

An explanatory research design was adopted to evaluate the causal links proposed in the conceptual model. A quantitative approach was selected because it allows the relationships among constructs to be examined empirically using statistical testing and hypothesis verification.

3.2 Research Model

The research framework extends the Technology Acceptance Model (TAM) by incorporating financial literacy as a consumer-related variable. Within this structure, perceived usefulness is positioned as an intervening variable that connects perceived ease of use and financial literacy with intention to use QRIS. In other words, consumers' views about system simplicity and their financial capability are expected to strengthen intention mainly through the development of usefulness perceptions. This framework therefore provides a clearer explanation of consumer acceptance of QRIS as a standardized digital payment solution.

3.3 Population and Sample

The study targets consumers who have previously made transactions using QRIS. Respondents were selected using purposive sampling, where eligibility was determined by the completion of at least one QRIS-based payment. This criterion ensured that participants were sufficiently familiar with QRIS to provide informed responses.

A total of 110 valid questionnaires were obtained for analysis. This number is considered adequate for regression-based testing. Referring to Hair et al. (2019), the minimum recommended sample size is at least five times the number of observed indicators; therefore, the sample collected in this study fulfills the suggested requirement.

3.4 Data Collection Method

The study collected primary data by distributing an online survey to qualified respondents. The instrument consisted of structured close-ended statements and was administered online to allow efficient data collection across a broad range of participants within a limited period.

3.5 Measurement of Variables

A five-point Likert scale was employed to measure each construct, with responses ranging from 1 (strongly disagree) to 5 (strongly agree). All items were adapted from previous studies and consistently used across the questionnaire.

Table 1. Measurement of Variables

Variable	Item Measurement
Perceived Ease of Use (X1)	Likert scale 1 - 5 PEOU1: QRIS is easy to learn, even for first-time users. PEOU2: Information regarding how to use QRIS is easy to understand. PEOU3: QRIS makes payment transactions easier for me. PEOU4: I feel comfortable using QRIS without help from others.
Financial Literacy (X2)	Likert scale 1 - 5 FL1: I understand the benefits and risks of using QRIS. FL2: I understand the importance of security in QRIS digital transactions. FL3: I am able to manage my spending well when using QRIS. FL4: I realize the importance of managing digital finances wisely.
Perceived Usefulness (Z)	Likert scale 1 - 5 PU1: QRIS helps me complete transactions faster. PU2: QRIS makes transactions more efficient than cash payments. PU3: QRIS helps me monitor my expenses. PU4: I feel safe and comfortable conducting transactions using QRIS.
Intention to Use (Y)	Likert scale 1 - 5 ITU1: I intend to keep using QRIS in the future.

ITU2: I prefer using QRIS rather than cash.
ITU3: I am willing to recommend QRIS to other people.
ITU4: I believe QRIS will become the main payment method in the future.

Source: Authors (2025)

3.6 Data Analysis Technique

IBM SPSS Statistics was used to analyze the data through descriptive and inferential procedures. Direct relationships were tested using multiple regression, and mediation analysis was used to evaluate perceived usefulness as the linking mechanism between perceived ease of use, financial literacy, and intention to use QRIS.

3.7 Hypothesis Testing

Hypothesis testing was performed by evaluating regression coefficients and their associated p-values using a 5% significance level ($\alpha = 0.05$) as the decision criterion. Mediation testing was also conducted to assess whether perceived usefulness explains the indirect influence of perceived ease of use and financial literacy on consumers' intention to use QRIS.

4. RESULT AND DISCUSSION

This section summarizes the empirical results based on the questionnaire data collected. The analysis covers respondent characteristics, descriptive statistics, instrument validity and reliability assessment, diagnostic tests for regression assumptions, regression estimation, mediation analysis, and hypothesis testing. All statistical procedures were performed using IBM SPSS Statistics.

4.1.1 Respondent Characteristics

A total of 110 respondents with prior QRIS transaction experience participated in this study. Respondent profiles are summarized based on age group, domicile, and frequency of QRIS usage.

Table 2. Respondent Characteristics

	Category	Frequency	Percentage
Age	17-21 years	81	73,6%
	22-25 years	29	26,4%
	>25 years	0	0%
Domicile	Jabodetabek	96	87,3%
	Java Island (outside Jabodetabek)	10	9,1%
	Outside java Island	4	3,6%
Frequency of QRIS Usage	Rare (<5 kali)	11	10%
	Frequent (5-10 kali)	46	41,8
	Very Frequent (>10 kali)	53	48,2

Source: Authors (2025)

The findings show that most participants are aged 17–21 years, indicating that the sample predominantly represents young QRIS users. In terms of domicile, the majority of respondents reside in Jabodetabek, while the remaining participants are located in other areas of Java or outside Java. In addition, most respondents reported frequent to very frequent QRIS usage, suggesting substantial exposure and familiarity with the payment system.

4.1.2 Descriptive Statistics

The descriptive statistics show consistently high mean values, indicating favorable respondent perceptions. In particular, QRIS is viewed as easy to operate and beneficial for everyday payments, while respondents also report a relatively strong level of financial literacy and continued intention to use QRIS.

Table 3. Statistik Deskriptif

Variable	N	Mean	Std. Deviation
PEOU	110	17.38	2.566
FL	110	15.92	2.682
PU	110	16.98	2.468
ITU	110	16.95	2.517

Source: Authors (2025)

4.1.3 Factor and Reliability Test Analysis

Before hypothesis testing, the instrument was evaluated through validity and reliability testing to ensure its suitability for further analysis. Construct validity was examined using EFA with the Principal Component Analysis (PCA) technique.

Table 4. Factor and Reliability Test Analysis

Variable	Indicator	Factor Loading	Eigen-value	Cumulative Explained (%)	Item-to-total correlation	Cronbach's Alpha
Perceived Ease of Use (PEOU)	PEOU1	0.867	2.961	74.035%	0.755	0.883
	PEOU2	0.872			0.762	
	PEOU3	0.881			0.776	
	PEOU4	0.821			0.690	
Financial Literacy (FL)	FL1	0.892	2.713	67.823%	0.742	0.880
	FL2	0.883			0.720	
	FL4	0.862			0.708	
Perceived Usefulness (PU)	PU1	0.823	2.869	71.726%	0.686	0.868
	PU2	0.904			0.808	
	PU3	0.806			0.663	
	PU4	0.852			0.727	
Intention to Use (ITU)	ITU1	0.883	3.011	75.278%	0.786	0.890
	ITU2	0.865			0.756	
	ITU3	0.837			0.712	
	ITU4	0.885			0.782	

Source: Authors (2025)

The data were suitable for factor analysis, supported by KMO values above 0.50 and Bartlett's Test significance values below 0.05. Factor extraction met the established criteria, including eigenvalues above 1, cumulative explained variance exceeding 60%, and factor loadings at or above 0.60.

Reliability evaluation also indicates adequate internal consistency across constructs, with Cronbach's Alpha values above 0.70 and corrected item-to-total correlation values above 0.50. One Financial Literacy item (FL3) was excluded because it did not meet the minimum corrected item-to-total correlation threshold. After removal, the remaining indicators for Financial Literacy met both validity and reliability standards. The results are summarized in Table 4.

4.1.4 Classical Assumption Test Results

Prior to regression estimation, diagnostic checks were performed to confirm that the linear regression assumptions were satisfied. The evaluation covered normality, multicollinearity, and heteroscedasticity.

The residual distribution indicates that the normality assumption is fulfilled, supported by the pattern observed in the P-P Plot and the residual histogram. Multicollinearity was not detected, as tolerance values remain above 0.10 and VIF values are below 10. Furthermore, the standardized residual scatterplot shows no systematic pattern, indicating stable variance across observations and supporting the assumption of homoscedasticity.

Table 5. Multicollinearity Test

Independent Variable	Tolerance	VIF	Description
Perceived Ease of Use (PEOU)	0,859	1,164	No multicollinearity detected
Financial Literacy (FL)	0,859	1,164	No multicollinearity detected
Perceived Usefulness (PU)	1,000	1,000	No multicollinearity detected

Source: Authors (2025)

4.1.5. Regression Analysis Results

To assess the proposed relationships in the research model, regression testing was performed using two equations. The first model estimates the influence of Perceived Ease of Use and Financial Literacy on Perceived Usefulness, while the second model evaluates the impact of Perceived Usefulness on Intention to Use.

Model 1: Predicting Perceived Usefulness

Model 1 demonstrates a statistically significant fit ($p < 0.05$), showing that Perceived Ease of Use and Financial Literacy together provide a meaningful explanation of Perceived Usefulness. Both variables display positive and significant effects ($p < 0.05$), and the standardized estimates indicate that Perceived Ease of Use exerts a stronger influence than Financial Literacy. The model explains 51.2% of the variance in Perceived Usefulness ($R^2 = 0.512$).

Table 6. Regression Analysis Results Model 1

Variabel Independen	β (Beta)	t-value	Sig.
Perceived Ease of Use (PEOU)	0.445	6.115	0.000
Financial Literacy (FL)	0.417	5.731	0.000
R^2	0.512		
F	56.206		0.000

Source: Authors (2025)

Model 2: Predicting Intention to Use

Model 2 indicates that Perceived Usefulness is a significant positive predictor of Intention to Use ($p < 0.05$). The model explains 45.7% of the variance in Intention to Use ($R^2 = 0.457$), while the remaining variation may be influenced by other factors not included in this study.

Table 7. Regression Analysis Results Model 2

Variabel Independen	β (Beta)	t-value	Sig.
Perceived Usefulness (PU)	0.676	9.537	0.000
R^2	0.457		
F	90.958		0.000

Source: Authors (2025)

4.1.6 Mediation Analysis Results

The mediating effect of Perceived Usefulness was evaluated to clarify how Perceived Ease of Use and Financial Literacy influence consumers' Intention to Use QRIS.

Table 8. Mediation Analysis Results

Relationship among Variables	Coefficient (β)	Sig.	Description
PEOU $\rightarrow$ PU	0.445	0.000	Signifikan
FL $\rightarrow$ PU	0.417	0.000	Signifikan
PU $\rightarrow$ ITU	0.676	0.000	Signifikan

Source: Authors (2025)

The findings indicate that Perceived Ease of Use and Financial Literacy both have positive and significant effects on Perceived Usefulness ($p < 0.05$). Perceived Usefulness also shows a significant positive relationship with Intention to Use ($p = 0.000$). Taken together, these results suggest that the influence of perceived ease of use and financial literacy on intention operates indirectly through perceived usefulness. Thus, Perceived Usefulness is confirmed as a mediating variable in the proposed research model.

4.1.7 Hypothesis Testing Results

The hypothesis testing results demonstrate that all proposed relationships in the research framework are statistically supported at the 5% significance level. First, Perceived Ease of Use shows a positive and significant effect on Perceived Usefulness ($\beta = 0.445$; $p = 0.000$), indicating that greater ease in operating QRIS strengthens users' usefulness evaluations. Second, Financial Literacy is also positively associated with Perceived Usefulness ($\beta = 0.417$; $p = 0.000$), suggesting that consumers with stronger financial understanding tend to perceive QRIS as more beneficial for payment activities. Finally, Perceived Usefulness significantly predicts Intention to Use QRIS ($\beta = 0.676$; $p = 0.000$), confirming that usefulness perceptions play a dominant role in reinforcing continued usage intention. Overall, these findings position Perceived Usefulness as the key explanatory construct that connects both technological perceptions and individual capability with consumers' behavioral intention to use QRIS.

Table 9. Hypothesis Testing Results

Hypothesis	Relationship	β (Beta)	t-value	Sig.	Result
H1	Perceived Ease of Use $\rightarrow$ Perceived Usefulness	0.445	6.115	0.000	Accepted
H2	Financial Literacy $\rightarrow$ Perceived Usefulness	0.417	5.731	0.000	Accepted
H3	Perceived Usefulness $\rightarrow$ Intention to Use	0.676	9.537	0.000	Accepted

Source: Authors (2025)

4.2 Discussion

This section explains the research findings by interpreting the statistical results using the Technology Acceptance Model (TAM) and relevant evidence from previous studies on digital payment adoption. It also emphasizes the research contribution, acknowledges several limitations, and suggests potential directions for future research.

4.2.1 The Effect of Perceived Ease of Use on Perceived Usefulness

The results show that QRIS users who perceive the system as simple to operate tend to judge it as more useful for supporting routine transactions. This aligns with the logic of TAM, which suggests that technologies requiring less effort to learn and use are more likely to be perceived as beneficial. In practical terms, when QRIS users can follow transaction steps smoothly, access features without confusion, and complete payments independently, they are more likely to view the advantages of QRIS in everyday use.

Moreover, ease of use appears to influence more than the technical experience of interacting with the system. It also shapes consumers' overall confidence in QRIS as a reliable and convenient payment option. While prior studies have often emphasized specific populations, such as students or business actors, the current findings demonstrate that ease of use remains an important determinant of usefulness perceptions among consumers more broadly, particularly within the context of QRIS as a standardized and widely accessible payment tool.

4.2.2 The Effect of Financial Literacy on Perceived Usefulness

The findings also show that financial literacy levels has a positive role in strengthening consumers' perceived usefulness of QRIS. This suggests that users who have better awareness of financial benefits, potential transaction risks, and security considerations tend to evaluate QRIS more positively. With stronger financial knowledge, consumers may be more capable of identifying the practical advantages of QRIS, including efficiency, convenience, and the ability to monitor spending through digital transaction records.

From a conceptual perspective, financial literacy can be interpreted as an individual capability that supports the usefulness evaluation process. Rather than directly shaping intention to use, financial literacy appears to influence consumers indirectly by enhancing their perceived benefits of using QRIS. This finding provides additional explanation within TAM-related studies by clarifying how financial capability may strengthen digital payment acceptance among consumers.

4.2.3 The Effect of Perceived Usefulness on Intention to Use

Perceived usefulness is shown to be a strong determinant of intention to continue using QRIS. When consumers experience real benefits from QRIS, such as faster transaction completion and more efficient payment processes, they are more likely to sustain usage in the future. This implies that usefulness perceptions remain important not only at the initial adoption stage, but also in reinforcing continued usage behavior over time.

Within this study, perceived usefulness functions as the main channel through which system-related perceptions and individual characteristics translate into behavioral intention. Therefore, improving consumers' perceived usefulness of QRIS is essential in supporting sustained usage as part of daily transaction routines.

4.2.4 The Mediating Role of Perceived Usefulness and Research Contribution

The mediation results indicate that perceived usefulness serves as the key mechanism connecting perceived ease of use and financial literacy with intention to use QRIS. This implies that ease of use and financial literacy influence intention indirectly by first strengthening consumers' perceptions of QRIS usefulness.

Theoretically, this result extends TAM by incorporating financial literacy as an additional consumer-related factor within a mediation structure. By placing perceived usefulness as the bridging construct between usability perceptions, individual capability, and behavioral intention, this study offers a more integrated explanation of QRIS adoption in the context of a nationally standardized payment system.

4.2.5 Limitations and Future Research Directions

While the analysis offers meaningful results, a number of limitations should be recognized. First, the cross-sectional design limits the ability to observe changes in consumer perceptions and QRIS usage behavior over time. Second, the model focuses on TAM variables and financial literacy, while other factors that may influence digital payment adoption such as trust, perceived risk, and social influence.

Future research is encouraged to apply longitudinal designs to capture the dynamics of QRIS usage over time. In addition, subsequent studies may extend the proposed framework by incorporating additional constructs and applying advanced analytical approaches, such as Structural Equation Modeling (SEM), to provide deeper and more comprehensive insights into QRIS adoption across diverse consumer groups.

5. CONCLUSION

This study investigates consumers' intention to use QRIS by extending the Technology Acceptance Model (TAM) with financial literacy as an additional individual factor. The empirical results support all hypotheses proposed in the research framework. Specifically, perceived ease of use and financial literacy both show significant positive effects on perceived usefulness, while perceived usefulness subsequently strengthens intention to use QRIS. Overall, these findings indicate that consumers' willingness to adopt QRIS is mainly driven by the perceived benefits

of the system, which are shaped through the combined role of usability perceptions and consumers' financial capability.

From a theoretical perspective, this study strengthens TAM-based research by confirming that perceived usefulness functions as a mediating mechanism linking perceived ease of use and financial literacy with intention to use QRIS. By integrating financial literacy into the model and focusing on consumers as end users, this research provides a broader explanation of digital payment adoption within the context of QRIS as a nationally standardized payment system.

In practical and policy terms, the findings suggest that QRIS adoption should be encouraged not only through infrastructure expansion, but also through continuous improvements in system usability and consumer readiness. Payment service providers are therefore expected to maintain QRIS features that are simple, intuitive, and accessible to various consumer segments. In addition, regulators and related stakeholders are encouraged to strengthen financial literacy programs that cover not only operational understanding, but also digital transaction security, financial planning awareness, and responsible payment behavior. Collaboration between financial authorities, educational institutions, and payment service providers may further support inclusive and sustainable implementation of QRIS.

Despite these contributions, limitations should be acknowledged. The cross-sectional research design restricts the ability to observe changes in consumer behavior over time, and the model does not include other possible determinants such as trust, perceived risk, and social influence. Future studies are therefore recommended to apply longitudinal approaches and extend the proposed model by including additional variables or using more advanced analytical techniques such as Structural Equation Modeling (SEM) to gain deeper insight into QRIS adoption behavior.

Acknowledgements

The author would like to express sincere appreciation to Adnan Kasofi, S.Pd., MBA, for his guidance, valuable insights, and constructive feedback throughout the completion of this research. Appreciation is also extended to all respondents who participated and contributed essential data. Their cooperation and involvement were highly important in supporting the successful completion of this study.

REFERENCES

- Anggriani, L., Diana, N., & Fakhriyyah, D. D. (2023). Pengaruh Literasi Keuangan, Persepsi Kegunaan, Dan Kemudahan Penggunaan Pada Minat Penggunaan Quick Response Code Indonesian Standard (Qris) Dalam Transaksi Keuangan (Studi Kasus Pada Mahasiswa Feb Unisma Tahun 2019). In *E_Jurnal Ilmiah Riset Akuntansi*. [Http://Jim.Unisma.Ac.Id/Index.Php/Jra](http://jim.unisma.ac.id/index.php/jra)
- Auer, R., Böhme, R., & Bank For International Settlements. (2020). The Technology Of Retail Central Bank Digital Currency. In *Bis Quarterly Review* (Pp. 85–87) [Journal-Article]. [Https://Www.Bis.Org/Publ/Qtrpdf/R_Qt2003j.Pdf](https://www.bis.org/publ/qtrpdf/R_Qt2003j.pdf)
- Bank Indonesia. (2023). *Qris Merchant Mencapai 29,6 Juta Hingga Oktober 2023*. Bank Indonesia. [Https://Www.Bi.Go.Id/Id/Publikasi/Ruang-Media/News-Release/Pages/Sp_2531823.Aspx](https://www.bi.go.id/Id/Publikasi/Ruang-Media/News-Release/Pages/Sp_2531823.aspx)
- Bank Indonesia. (2025). *Perkembangan Qris Dan Sistem Pembayaran Nasional Semester I 2025*. Bank Indonesia. [Https://Www.Bi.Go.Id/Id/Publikasi/Ruang-Media/News-Release/Pages/Sp_2717025.Aspx](https://www.bi.go.id/Id/Publikasi/Ruang-Media/News-Release/Pages/Sp_2717025.aspx)
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate Data Analysis* (8th Ed.). Cengage.
- Herlina, Suhardi, Astuti, N., & Hamdan. (2025). Qris Adoption Determinants: Analysis Of The Role Of Ease Of Use, Trust, And Promotion With User Satisfaction As An Intervening. *Sibatik Journal: Jurnal Ilmiah Bidang Sosial, Ekonomi, Budaya, Teknologi, Dan Pendidikan*, 4(4), 289–306. [Https://Doi.Org/10.54443/Sibatik.V4i4.2651](https://doi.org/10.54443/Sibatik.V4i4.2651)
- Lolowang, T., Tasik, H. H. D., & Gunawan, E. M. (2024). Unlocking The Qris Impact: An Analysis Of Mobile Payment Among Msmes Using Technology Acceptance Model (Tam). In *Jurnal Emba* (Vols. 9–9, Issue 2, Pp. 793–803) [Journal-Article]. [Https://Ejournal.Unsrat.Ac.Id/V3/Index.Php/Emba/Article/View/59378](https://ejournal.unsrat.ac.id/V3/Index.Php/Emba/Article/View/59378)
- Pradianto, M. A., Sangka, K. B., & Totalia, S. A. (2024). Effect Of The Technology Acceptance Model On The Use Of Qris On The Financial Literacy Needs Of Surakarta Klewer Market Traders. *Wiga Jurnal Penelitian Ilmu Ekonomi*, 14(1), 172–185. [Https://Doi.Org/10.30741/Wiga.V14i1.1243](https://doi.org/10.30741/Wiga.V14i1.1243)
- Purwatiningsih, A. P., Fitria, S., Indriani, A., & Kuriawan, C. S. (2025). Adoption Of Qris Digital Payment In Indonesia And Malaysia: A Technology Acceptance And Knowledge Perspective. *International Journal Of Innovative Research And Scientific Studies*, 8(6), 704–713. [Https://Doi.Org/10.53894/Ijirss.V8i6.9670](https://doi.org/10.53894/Ijirss.V8i6.9670)
- Ramayanti, R. (2024). Understanding User Perceptions Of Qris In Indonesia: Exploring The Impact Of Perceived Usefulness, Ease Of Use, And Demographic Factors. In *International Journal Of Finance & Banking Studies* (Vol. 13, Issue 4, Pp. 90–99) [Journal-Article]. [Https://Doi.Org/10.20525/Ijfb.V13i4.3887](https://doi.org/10.20525/Ijfb.V13i4.3887)
- Sari, Y. F., & Indarta, A. (2025). Pengaruh Literasi Keuangan, Manfaat, Dan Kemudahan Terhadap Keputusan Penggunaan Ulang Quick Response Indonesian Standard (Qris) Pada Generasi Z Kabupaten Klaten. *Jurnal Bisnis Mahasiswa*, 5(3), 1151–1162. [Https://Doi.Org/10.60036/Jbm.673](https://doi.org/10.60036/Jbm.673)

- Sholihah, E., & Nurhapsari, R. (2023). Percepatan Implementasi Digital Payment Pada Umkm: Intensi Pengguna Qris Berdasarkan Technology Acceptance Model. *Nominal Barometer Riset Akuntansi Dan Manajemen*, 12(1), 1–12. <https://doi.org/10.21831/Nominal.V12i1.52480>
- Supriyanto, N. M., Wiwoho, N. R. D., & Srimiatun, N. S. (2025). Effect Of Qris Digital Payments (Quick Response Code In-Donesian Standard) On Students' Consumptive Behavior Madiun State Polytechnic. *Brilliant International Journal Of Management And Tourism*, 5(3), 67–74. <https://doi.org/10.55606/Bijmt.V5i3.5748>
- Wicaksono, I. (2025). Role Of Habit And Trust In Driving The Continuance Of Qr Code Payment Usage: A Study Of Qris Consumers In Indonesia. *Journal Of Marketing Innovation (Jmi)*, 5(2). <https://doi.org/10.35313/Jmi.V5i2.273>