

Determinants of QRIS Adoption and Financial Performance of Creative MSMEs in West Java Indonesia

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ABSTRACT

Purpose – This research intends to evaluate the factors of Quick Response Code Indonesian Standard (QRIS) adoption and its influence on the financial performance of creative Micro, Small, and Medium Enterprises (MSMEs) in West Java, Indonesia. In particular, it examines how QRIS adoption affects MSMEs' financial performance and assesses the impact of technological, readiness, organizational readiness, environmental support, financial literacy, perceived utility, and perceived ease of use.

Methodology/approach – A quantitative study approach was applied utilizing a survey of 402 creative MSMEs who had deployed QRIS as their digital payment system. Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS 4 was used to examine the data that was gathered via structured questionnaires. To explain QRIS adoption and its connection to financial performance, the suggested model combines the Technology Acceptance Model (TAM), the Technology–Organization–Environment (TOE) framework, and financial literacy.

Findings – The findings reveal that technological readiness, organizational readiness, environmental support, financial literacy, perceived usefulness, and perceived ease of use all have significant positive effects on QRIS adoption. Among these determinants, perceived usefulness exerts the strongest influence on QRIS adoption. Furthermore, QRIS adoption significantly enhances the financial performance of creative MSMEs, indicating that greater utilization of digital payment technology contributes to improved profitability, operational efficiency, and financial stability.

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INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a strategic role in Indonesia's economic development by contributing significantly to national output, employment generation, and export activities. In 2025, MSMEs contributed approximately 60% of Indonesia's Gross Domestic Product (GDP), absorbed around 97% of the national workforce, and accounted for 15.7% of total exports (Coordinating Ministry for Economic Affairs, 2025). In West Java, approximately 4.63 million MSMEs operate across various business sectors, with micro enterprises representing 85.02% of all business units (West Java Office of Cooperatives and Small Enterprises, 2024). Furthermore, West Java is recognized

as one of Indonesia's leading creative economy provinces, hosting approximately 33,267 creative enterprises, particularly in the culinary, fashion, and craft subsectors (Ministry of Creative Economy, 2025). These characteristics position West Java as an important ecosystem for examining digital transformation among creative MSMEs.

Among various MSME sectors, the creative economy has emerged as one of the fastest-growing contributors to Indonesia's economic development. Creative MSMEs generate value through innovation, creativity, intellectual capital, and digital entrepreneurship, enabling them to create products and services with higher added value. The Indonesian government has continuously promoted the development of the creative economy as one of the country's future economic drivers through digital transformation, innovation support, and financial inclusion programs. West Java represents one of the largest creative economy ecosystems in Indonesia, with approximately 33,267 creative MSMEs operating across diverse creative subsectors (Ministry of Creative Economy, 2025). In addition, West Java has become one of Indonesia's most dynamic entrepreneurial regions due to its high concentration of innovative businesses, strong digital infrastructure, and rapidly expanding digital payment ecosystem. These characteristics make the province an appropriate setting for investigating digital technology adoption among creative MSMEs. The fast progress of digital technology has substantially impacted the way organizations perform financial transactions and manage everyday operations. The introduction of financial technology (fintech) has helped firms to improve transaction efficiency, decrease operating costs, boost financial transparency, and expand access to financial services (Nugraha et al., 2022; Hossain et al., 2025). Because they enable quicker, safer, and more comfortable transactions for both customers and merchants, digital payment systems have emerged as one of the most significant fintech advancements. Digital payment solutions not only replace traditional cash transactions but also facilitate business process optimization via enhanced cash flow management, automatic transaction recording, and more precise financial reporting all of which enhance corporate performance.

Bank Indonesia established the Quick Response Code Indonesian Standard (QRIS) as the country's standardized QR code payment system in order to hasten the adoption of digital payments. QRIS unifies numerous electronic payment providers into a single interoperable platform, enabling retailers to accept payments from different banks and electronic wallets using one common QR code. Both clients and merchants benefit from this compatibility, which lowers transaction complexity. As a result, QRIS has emerged as one of Indonesia's most prosperous digital financial inventions and is crucial to the nation's shift to a cashless society (Kurniasari et al., 2023; Irdianty et al., 2025).

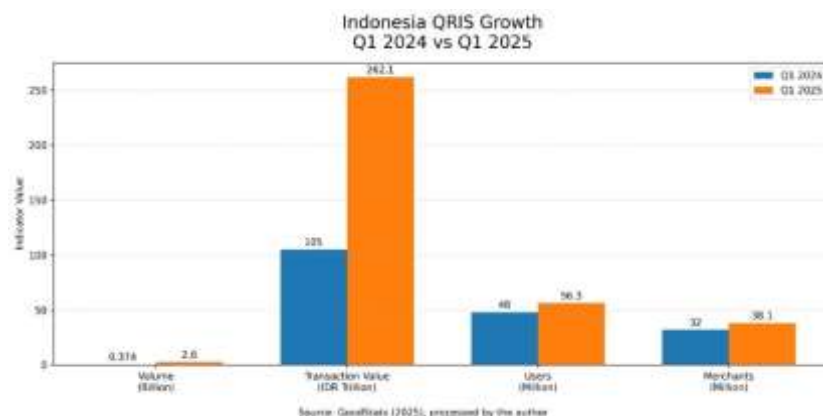


Fig 1. Growth of QRIS Transaction Volume, Transaction Value, Users, and Merchants in Indonesia, Q1 2024–Q1 2025.

Figure 1 illustrates the development of QRIS has experienced remarkable growth since its nationwide implementation. According to Bank Indonesia, QRIS transaction volume reached approximately 2.6 billion transactions during the first quarter of 2025, with a transaction value of approximately IDR 262.1 trillion. During the same period, the number of registered QRIS users increased to 56.3 million, while the number of merchants exceeded 38.1 million (Goodstats, 2025). West Java has become the province with the largest QRIS merchant ecosystem in Indonesia, accounting for approximately 7.3 million merchants, or more than one-fifth of all QRIS merchants nationwide. These statistics indicate that digital payment infrastructure has expanded rapidly and that QRIS has become increasingly accessible for business actors across different economic sectors.

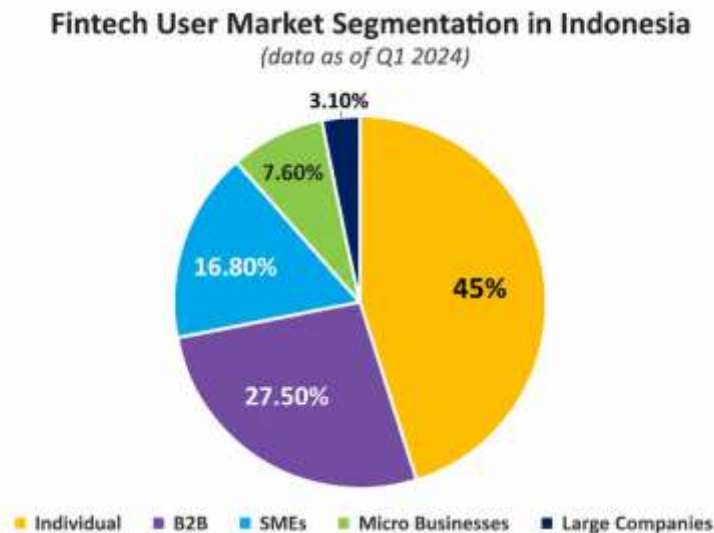


Fig 2. Fintech User Market Segmentation in Indonesia (Q1 2024)

Despite the impressive expansion of QRIS, the utilization of financial technology among business entities remains relatively limited. As illustrated in Figure 2, individual consumers account for approximately 45% of fintech users in Indonesia, while business-to-business (B2B) users represent 27.5%. In contrast, Small and Medium Enterprises (SMEs) account for only 16.8%, micro enterprises represent 7.6%, and large enterprises account for merely 3.1% of fintech users (Kharisma, 2025). These figures suggest that although digital payment infrastructure continues to develop rapidly, its productive utilization among MSMEs remains considerably lower than among individual consumers. This discrepancy indicates that increasing the number of QRIS merchants does not necessarily guarantee the effective utilization of digital payment technologies to improve business performance.

For creative MSMEs, QRIS should not just be considered as a cashless payment device but as a strategic business resource capable of boosting operational efficiency, financial management, and organizational competitiveness. Through digital transaction records, MSME owners may better monitor cash flow, analyze sales performance, produce financial reports, and enhance corporate decision-making. Previous research have also showed that digital payment use adds favorably to operational efficiency, customer happiness, and financial performance (Kurniasari et al., 2023; Bajwa et al., 2025). Nevertheless, many MSMEs continue to suffer difficulties in implementing and using digital payment systems efficiently, including low technical competence, poor organizational readiness, lack financial literacy, and environmental restrictions.

To comprehend these issues, scholars have presented many theoretical approaches explaining technological adoption. Tornatzky and Fleischer (1990) established the Technology–Organization–Environment (TOE) framework, which is among the most complete organizational viewpoints (Wicaksono, 2022). According to the TOE framework, organizational technology adoption is

influenced by three contextual factors: environmental support, organizational readiness, and technological readiness. According to Baker (2012) and Edo et al. (2024), organizations that have enough technological, infrastructure, organizational resources, and supportive external contexts are more likely to effectively integrate technological breakthroughs. In the context of MSMEs, organizational readiness reflects managerial commitment and resource availability, technological readiness reflects the availability of digital infrastructure and technological capability, and environmental support includes government regulations, pressure from competitors, and the growth of digital ecosystems.

The Technology Acceptance Model (TAM) describes technology adoption from the behavioral standpoint of the user, while TOE offers an organizational viewpoint. According to Davis (1989) (Baker, 2012), perceived utility and perceived ease of use are the two main cognitive assumptions that impact technology adoption. Users are more likely to embrace and consistently use technologies that they believe will improve MSMEs performance and are sufficiently simple to use. Numerous research have proven that these two constructs strongly impact the adoption of digital payment systems and other financial innovations among MSMEs (Wicaksono, 2022; Krah et al., 2024). As a result, combining TOE and TAM offers a more thorough explanation by taking organizational readiness and personal attitudes toward technology into account at the same time.

In addition to organizational and behavioral considerations, financial literacy has become an increasingly crucial predictor of fintech adoption. Financial literacy refers to an individual's knowledge, abilities, and confidence in comprehending financial ideas and making educated financial choices. According to Mutamimah and Indriastuti (2023) and Islam and Khan (2024), MSME owners with greater levels of financial literacy are often better at assessing financial goods, comprehending digital financial services, managing firm finances, and embracing technology developments. Therefore, by lowering uncertainty and boosting entrepreneurs' confidence in using digital financial services, financial literacy is anticipated to enhance the adoption of QRIS.

Despite the fact that adoption of digital payments has been well studied in the past, there are still a number of significant research gaps. First, there is a fragmented understanding of how organizational, technological, behavioral, and financial capability factors collectively influence QRIS adoption because previous research has typically used the TOE framework or the Technology Acceptance Model independently (Nugraha et al., 2022; Edo et al., 2024). Second, empirical research has generally focused on general MSMEs or individual customers, while very few studies have particularly explored creative MSMEs, despite their strategic role to Indonesia's creative economy. Third, previous research has mostly focused on technology adoption intention or use patterns rather than thoroughly investigating whether QRIS adoption actually improves financial performance (Thathsarani & Jianguo, 2022; Kalbounieh et al., 2025). Lastly, there is still a dearth of empirical data from West Java, the Indonesian area with the biggest QRIS merchant environment.

To address these research gaps, this study offers an integrated research model incorporating the Technology–Organization–Environment (TOE) framework, the Technology Acceptance Model (TAM), and financial literacy to explain QRIS uptake among creative MSMEs. In contrast to other research, this study looks at QRIS adoption as the mediating mechanism via which financial performance is influenced by technology readiness, organizational readiness, environmental support, financial literacy, perceived utility, and perceived ease of use. This study adds empirical data from one of Indonesia's largest creative economy ecosystems to the literature on digital payment adoption by concentrating on creative MSMEs in West Java. It also offers useful implications for policymakers, financial institutions, fintech providers, and MSME practitioners looking to boost the financial performance of creative enterprises and accelerate digital financial transformation.

LITERATURE REVIEW

Technology–Organization–Environment (TOE) Framework

The Technology–Organization–Environment (TOE) framework presented by Tornatzky and Fleischer argues that technology adoption is impacted by technological, organizational, and environmental settings. Because it takes into account both internal and external factors that influence technology adoption, the framework has been extensively used to explain the adoption of digital innovations and information systems inside businesses. The technological context refers to the technologies and technical resources available to an organization, including technological infrastructure, compatibility, and capabilities required to implement an innovation. The organizational context concerns internal conditions such as organizational resources, managerial support, and human capabilities that determine an organization's readiness to implement new technologies. Meanwhile, the environmental context encompasses external factors that may influence technology adoption, including government support, competitive pressure, customer demand, and supporting infrastructure. The TOE framework therefore provides a comprehensive perspective for understanding technology adoption because it considers both internal organizational capabilities and external environmental conditions that may facilitate or constrain the implementation of technological innovations (Baker, 2012; Edo et al., 2024; Nugraha et al., 2022).

Technological Readiness

Technology readiness refers to the extent to which an organization maintains enough technology infrastructure, technological skill, and technological resources to facilitate the adoption of new technologies. Organizations with better technology readiness are more likely to embrace digital innovations because they have fewer implementation hurdles and have more compatibility with technological systems (Edo et al., 2024). Previous studies have reported that technological readiness positively influences technology and fintech adoption among MSMEs, as adequate technological capabilities facilitate the integration of digital financial technologies into business operations (Edo et al., 2024; Kalbouneh et al., 2025). Accordingly, this study proposes that Technological Readiness positively influences QRIS Adoption (H1).

Organizational Readiness

Organizational readiness refers to the availability of organizational resources, managerial support, human resources, and financial capabilities required to implement technological innovation. MSMEs with stronger organizational readiness are more prepared to integrate QRIS into their business activities because internal resources and managerial commitment can facilitate the implementation and utilization of digital payment technology. Previous studies have indicated that organizational readiness supports the adoption of digital technologies by enabling organizations to provide the resources and internal capabilities required for technology implementation (Edo et al., 2024). Accordingly, this study proposes that Organizational Readiness positively influences QRIS Adoption (H2).

Environmental Support

Environmental support refers to external conditions that facilitate technology adoption, including government initiatives, competitive pressure, customer demand, and supporting digital infrastructure. A supportive business environment can encourage MSMEs to adopt QRIS by increasing awareness of digital payment benefits, reducing uncertainty, and providing favorable conditions for digital technology implementation. Previous studies have indicated that environmental factors, including government support and the development of digital ecosystems, can encourage fintech adoption among Indonesian SMEs (Nugraha et al., 2022; Kurniasari et al., 2023). Accordingly, this study proposes that Environmental Support positively influences QRIS Adoption (H3).

Financial Literacy

Financial literacy refers to an individual's knowledge, understanding, and ability to make appropriate financial decisions and manage financial resources effectively. For MSME owners, adequate financial literacy enables them to understand financial products, assess financial risks, and evaluate the benefits of digital financial services, thereby increasing their confidence in adopting digital payment technologies. Previous studies have reported that financial literacy positively influences fintech adoption and the decision to use QRIS because greater financial understanding enables MSME owners to better recognize the benefits and mechanisms of digital financial services (Mutamimah & Indriastuti, 2023; Islam & Khan, 2024). Accordingly, this study proposes that Financial Literacy positively influences QRIS Adoption (H4).

Technology Acceptance Model (TAM)

According to the Technology adoption Model (TAM), perceived usefulness (PU) and perceived ease of use (PEOU) are the main factors influencing technology adoption (Wicaksono, 2022). Perceived ease of use is the degree to which a technology is seen to be simple to learn and use, while perceived usefulness is the degree to which a person feels that employing a technology improves performance.

Perceived Usefulness

When QRIS increases transaction efficiency, speeds up payment procedures, and makes financial management tasks easier, perceived usefulness in the context of digital payment systems may emerge. Perceived usefulness refers to the extent to which MSME owners believe that using QRIS can improve their business performance, streamline payment processes, and increase transaction efficiency. When MSME owners perceive QRIS as providing meaningful benefits for their business activities, they are more likely to accept and adopt the technology. Previous studies have shown that perceived usefulness significantly influences the adoption of digital financial technologies and payment systems, as users tend to adopt technologies that are perceived to provide practical benefits and improve their activities (Thatsarani & Jianguo, 2022; Krah et al., 2024). Accordingly, this study proposes that Perceived Usefulness positively influences QRIS Adoption (H5).

Perceived Ease of Use

Meanwhile, perceived ease of use decreases complexity and encourages consumers to use digital payment systems more often. Perceived ease of use refers to the extent to which MSME owners perceive QRIS as easy to understand, learn, and operate. A digital payment system that is simple to use can reduce the effort required to conduct transactions and encourage business owners to integrate the technology into their daily activities. Previous studies have indicated that perceived ease of use positively influences the adoption of digital financial technologies and payment systems because users are more likely to adopt technologies that they perceive as simple and convenient to operate (Thatsarani & Jianguo, 2022; Krah et al., 2024). Accordingly, this study proposes that Perceived Ease of Use positively influences QRIS Adoption (H6).

QRIS Adoption

QRIS adoption refers to the use and integration of QRIS as a digital payment system within MSME business activities. The adoption of QRIS can facilitate faster transactions, improve transaction records, reduce cash-handling requirements, and support more efficient financial management. These benefits can contribute to improved financial performance by increasing operational efficiency, reducing

transaction costs, and strengthening financial record management. Previous studies have shown that digital payment adoption can positively influence the financial performance of SMEs by improving operational efficiency and financial management (Kurniasari et al., 2023; Sinaga et al., 2025). Similarly, research on QRIS utilization among MSMEs found that the use of QRIS contributes positively to operational efficiency and profitability (Primasari et al., 2025). Accordingly, this study proposes that QRIS Adoption positively influences Financial Performance (H7).

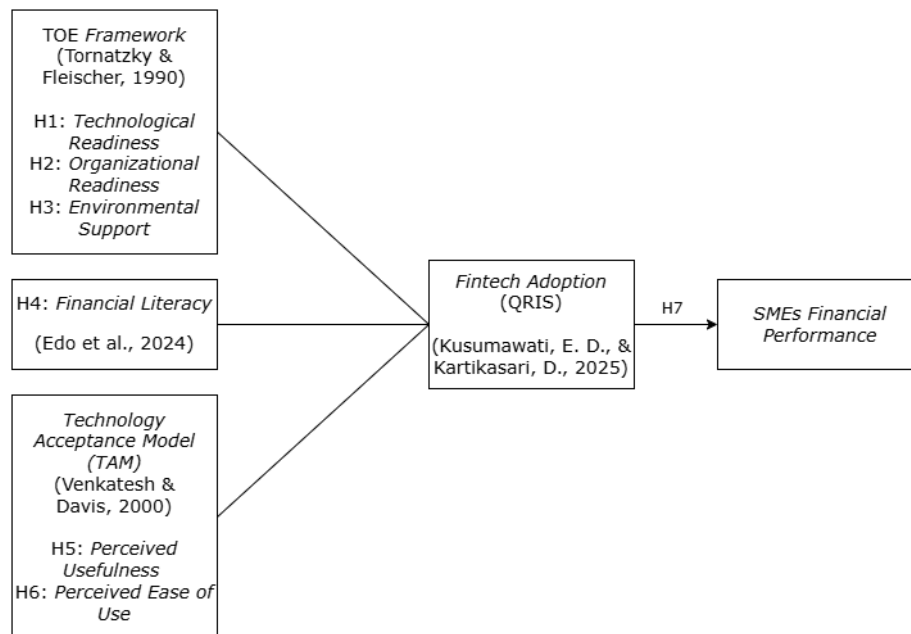


Fig 3. Research Framework

METHOD

This study employed a quantitative approach with a causal-explanatory research design to examine the determinants of QRIS adoption and its influence on the financial performance of creative Micro, Small, and Medium Enterprises (MSMEs) in West Java, Indonesia. The population consisted of 33,267 creative MSMEs operating in West Java, while the sample was selected using non-probability sampling with a purposive sampling technique based on predetermined criteria, including MSMEs located in West Java, operating in one of the creative economy subsectors, having adopted QRIS as a digital payment system, and respondents being owners or managers who understood the operational and financial conditions of their businesses. The minimum sample size calculated using the Yamane formula was 395 respondents, while a total of 402 valid responses were obtained and analyzed. Data were collected through self-administered structured questionnaires distributed online using Google Forms through social media and business networks, as well as directly at business locations across various districts and cities in West Java. The questionnaire employed a four-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). The collected data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4. The analysis involved evaluation of the measurement model through convergent validity, discriminant validity, and reliability, followed by evaluation of the structural model through collinearity, coefficient of determination (R^2), effect size (f^2), predictive relevance (Q^2), path coefficients, and hypothesis testing.

RESULT AND DISCUSSION

Table 1. Respondent Characteristics

Characteristics	Category	Frequency	Percentage
Age	15–17 years	8	2.0%
	18–20 years	36	9.0%
	21–25 years	131	32.6%
	26–35 years	103	25.6%
	>35 years	124	30.8%
Education	Elementary school/equivalent	1	0.2%
	Junior high school/equivalent	11	2.7%
	Senior high school/vocational school/equivalent	185	46.0%
	Diploma	57	14.2%
	Bachelor's degree	124	30.8%
	Master's/Doctoral degree	2	0.5%
	Others	22	5.5%
Business Sector	Culinary	316	78.6%
	Crafts	48	11.9%
	Fashion	25	6.2%
	Visual Communication Design	5	1.2%
	Product Design	4	1.0%
Monthly Business Revenue	< IDR 500,000	9	2.2%
	IDR 500,000–1,000,000	27	6.7%
	IDR 1,000,000–3,000,000	95	23.6%
	IDR 3,000,000–5,000,000	138	34.3%
	IDR 5,000,000–10,000,000	54	13.4%
	> IDR 10,000,000	57	14.2%
	Others	22	5.5%

Table 1 shows the characteristics of the respondents in this study. The majority of respondents were aged 21–25 years and had a senior high school or vocational school education. Most respondents had operated their businesses for 3–5 years and were engaged in the culinary sector. In terms of monthly business revenue, the largest proportion reported revenue between IDR 3,000,000 and IDR 5,000,000. The respondents also came from various districts and cities across West Java, providing broad geographical coverage of the study.

Table 2. Results of Measurement Model Evaluation (Validity and Reliability)

Variables	Loadings	CA	Rho c	AVE
Technological Readiness (X1)		0.858	0.914	0.779
Technology Availability	0.879			
Technology Compatibility	0.890			
Technological Capabilities	0.879			
Organizational Readiness (X2)		0.870	0.920	0.794
Management Support	0.893			
Internal Resources	0.892			
Financial Readiness	0.887			
Environmental Support (X3)		0.912	0.934	0.740
Government Support	0.884			
	0.896			
	0.829			
Competitive Pressure	0.865			

Variables	Loadings	CA	Rho c	AVE
Digital Ecosystem	0.824			
Financial Literacy (X4)		0.813	0.889	0.728
Basic Financial Knowledge	0.747			
Understanding of Economic Conditions	0.906			
Financial Risk Management	0.897			
Perceived Usefulness (X5)		0.887	0.930	0.816
Operational Efficiency	0.899			
Financial Accessibility	0.899			
Overall Benefit of QRIS Services	0.912			
Perceived Ease of Use (X6)		0.873	0.922	0.798
Ease of System Use	0.894			
Operational Simplicity	0.900			
Availability of Supporting Facilities	0.886			
QRIS Adoption (Z)		0.889	0.931	0.818
Continuance Intention	0.902			
Recommendation Intention	0.902			
Future Usage Intention	0.909			
Financial Performance (Y)		0.873	0.922	0.798
Profitability	0.897			
Asset Efficiency	0.890			
Financial Stability	0.892			

As reported in Table 2 shows the results of the measurement model evaluation for validity and reliability. The outer loading values of all indicators range from 0.747 to 0.912, indicating that all indicators meet the required validity criteria. The Cronbach's alpha (CA) values range from 0.813 to 0.912, while the rho_c values range from 0.889 to 0.934, indicating that all constructs meet the reliability requirements. Furthermore, the Average Variance Extracted (AVE) values range from 0.728 to 0.818, exceeding the minimum threshold for convergent validity. Therefore, all indicators and constructs are considered valid and reliable and can be used for further analysis in the structural model.

Table 3. Fornell-Larcker Criterion

Variables	QRIS Adoption	Environmental Support	Financial Performance	Financial Literacy	Organizational Readiness	Perceived Usefulness	Perceived ease of use	Technological Readiness
QRIS Adoption	0.905							
Environmental Support	0.688	0.860						
Financial Performance	0.675	0.578	0.893					
Financial Literacy	0.612	0.563	0.504	0.853				
Organizational Readiness	0.543	0.507	0.447	0.447	0.891			
Perceived Usefulness	0.734	0.687	0.590	0.581	0.531	0.903		
Perceived ease of use	0.679	0.592	0.572	0.531	0.512	0.689	0.893	
Technological Readiness	0.704	0.686	0.569	0.549	0.562	0.702	0.621	0.883

The Fornell-Larcker criteria findings show that all constructs exhibit good discriminant validity, as shown in Table 3. In particular, the correlations between each construct and every other construct are less than the square root of the Average Variance Extracted (AVE), which is represented by the diagonal values. These data imply that each construct assesses a distinct notion and has larger variation with its own indicators than with other latent variables. As a result, the measurement model exhibits sufficient

discriminant validity and is deemed suitable for further structural model assessment and hypothesis testing.

Table 4. Results of Heterotrait-Monotrait Ratio (HTMT)

Variables	QRIS Adoption	Environmental Support	Financial Performance	Financial Literacy	Organizational Readiness	Perceived Usefulness	Perceived ease of use	Technological Readiness
QRIS Adoption								
Environmental Support	0.761							
Financial Performance	0.766	0.648						
Financial Literacy	0.708	0.650	0.597					
Organizational Readiness	0.616	0.569	0.512	0.518				
Perceived Usefulness	0.824	0.761	0.668	0.667	0.603			
Perceived ease of use	0.771	0.662	0.654	0.626	0.587	0.782		
Technological Readiness	0.805	0.773	0.657	0.645	0.650	0.804	0.717	

Table 4 shows the results of the Heterotrait–Monotrait Ratio (HTMT) analysis for assessing discriminant validity. The HTMT values among the constructs range from 0.512 to 0.824, indicating that all values are below the recommended threshold of 0.90. Therefore, the results demonstrate that each construct has adequate discriminant validity and is empirically distinct from the other constructs in the research model.

Table 5. Results of Predictive Relevance and Coefficient of Determination

Variable	Q ² predict	R ² adjusted
QRIS Adoption	0.664	0.670
Financial Performance	0.437	0.455

The structural model has enough explanatory power and predictive relevance, as shown in Table 5. The suggested model has sufficient capacity to forecast the actual data, as shown by the positive Q² predict values for both endogenous constructs. In particular, Financial Performance recorded a score of 0.437, but QRIS Adoption attained a Q² forecast value of 0.664. The large contribution of the chosen antecedent factors in explaining MSMEs' adoption of QRIS is shown in these results, which indicate that the model has a better predictive potential for explaining QRIS adoption than for forecasting financial success.

Additionally, the R² adjusted values show that a significant amount of the variation in the endogenous constructs can be explained by the suggested model. QRIS Adoption received a R² adjusted value of 0.670, suggesting that 67.0% of the variance in QRIS Adoption is jointly explained by Technological Readiness, Organizational Readiness, Environmental Support, Financial Literacy, Perceived Usefulness, and Perceived Ease of Use. Other variables beyond the purview of this research might be responsible for the remaining 33.0%. Financial Performance, on the other hand, had an R² adjusted

value of 0.455, meaning that QRIS Adoption accounts for 45.5% of the variation in financial performance, with the remaining 54.5% likely being impacted by other internal and external business factors not covered by the suggested model.

Table 6. Results of Effect Size Analysis

Variable	f ²
QRIS Adoption -> Financial Performance	0.839
Environmental Support -> QRIS Adoption	0.037
Financial Literacy -> QRIS Adoption	0.039
Organizational Readiness -> QRIS Adoption	0.008
Perceived Usefulness -> QRIS Adoption	0.060
Perceived Ease of Use -> QRIS Adoption	0.050
Technological Readiness -> QRIS Adoption	0.043

As illustrated in Table 6, the impact size (f²) analysis analyzes the individual contribution of each exogenous construct to the endogenous variables in the structural model. The findings demonstrate that the antecedent factors often display very modest individual impact sizes on QRIS Adoption, indicating that no single factor independently dominates the adoption choice. Instead, QRIS adoption is driven by the combined impacts of technological, organizational, environmental, financial, and behavioral variables.

Perceived Usefulness has the biggest impact size (f² = 0.060) among the variables of QRIS Adoption, suggesting that the perceived usefulness of QRIS provide the most practical contribution to promoting its adoption among creative MSMEs. This is followed by viewed Ease of Use (f² = 0.050) and Technological Readiness (f² = 0.043), demonstrating that MSME owners are more likely to implement QRIS when the system is viewed as useful, simple to use, and backed by acceptable technological capabilities. Financial Literacy (f² = 0.039) and Environmental Support (f² = 0.037) also contribute favorably to QRIS Adoption, but their practical benefits are quite low. In contrast, Organizational Readiness records the lowest impact size (f² = 0.008), suggesting that although the association remains statistically significant, its practical contribution to explaining QRIS Adoption is fairly modest.

The association between QRIS Adoption and Financial Performance shows a distinct pattern, with a f² value of 0.839. This significant impact size suggests that the financial performance of MSMEs is significantly influenced by QRIS Adoption. The results indicate that the use of QRIS significantly enhances company outcomes, such as financial stability, operational effectiveness, and profitability. Overall, these findings suggest that while each antecedent variable has a comparatively minor practical impact on QRIS adoption on its own, their combined influence effectively promotes technology adoption, which in turn has a significant impact on the financial performance of creative MSMEs.

Table 7. Results of Hypothesis Testing

Relationship	Original Sample (β)	T Statistics	P values	Result
Technological Readiness → QRIS Adoption	0,189	3,741	0,000	Accepted
Organizational Readiness → QRIS Adoption	0,063	1,763	0,039	Accepted
Environmental Support → QRIS Adoption	0,169	3,739	0,000	Accepted
Financial Literacy → QRIS Adoption	0,147	3,976	0,000	Accepted
Perceived Usefulness → QRIS Adoption	0,235	4,593	0,000	Accepted
Perceived Ease of Use → QRIS Adoption	0,188	4,563	0,000	Accepted
QRIS Adoption → Financial Performance	0,675	22,878	0,000	Accepted

According to Table 7 presents the results of hypothesis testing for the proposed relationships among the research variables. The findings reveal that Technological Readiness significantly influences QRIS Adoption ($\beta = 0.189$, $t = 3.741$, $p < 0.001$), supporting H1. Similarly, Organizational Readiness ($\beta = 0.063$, $t = 1.763$, $p = 0.039$), Environmental Support ($\beta = 0.169$, $t = 3.739$, $p < 0.001$), Financial Literacy ($\beta = 0.147$, $t = 3.976$, $p < 0.001$), Perceived Usefulness ($\beta = 0.235$, $t = 4.593$, $p < 0.001$), and Perceived Ease of Use ($\beta = 0.188$, $t = 4.563$, $p < 0.001$) significantly influence QRIS Adoption, supporting H2, H3, H4, H5, and H6, respectively. Furthermore, QRIS Adoption significantly influences Financial Performance ($\beta = 0.675$, $t = 22.878$, $p < 0.001$), supporting H7. Among the antecedent variables, Perceived Usefulness exhibits the largest effect on QRIS Adoption, while QRIS Adoption demonstrates the strongest relationship with Financial Performance. These findings indicate that technological, organizational, environmental, financial, and behavioral factors contribute significantly to QRIS Adoption, while QRIS Adoption plays an important role in improving the Financial Performance of creative MSMEs.

Discussion

The findings of this study demonstrate that Technological Readiness, Organizational Readiness, Environmental Support, Financial Literacy, Perceived Usefulness, and Perceived Ease of Use significantly influence QRIS Adoption, while QRIS Adoption significantly influences Financial Performance among creative MSMEs in West Java. These findings support the integration of the Technology–Organization–Environment (TOE) framework, Technology Acceptance Model (TAM), and financial literacy perspective, which explain that technology adoption is influenced by technological capabilities, organizational conditions, environmental factors, financial knowledge, and users' perceptions of technology. Among the antecedent variables, Perceived Usefulness emerged as the strongest predictor of QRIS Adoption, followed by Technological Readiness, Perceived Ease of Use, Environmental Support, and Financial Literacy, while Organizational Readiness had the weakest influence. Furthermore, QRIS Adoption demonstrated a strong positive influence on Financial Performance, indicating that QRIS adoption plays an important role in improving the financial outcomes of creative MSMEs.

Among the antecedent variables, Perceived Usefulness emerged as the strongest predictor of QRIS Adoption. This finding indicates that creative MSME owners are more likely to adopt QRIS when they perceive that the technology provides meaningful benefits for their business activities. The perceived usefulness of QRIS is reflected in its ability to improve operational efficiency, facilitate financial transactions, and provide overall benefits to business activities. This finding indicates that MSME owners tend to adopt digital payment technology when its benefits can be directly recognized in their business operations. Similar findings have shown that perceived usefulness is an important determinant of FinTech adoption among SMEs, as users are more likely to adopt technologies that provide clear and practical benefits for their business activities (Krah et al., 2024; Thatthasrani & Jianguo, 2022).

The findings also indicate that Technological Readiness has a positive and significant influence on QRIS Adoption. This finding suggests that the availability of technological infrastructure, compatibility, and technological capabilities facilitates the adoption of QRIS among creative MSMEs. MSMEs with adequate technological capabilities are better positioned to integrate QRIS into their existing business activities. The importance of technological conditions in digital financial technology adoption is consistent with previous research demonstrating that technological factors significantly influence FinTech adoption among SMEs. However, the present finding indicates that technological readiness is not the strongest determinant of QRIS adoption, suggesting that technological preparedness provides an important foundation for adoption but must be accompanied by perceived benefits and other supporting conditions (Nagy et al., 2025).

Environmental Support also has a positive and significant influence on QRIS Adoption, indicating that external conditions such as government support, competitive pressure, customer demand, and the digital ecosystem encourage creative MSMEs to adopt QRIS. A supportive environment can facilitate technology adoption by increasing access to information, infrastructure, and external assistance. This finding is consistent with previous research demonstrating that environmental factors significantly influence FinTech adoption among SMEs. In contrast, Organizational Readiness, although statistically significant, has the weakest influence among the antecedent variables. This finding suggests that internal organizational conditions may play a more limited role in QRIS adoption among creative MSMEs, potentially because QRIS is a standardized payment system that can be implemented without extensive organizational restructuring. The finding differs from studies that emphasize organizational conditions as important determinants of technology adoption, indicating that the relative importance of organizational readiness may depend on the characteristics and complexity of the technology being adopted (Nagy et al., 2025).

Financial Literacy also positively and significantly influences QRIS Adoption. This finding indicates that MSME owners with stronger financial knowledge are more capable of understanding financial products, assessing financial risks, and recognizing the potential benefits of digital payment technology. Financial literacy can therefore provide greater confidence when making decisions related to digital financial services. The finding is consistent with previous research showing that financial literacy contributes to FinTech adoption by improving users' ability to understand and evaluate digital financial services. It is also consistent with research examining QRIS adoption among MSMEs, which found that financial literacy significantly influences the decision to use QRIS (Islam & Khan, 2024; Manalu et al., 2025).

Perceived Ease of Use also has a positive and significant influence on QRIS Adoption. This finding demonstrates that MSME owners are more likely to adopt QRIS when the system is perceived as simple to understand, learn, and operate. Ease of use can reduce the effort required to integrate digital payments into daily business activities and consequently reduce barriers to adoption. This finding is consistent with previous research indicating that perceived ease of use contributes to the adoption of digital financial technologies. However, other research has found that perceived ease of use does not always have a significant direct effect on FinTech adoption, suggesting that its influence may depend on perceived usefulness and other behavioral mechanisms. The difference indicates that the relatively standardized and simple characteristics of QRIS may make ease of use a more direct consideration for creative MSMEs in West Java (Krah et al., 2024; Thathsarani & Jianguo, 2022).

Another important finding is that QRIS Adoption has a strong positive influence on Financial Performance. This result indicates that greater adoption of QRIS is associated with better financial outcomes among creative MSMEs. The use of QRIS can facilitate transactions, improve transaction recording, reduce cash-handling requirements, and support more efficient financial management, which may ultimately contribute to profitability, financial stability, and asset efficiency. Previous research has demonstrated that digital adoption and digital payment utilization can contribute positively to SME financial performance. Research specifically examining QRIS has also shown that QRIS-related factors, including accessibility, ease of use, transaction speed, and transaction security, can improve operational

efficiency and profitability among MSMEs (Kurniasari et al., 2023; Primasari et al., 2025). However, previous findings regarding the relationship between FinTech adoption and financial performance have not always been consistent, indicating that the financial benefits of digital payment adoption may depend on how effectively businesses integrate the technology into their operational and financial activities (Manalu et al., 2025).

Overall, the findings demonstrate that QRIS adoption is influenced by a combination of technological, organizational, environmental, financial, and behavioral factors. The model explains 67.0% of the variance in QRIS Adoption and 45.5% of the variance in Financial Performance, indicating substantial explanatory capability. The predictive relevance results also demonstrate that the model has predictive relevance for both endogenous constructs. Furthermore, QRIS Adoption has a substantially larger practical contribution to Financial Performance than the individual antecedent variables have to QRIS Adoption. These findings extend previous research by integrating the TOE framework, TAM, and financial literacy into a single model and demonstrating that QRIS adoption represents an important mechanism connecting the determinants of digital payment adoption with the financial performance of creative MSMEs in West Java.

CONCLUSION

This research demonstrates that a thorough explanation of QRIS adoption among creative MSMEs in West Java can be found in the combined Technology–Organization–Environment (TOE) framework, Technology Acceptance Model (TAM), and Financial Literacy. The results show that QRIS adoption is positively and significantly impacted by technological readiness, organizational readiness, environmental support, financial literacy, perceived usefulness, and perceived ease of use. The strongest influence among these factors is Perceived Usefulness, suggesting that creative MSMEs are primarily motivated to adopt digital payment technology by the perceived usefulness of QRIS, specifically in enhancing transaction efficiency, operational effectiveness, and business management. Additionally, QRIS adoption significantly improves financial performance, indicating that increased use of QRIS leads to improved profitability, asset utilization, and financial stability among creative MSMEs.

The results are mostly in line with other empirical research on the uptake of digital payments and fintech. The strong effect of technological readiness validates the results of Edo et al. (2024), Krah et al. (2024), and Kalbounch et al. (2025), who showed that appropriate technological aptitude accelerates the adoption of financial technology among MSMEs. Likewise, the positive effects of Environmental Support and Organizational Readiness are in line with the studies of Nugraha et al. (2022) and Kurniasari et al. (2023), emphasizing that government support, digital ecosystems, and organizational readiness play important roles in accelerating digital technology adoption. In addition, the strong contribution of Financial Literacy corroborates the results of Mutamimah and Indriastuti (2023) and Islam and Khan (2024), suggesting that MSME owners with better financial literacy are more likely to embrace digital financial services. Consistent with the Technology Acceptance Model, the dominant role of Perceived Usefulness and the significant contribution of Perceived Ease of Use also reinforce the findings of Thathsarani and Jianguo (2022) and Krah et al. (2024), highlighting that users' perceptions of usefulness and ease of use remain fundamental determinants of technology adoption. Finally, the positive relationship between QRIS Adoption and Financial Performance confirms previous evidence reported by Lontchi et al. (2023), Kurniasari et al. (2023), and Kalbounch et al. (2025), indicating that digital payment adoption contributes to improved business performance through greater operational efficiency and financial management.

Practically speaking, the results indicate that MSME owners, financial institutions, QRIS service providers, and legislators must work together to increase QRIS adoption. To optimize the advantages of digital payment systems, creative MSMEs should consistently enhance their technology proficiency

and financial awareness. At the same time, QRIS providers should increase the usefulness, accessibility, and user-friendliness of their services to attract greater use. In order to speed up financial inclusion and digital transformation in the creative MSME sector, policymakers are also required to bolster digital infrastructure, broaden financial literacy programs, and keep encouraging QRIS deployment.

This study has a number of shortcomings despite its contributions. The study's cross-sectional research approach and exclusive emphasis on creative MSMEs in West Java restrict the results' applicability to other areas and make it unable to track changes in QRIS adoption over time. Future studies are encouraged to investigate MSMEs in different provinces or business sectors, adopt longitudinal research designs, and incorporate additional variables, such as digital trust, innovation capability, or government incentives, to provide a broader understanding of the factors influencing digital payment adoption and its impact on business performance.

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