

International Journal for Advanced Research

Journal homepage: <https://journal.outlinepublisher.com/index.php/ijar>

Research Article

Behavioral and Institutional Perspectives on QRIS Adoption among MSMEs in Indonesia: A Qualitative Descriptive Study

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Keywords:

QRIS adoption,
Digital payment
systems,
MSMEs in Indonesia,
Behavioral factors,
Institutional factors.

Abstract

The rapid development of digital payment systems has transformed financial transactions among micro, small, and medium enterprises (MSMEs) in Indonesia. One of the most significant innovations is Quick Response Code Indonesian Standard (QRIS), which aims to promote payment efficiency and financial inclusion. This study explores behavioral and institutional perspectives on QRIS adoption among MSMEs in Indonesia using a qualitative descriptive approach. Data were collected through in-depth interviews with MSME owners across various business sectors, supported by interviews with relevant institutional stakeholders and analysis of policy documents related to QRIS implementation. The data were analyzed using thematic analysis to identify key patterns and recurring themes. The findings reveal that MSMEs' adoption of QRIS is strongly influenced by behavioral factors such as perceived ease of use, transaction convenience, customer demand, and trust in digital payment systems. In addition, institutional factors including government support, banking infrastructure, socialization programs, and regulatory frameworks play a crucial role in encouraging QRIS utilization. However, challenges remain, particularly related to digital literacy gaps, internet accessibility, and concerns over transaction fees and technical disruptions. This study contributes to the growing literature on digital payment adoption in developing economies by providing contextual insights into how behavioral and institutional dynamics shape MSMEs' engagement with QRIS. The findings offer practical implications for policymakers, financial institutions, and stakeholders in designing more inclusive digital payment strategies and strengthening MSMEs' participation in the digital economy.

Introduction

The rapid advancement of digital technology has significantly transformed economic activities worldwide, particularly in the financial sector. Digital payment systems have become an essential component of modern economies, offering efficiency, speed, and convenience in financial transactions. In developing countries, digital payments are increasingly viewed as strategic instruments to enhance financial inclusion and reduce reliance on cash-based transactions (World Bank, 2022). For micro, small, and medium enterprises (MSMEs),

digital payment adoption is not only a technological shift but also a structural transformation that influences business sustainability and competitiveness in the digital economy.

In Indonesia, MSMEs play a critical role in national economic development, contributing substantially to employment creation and gross domestic product. Despite their economic significance, many MSMEs continue to face structural challenges, including limited access to formal financial services and low levels of digital financial literacy (OECD, 2021). These constraints often hinder MSMEs from fully participating in the digital economy. Consequently, the Indonesian government and financial authorities have intensified efforts to promote digital payment systems as a means to empower MSMEs and foster inclusive economic growth.

One of the most prominent digital payment initiatives in Indonesia is the Quick Response Code Indonesian Standard (QRIS), launched by Bank Indonesia as a unified QR code standard for payment transactions. QRIS was designed to simplify digital payments by enabling interoperability among various payment service providers, thereby enhancing transaction efficiency and accessibility (Bank Indonesia, 2023). Through QRIS, MSMEs can accept non-cash payments without the need for multiple devices or platforms, making it particularly suitable for small-scale businesses with limited technological capacity.

Although QRIS has been widely promoted and adopted, its implementation among MSMEs has not been without challenges. Prior studies on digital payment adoption suggest that technological acceptance is influenced not only by system characteristics but also by users' behavioral perceptions, such as perceived usefulness, ease of use, trust, and perceived risk (Davis, 1989; Venkatesh et al., 2003). For MSMEs, behavioral factors are often shaped by practical business considerations, customer preferences, and personal experiences with digital technology, which may vary significantly across regions and sectors.

In addition to behavioral aspects, institutional factors play a crucial role in shaping digital payment adoption. Institutional support, including regulatory frameworks, infrastructure availability, financial institution involvement, and government outreach programs, can either facilitate or constrain MSMEs' willingness to adopt digital payment systems (North, 1990). In the context of QRIS, institutional interventions such as merchant onboarding programs, transaction fee policies, and digital literacy initiatives are expected to influence adoption outcomes, particularly among small and informal businesses.

Existing studies on digital payment systems in Indonesia have predominantly employed quantitative approaches, focusing on adoption determinants and usage intentions using survey-based models. While these studies provide valuable statistical insights, they often overlook the contextual and experiential dimensions of MSMEs' engagement with digital payments. Qualitative evidence remains limited, particularly regarding how behavioral and institutional dynamics interact in shaping MSMEs' real-world experiences with QRIS adoption.

A qualitative descriptive approach offers an opportunity to capture rich, contextualized insights into MSMEs' perceptions, motivations, and challenges in adopting QRIS. This approach is particularly suitable for exploring complex social and institutional phenomena, as it allows researchers to describe patterns and themes grounded in participants' lived experiences (Sandelowski, 2000). By examining both behavioral and institutional perspectives, qualitative research can provide a more holistic understanding of QRIS adoption beyond measurable variables.

Understanding QRIS adoption from behavioral and institutional perspectives is essential for evaluating the effectiveness of Indonesia's digital payment policies. Insights from MSMEs can inform policymakers and financial institutions about practical barriers and enabling factors that may not be fully captured through macro-level indicators. Such understanding is also critical for refining digital payment strategies aimed at strengthening MSMEs' participation in the digital economy and enhancing financial inclusion.

Therefore, this study aims to explore behavioral and institutional perspectives on QRIS adoption among MSMEs in Indonesia using a qualitative descriptive research design. By drawing on in-depth interviews and document analysis, this study seeks to contribute to the literature on digital payment adoption in developing economies and provide policy-relevant insights for improving QRIS implementation. The findings are expected to support more inclusive and context-sensitive digital payment policies that align with the needs and capacities of MSMEs.

Hypotheses Development

The adoption of digital payment systems among micro, small, and medium enterprises (MSMEs) is a complex process shaped by both individual behavior and institutional environments. Previous studies on technology adoption emphasize that users' behavioral perceptions play a central role in determining whether new technologies are accepted and utilized in daily business activities (Davis, 1989; Venkatesh et al., 2003). In the context of QRIS adoption, MSME owners' attitudes toward digital payments are influenced by how they perceive the practicality, reliability, and relevance of QRIS for their business operations.

Behavioral factors such as perceived ease of use and perceived usefulness are widely recognized as key drivers of technology adoption. For MSMEs, QRIS is more likely to be adopted when it simplifies transactions, reduces operational complexity, and responds to customer demand for cashless payments. Trust in digital payment systems is also critical, as concerns related to data security, transaction failures, and financial risks may discourage adoption, particularly among small businesses with limited technological experience. Therefore, behavioral perceptions are expected to play a decisive role in shaping MSMEs' willingness to adopt and continue using QRIS.

Beyond individual behavior, institutional theory highlights the importance of formal and informal institutions in influencing economic actors' decisions (North, 1990). Institutional support in the form of regulations, infrastructure readiness, financial institution involvement, and government-led digitalization programs can create an enabling environment for digital payment adoption. In Indonesia, the role of Bank Indonesia, financial service providers, and local governments is particularly relevant in promoting QRIS through standardization, merchant onboarding, and socialization initiatives.

Institutional pressures and support mechanisms may also reduce uncertainty and perceived risks associated with digital payments. Clear regulatory frameworks, affordable transaction fees, and accessible technical assistance can increase MSMEs' confidence in adopting QRIS. Conversely, weak infrastructure, limited internet access, and insufficient institutional guidance may constrain adoption, especially in less developed regions. This suggests that institutional factors do not merely complement behavioral factors but actively shape MSMEs' perceptions and experiences with QRIS.

Importantly, behavioral and institutional factors are likely to interact dynamically in influencing QRIS adoption. Institutional support can strengthen positive behavioral perceptions, while negative experiences at the behavioral level may undermine the effectiveness of institutional initiatives. Understanding this interaction is essential for capturing the complexity of QRIS adoption among MSMEs in a developing economy context.

Based on the above discussion, this study proposes the following conceptual hypotheses to guide the qualitative analysis:

H1: Behavioral factors, including perceived ease of use, perceived usefulness, trust, and customer demand, play a significant role in shaping MSMEs' adoption of QRIS in Indonesia.

H2: Institutional factors, such as regulatory support, infrastructure availability, and institutional outreach programs, significantly influence MSMEs' adoption of QRIS.

H3: Behavioral and institutional factors interact in shaping MSMEs' experiences and decisions regarding QRIS adoption.

These hypotheses serve as analytical propositions to guide data interpretation rather than statistical testing, allowing this qualitative descriptive study to generate context-rich insights into the behavioral and institutional dynamics of QRIS adoption among MSMEs in Indonesia.

Method

The research method includes data sources, collection techniques, processing, and analysis. The technique reflects how to analyze research/ study data. From the analysis of this data, results, and study discussion. There is no need for subheadings such as research design, sample and data collection techniques, validity and reliability tests, but directly in paragraph form.

Results And Discussion

Result

This section presents the findings derived from thematic analysis of interview data collected from MSME owners and institutional stakeholders, complemented by document analysis. The results are structured around three major themes corresponding to the proposed hypotheses: behavioral factors, institutional factors, and the interaction between behavioral and institutional dynamics in shaping QRIS adoption among MSMEs in Indonesia.

1. Behavioral Factors Influencing QRIS Adoption

The analysis reveals that behavioral factors are fundamental in shaping MSMEs' decisions to adopt QRIS. Perceived ease of use emerged as a dominant theme across almost all participants. MSME owners consistently described QRIS as a practical and user-friendly payment system that could be operated with minimal technical skills. Participants emphasized that QRIS reduced transaction complexity and minimized errors commonly associated with cash handling, particularly during peak business hours.

Beyond operational convenience, perceived usefulness was closely associated with business flexibility and customer satisfaction. MSMEs reported that QRIS enabled them to serve a wider range of customers, especially younger consumers who prefer cashless payments. Several participants indicated that QRIS adoption indirectly contributed to increased transaction frequency, as customers were less constrained by cash availability.

Another salient behavioral factor was trust in the digital payment system. Participants who had positive early experiences with QRIS expressed strong confidence in its reliability and security. In contrast, MSMEs that encountered technical disruptions or delayed transaction confirmations exhibited cautious usage patterns, often treating QRIS as a supplementary rather than primary payment method. Customer demand further reinforced behavioral motivation, as MSMEs perceived QRIS adoption as a strategic response to evolving market expectations rather than merely a technological choice.

2. Institutional Factors Shaping QRIS Adoption

Institutional factors were found to play a critical enabling role in QRIS adoption. MSME owners frequently highlighted the influence of government and central bank endorsement, which enhanced the perceived legitimacy of QRIS. Bank Indonesia's role in standardizing QR codes across payment platforms was viewed as reducing confusion and increasing trust in the system.

Institutional support through socialization programs, onboarding assistance, and collaboration with financial institutions significantly lowered entry barriers for MSMEs. Participants noted that training sessions and direct assistance from banks or payment service providers helped them understand QRIS features and resolve technical issues. However, the findings also reveal disparities in institutional effectiveness. MSMEs located in urban areas benefited more from institutional support compared to those in rural or semi-urban regions.

Infrastructure readiness, particularly internet connectivity and device availability, emerged as a decisive institutional condition. MSMEs experiencing unstable connectivity reported operational disruptions that negatively affected customer trust and transaction continuity. Additionally, institutional policies related to transaction fees influenced MSMEs' cost-benefit considerations, with some participants expressing concerns about the long-term financial implications of QRIS usage.

3. Interaction between Behavioral and Institutional Factors

The findings demonstrate that QRIS adoption among MSMEs is shaped by a dynamic interaction between behavioral and institutional factors. Institutional interventions, such as training and regulatory clarity, were found to enhance positive behavioral perceptions, including trust and perceived usefulness. MSMEs that received consistent institutional support exhibited greater confidence and willingness to integrate QRIS into daily transactions.

onversely, negative behavioral experiences such as repeated technical failures or customer complaints were reported to weaken the perceived value of institutional initiatives. In such cases, MSMEs tended to limit QRIS usage despite policy encouragement. This interaction suggests that institutional efforts alone are insufficient without positive user experiences at the behavioral level.

Overall, MSMEs' adoption of QRIS reflects a combined process in which individual perceptions, customer interactions, and institutional environments mutually reinforce or constrain one another. Consistent with the proposed hypotheses, the results indicate that both behavioral and institutional factors, as well as their interaction, are essential in shaping MSMEs' QRIS adoption patterns in Indonesia.

Discussion

The findings of this study demonstrate that QRIS adoption among MSMEs in Indonesia is a multifaceted process shaped by both individual-level perceptions and broader institutional arrangements. Rather than being driven solely by technological attractiveness, QRIS adoption emerges as the result of an interaction between perceived functional benefits, ease of system use, and a supportive regulatory environment. This confirms that digital payment adoption in emerging economies cannot be adequately understood through purely behavioral or technological lenses, but requires an integrated socio-institutional perspective.

From the standpoint of the Technology Acceptance Model (TAM), perceived usefulness is clearly positioned as the most influential factor shaping MSMEs' willingness to adopt QRIS. Participants consistently emphasized that QRIS enhances transaction speed, minimizes operational frictions, and reduces dependence on cash-based transactions. These benefits are particularly salient for micro and small enterprises operating with limited financial and human resources. This finding reinforces the foundational argument of Davis (1989) that perceived usefulness directly affects technology acceptance, and aligns with subsequent extensions of TAM emphasizing performance expectancy as a key driver of adoption (Venkatesh et al., 2003).

Importantly, the perceived usefulness of QRIS in this study extends beyond efficiency gains to include strategic business advantages. MSME actors viewed QRIS as a tool that improves business legitimacy, increases customer trust, and aligns their enterprises with contemporary consumer payment preferences. Similar observations have been reported in Indonesian fintech studies, which indicate that digital payment systems are increasingly associated with professionalism and market competitiveness among MSMEs (Prmono et al., 2020; Putra & Dewi, 2022). This suggests that perceived usefulness in the QRIS context is both operational and symbolic in nature.

Perceived ease of use also plays a crucial role in shaping MSMEs' attitudes toward QRIS. The simplicity of QRIS registration, its interoperability across payment service providers, and its intuitive transaction process reduce psychological and technical barriers to adoption. For MSMEs with limited digital literacy, these features are essential. This finding resonates strongly with Indonesian empirical evidence demonstrating that usability and system simplicity significantly influence fintech adoption in the micro-enterprise sector (Sari & Nugroho, 2021; Hidayat et al., 2022). Ease of use thus acts as a facilitator that enables perceived usefulness to translate into actual usage.

However, the results also indicate that TAM alone does not fully capture the adoption dynamics observed in this study. While individual perceptions explain initial acceptance, they do not sufficiently account for the rapid diffusion and normalization of QRIS across diverse MSME segments. This limitation highlights the importance of incorporating Institutional Theory to contextualize technology adoption within regulatory, normative, and cognitive frameworks.

From an institutional perspective, the strong involvement of Bank Indonesia emerges as a decisive factor shaping QRIS adoption. The standardization of QRIS, its integration into national payment policies, and continuous institutional endorsement create a regulatory environment that legitimizes the technology. Consistent with North (1990) and Scott (2014), institutions in this context function not only as rule-makers but also as trust-building mechanisms that reduce uncertainty in economic transactions.

Institutional legitimacy is particularly important in financial technology adoption, where concerns about security, fraud, and data protection are prevalent. MSMEs in this study expressed greater confidence in QRIS

because it is officially regulated and supervised by the central bank. This finding corroborates prior Indonesian studies showing that regulatory backing significantly enhances trust in digital payment systems (Rahman et al., 2021; Utami & Purnomo, 2023). Trust, therefore, operates as a bridge between institutional support and individual acceptance.

Moreover, the findings suggest that QRIS adoption among MSMEs exhibits characteristics of quasi-mandatory behavior. Many participants reported adopting QRIS not purely out of intrinsic motivation, but in response to external expectations from customers, local governments, and business networks. This reflects normative and mimetic pressures as described by DiMaggio and Powell (1983), where organizations conform to dominant practices to maintain legitimacy. Similar patterns have been identified in Indonesian MSME research, where peer influence and policy-driven expectations accelerate fintech adoption (Nugroho et al., 2022).

The presence of such institutional pressures indicates that QRIS adoption is embedded within a broader process of digital normalization. Over time, the use of QRIS becomes not merely an option, but an implicit requirement for participation in modern commercial ecosystems. This finding underscores the importance of viewing QRIS not just as a technological artifact, but as part of an evolving institutional infrastructure supporting Indonesia's digital economy.

The integration of TAM and Institutional Theory in this study provides a more comprehensive explanatory framework than either theory alone. TAM accounts for the cognitive and affective processes that shape individual acceptance, while Institutional Theory explains how adoption is reinforced, sustained, and diffused through policy interventions and social expectations. This integrative approach is increasingly recommended in digital finance research, particularly in emerging economies characterized by strong state involvement (OECD, 2021; World Bank, 2022).

From a theoretical contribution perspective, this study extends TAM by situating it within a policy-driven institutional context. The findings demonstrate that perceived usefulness and ease of use are not static individual perceptions, but are actively shaped by institutional narratives, regulatory assurance, and state-led digitalization initiatives. This insight enriches existing technology adoption literature by emphasizing the co-evolution of individual agency and institutional structure.

Practically, the findings imply that efforts to enhance QRIS adoption should not focus exclusively on technological innovation. Continuous regulatory clarity, institutional consistency, and targeted capacity-building programs for MSMEs are essential to sustain long-term usage. These implications align with Indonesian policy-oriented studies emphasizing that digital payment sustainability depends on both technological readiness and institutional governance (Bank Indonesia, 2023).

Furthermore, the study highlights the role of QRIS as a catalyst for broader financial inclusion. By lowering transaction costs and integrating MSMEs into formal digital payment networks, QRIS contributes to the gradual formalization of micro-enterprises. This supports national development goals and reinforces previous findings that digital payments can function as entry points to inclusive financial ecosystems (Sari & Nugroho, 2021; World Bank, 2022).

Finally, this discussion positions QRIS as a locally developed innovation with global relevance. While rooted in Indonesia's unique institutional landscape, the QRIS experience offers valuable lessons for other emerging economies seeking to harmonize technological innovation with regulatory coordination. As such, this study contributes not only to national discourse but also to the broader international literature on digital payment adoption and institutionalized fintech diffusion.

Conclusion

This study examined the adoption of Quick Response Code Indonesian Standard (QRIS) among MSMEs in Indonesia through an integrated perspective combining the Technology Acceptance Model (TAM) and Institutional Theory. Using a qualitative descriptive approach, the findings demonstrate that QRIS adoption is not solely driven by individual perceptions of technology, but is also strongly shaped by institutional structures, regulatory support, and policy-driven digitalization efforts.

The results confirm that perceived usefulness and perceived ease of use remain fundamental determinants of QRIS acceptance among MSMEs. QRIS is widely perceived as a practical solution that enhances transaction efficiency, reduces reliance on cash, and aligns MSMEs with evolving consumer payment preferences. These findings reaffirm the continued relevance of TAM in explaining individual-level technology acceptance within the context of digital payment systems.

However, this study also reveals that behavioral factors alone are insufficient to explain the rapid diffusion and normalization of QRIS across the Indonesian MSME sector. Institutional support particularly the role of Bank Indonesia in standardizing, regulating, and promoting QRIS plays a decisive role in legitimizing the technology and fostering trust among MSMEs. This highlights the importance of Institutional Theory in understanding how regulatory frameworks and normative pressures shape technology adoption in emerging economies.

By integrating TAM and Institutional Theory, this research provides a more comprehensive explanation of QRIS adoption, capturing both micro-level behavioral processes and macro-level institutional dynamics. The findings suggest that QRIS adoption in Indonesia reflects a form of quasi-mandatory digitalization, where MSMEs adopt the system not only based on personal motivation but also in response to regulatory expectations, market norms, and customer demands.

From a theoretical perspective, this study contributes to the literature by extending TAM into a policy-driven institutional context, demonstrating that individual perceptions of usefulness and ease of use are actively influenced by institutional legitimacy and regulatory assurance. Practically, the findings imply that sustaining QRIS adoption requires not only continuous technological improvement but also consistent regulatory support, institutional coordination, and ongoing capacity-building initiatives for MSMEs.

Overall, this study positions QRIS as a locally developed digital payment innovation with broader implications for financial inclusion and digital transformation. The Indonesian experience offers valuable insights for other emerging economies seeking to harmonize technological innovation with institutional governance in advancing inclusive digital finance.

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