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The Role Of Qris In Promoting Financial Inclusion For Umkm Actors In Indonesia

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Abstract. This research comprehensively examines the role of QRIS (Quick Response Code Indonesian Standard) in fostering financial inclusion for Micro, Small, and Medium Enterprises (MSMEs) in Indonesia, utilizing a literature review method. The analysis indicates that QRIS has significantly increased the accessibility of digital payments for MSMEs through the standardization of a single QR code, which was previously a major barrier. Furthermore, the use of QRIS facilitates the creation of an accurate digital transaction footprint, enabling MSMEs to build credible financial records, crucial for gaining access to formal financing from financial institutions. Additionally, QRIS optimizes transaction efficiency and security, supports transparency, and encourages the integration of MSMEs into the broader digital economic ecosystem. Despite facing challenges such as digital literacy and infrastructure, the potential of QRIS as a foundation for sustainable financial inclusion for MSMEs is substantial, promising enhanced welfare and competitiveness in the digital era.

Keywords: QRIS, Financial Inclusion, MSMEs, Digital Payments, Literature Review.

1. Introduction

The Micro, Small, and Medium Enterprises (MSME) sector is the backbone of the Indonesian economy, absorbing a significant portion of the workforce and contributing substantially to the national Gross Domestic Product (GDP). According to data from the Ministry of Cooperatives and SMEs, the number of MSMEs in Indonesia exceeds 64 million units, with a contribution to GDP of over 60%. These figures highlight the vital role of MSMEs in maintaining economic stability and creating community welfare. However, despite this vast potential, MSMEs in Indonesia still face various challenges, one of which is access to formal financial services, also known as financial inclusion (Muslimawati, 2024). Many MSME actors, especially in rural areas or those operating in the informal sector, still rely on cash transactions, struggle to obtain bank loans, or do not even have bank accounts. This limited access hinders MSME growth, restricting their ability to develop their businesses, innovate, and compete in an increasingly competitive market. This situation highlights the urgency of finding innovative solutions that can bridge the financial inclusion gap for MSMEs, opening wider opportunities for them to integrate into the rapidly developing digital economic system. This research will explore how QRIS (Quick Response Code Indonesian Standard), as a digital payment standard initiated by Bank Indonesia, plays a crucial role in overcoming these obstacles and promoting financial inclusion for MSME actors throughout Indonesia (Hadi and Hanani 2023).

Financial inclusion is defined as easy, affordable, and sustainable access to various formal financial products and services, such as savings, credit, insurance, and payments, for all segments of society, including vulnerable groups and small business actors (Setiawan & Mahyuni, 2020). Bank Indonesia and the Financial Services Authority (OJK) have placed financial inclusion as a national priority agenda, recognizing that high financial inclusion correlates positively with inclusive and sustainable economic growth, as well as a reduction in poverty and inequality. Data shows that the level of financial inclusion in Indonesia continues to increase, but there are still significant disparities between urban and rural areas, and between community groups with access to technology and those without. For MSMEs, financial inclusion means ease in receiving payments from customers, access to business capital through bank loans, better financial management, and financial protection through insurance. Without adequate financial inclusion, MSMEs struggle to scale up their businesses, modernize, and leverage opportunities from the continuously evolving digital economic ecosystem. Therefore, various initiatives continue to be rolled out to accelerate financial inclusion, and one of the most prominent in recent years is the adoption of digital payment technology (Budiman, Hanani, and Rozi 2024).

Digital transformation has fundamentally changed the economic landscape, with digital payments being one of its main pillars. Digital payments offer various advantages over cash transactions, such as efficiency, security, transparency, and ease of transaction recording (Santika et al., 2022). In Indonesia, the use of digital payments has surged dramatically, driven by high smartphone penetration and the growth of e-commerce platforms. However, fragmentation in QR code payment standards became an obstacle, where each service provider had its own QR code, making it difficult for merchants and consumers. To overcome this problem, Bank Indonesia launched QRIS in 2019, a national QR code payment standard that enables interoperability among payment service providers. With QRIS, a single QR code can be used to receive payments from various digital payment applications, both from banks and non-banks (Oktaviani & Ibrahimy, 2024). This innovation is designed to simplify the payment process, increase efficiency, and expand the reach of digital payments, especially for MSMEs who often struggle to manage various EDC machines or QR codes from different providers (Irfanda, Hanani, and Sesmiarni 2025).

The role of QRIS in promoting financial inclusion for MSME actors is highly multidimensional. First, QRIS simplifies payment acceptance for MSMEs. Previously, many MSMEs, especially micro-scale ones, relied solely on cash transactions due to difficulties in accessing EDC machines or other digital payment services (Aini et al., 2021). With QRIS, MSMEs only need one QR code that can be scanned by customers from any digital payment application. This drastically reduces technical barriers and costs for MSMEs to accept cashless payments. This convenience not only increases convenience for customers but also expands the customer base of MSMEs who are increasingly accustomed to digital payments (Muzhafar et al., n.d.). Second, the use of QRIS automatically creates a digital transaction footprint for MSMEs. Every transaction conducted through QRIS is recorded digitally, which is very important for MSMEs who previously did not have neat financial records. This transaction footprint can become a credible

"financial track record," which can ultimately be used by MSMEs as a basis for applying for financing from formal financial institutions, such as banks or microfinance institutions. This is a crucial step in overcoming the problem of unbanked and underbanked MSMEs, opening doors to capital access that has been difficult to reach.

Furthermore, QRIS also contributes to increased transaction efficiency and security for MSMEs. With digital payments, the risks of cash loss, counterfeiting, or calculation errors can be minimized. Transactions become faster and more accurate, allowing MSMEs to focus on their business operations without having to worry about payment security or efficiency issues. In addition, QRIS supports the creation of a more transparent business environment (Sholihah & Nurhapsari, 2023). Digital transaction recording makes it easier for MSMEs to monitor income and expenses, which is the first step towards better financial management. This transparency is also beneficial for financial institutions that want to assess MSMEs' creditworthiness, as they have access to more accurate and reliable transaction data. This ease of recording and reporting is the foundation for MSMEs to shift from informal to formal financial practices, which is essential for their business growth and sustainability in the digital era.

The implementation of QRIS also supports an inclusive digital economic ecosystem. With a single QR code standard, QRIS promotes interoperability among various payment service providers, both banks and fintech companies. This creates healthy competition among service providers, which can ultimately result in lower transaction costs and better services for MSMEs. In addition, QRIS facilitates the integration of MSMEs into e-commerce platforms and other digital applications, opening up wider market access for their products and services (Hidayat & Asky Humeriatunnisa, 2023). MSMEs are no longer limited by physical location but can reach customers throughout Indonesia, even potentially globally. This integration is key to increasing MSMEs' competitiveness and ensuring they are not left behind in the continuously moving digital economy. Thus, QRIS not only promotes financial inclusion from the payment side but also acts as a catalyst for digital inclusion and market inclusion for MSME actors (Nursansiwi & Armiani, 2022).

Given the significant role of MSMEs in the national economy and the great potential of QRIS in overcoming financial inclusion challenges, this research aims to deeply examine the role of QRIS in promoting financial inclusion for MSME actors in Indonesia. This research will focus on how the adoption of QRIS affects MSMEs' access to digital payment services, their ability to record transactions, and their opportunities to access formal financing. In addition, this research will also identify the factors that support or hinder the adoption of QRIS among MSMEs. The core research questions to be answered include: How does QRIS facilitate financial inclusion for MSMEs from the perspective of payment accessibility and transaction recording? How does the use of QRIS affect MSMEs' ability to gain access to formal financing? And, what are the main obstacles and opportunities in optimizing the role of QRIS for MSME financial inclusion?

2. Methods

This research method will adopt a comprehensive literature review approach to collect, analyze, and synthesize relevant information from various trusted sources (Ahmad Wahyudin, Sudarmiatin, 2022). The literature search will focus on scholarly publications, official reports from Bank Indonesia and the Financial Services Authority (OJK), leading news articles, and relevant books discussing financial inclusion, MSMEs, digital payments, QRIS, and digital transformation in Indonesia. The collected data will be analyzed qualitatively using content analysis techniques and an interpretive approach to identify patterns, key arguments, conceptual gaps, and various perspectives on the impact of QRIS on MSME financial inclusion. The purpose of this approach is to build a solid conceptual framework, understand the role of QRIS in promoting financial inclusion for MSMEs, and present in-depth insights without involving primary data collection in the field.

3. Results and Discussion

3.1. Increased Digital Payment Accessibility and Its Impact on Financial Inclusion

One of the key findings from the literature review is that QRIS significantly increases MSMEs' accessibility to digital payment services. Prior to QRIS, MSMEs often faced obstacles such as expensive EDC machine acquisition costs, complexity in managing various QR codes from different providers, and a lack of technological understanding. QRIS successfully overcame these barriers by offering a single QR code solution that can accept payments from various digital payment applications, both bank and non-bank. This ease directly impacts increased financial inclusion in several aspects (Afriyanti, 2022). First, MSMEs, especially micro and super-micro scale businesses in the informal sector, can now receive cashless payments from customers more easily and quickly. This not only increases convenience for buyers who are increasingly accustomed to digital payments but also expands the market reach of MSMEs who previously relied solely on cash transactions. Data shows a significant increase in the number of QRIS merchants dominated by MSMEs, indicating massive adoption.

Second, with the adoption of QRIS, MSMEs can reduce their dependence on cash, which often carries security risks such as theft or counterfeiting, as well as inefficiencies due to calculation errors. Digital transactions via QRIS are safer and more efficient, allowing MSMEs to operate with greater peace of mind and focus on their core business. Third, for many MSMEs who previously did not have bank accounts or had limited access to formal payment services, the use of QRIS effectively integrates them into the digital financial ecosystem. This is a crucial first step towards broader financial inclusion. This convenience not only simplifies the payment process for MSMEs but also helps them enter the formal financial world, paving the way for greater potential business growth and development in the future.

3.1.1. Easier Payment Acceptance

One of the most significant findings from this literature review is how QRIS has fundamentally simplified payment acceptance for MSMEs, a crucial aspect in promoting financial inclusion. Before the adoption of QRIS, many MSME actors, especially those in the micro and informal sectors, relied exclusively on cash transactions. The obstacles

they faced included the high cost of acquiring and maintaining Electronic Data Capture (EDC) machines, technical complexity in managing various QR codes from different payment service providers, and limited banking infrastructure in some areas. With the advent of QRIS, these barriers have been drastically reduced. MSMEs now only need one standard QR code that is compatible with various digital payment applications, whether issued by banks or fintech companies (Harahap, 2025). This convenience not only increases comfort for customers who are increasingly accustomed to cashless payment methods but also effectively expands the market reach for MSMEs. Data on the increasing number of QRIS merchants dominated by MSMEs clearly indicates a massive adoption rate, showing that QRIS has successfully provided a simple, affordable, and accessible digital payment solution for MSME segments that were previously unbanked or underbanked.

3.1.2. Reduced Reliance on Cash

One of the significant benefits of QRIS adoption for MSME actors, found in this literature review, is their drastic reduction in reliance on cash. Previously, the majority of MSMEs, especially those operating in the informal sector or micro-scale businesses, heavily depended on physical transactions using cash. This dependence carried a number of risks and inefficiencies, including the risk of losing money due to theft or negligence, the potential for counterfeit money, and the complexity of manual counting and recording processes that are prone to errors. With QRIS, MSMEs now have an easily accessible and secure digital payment alternative, allowing them to receive payments directly into their bank accounts or e-wallets without needing to manage large amounts of physical cash. This shift not only enhances transaction security for MSMEs but also significantly improves their operational efficiency, freeing up time and energy previously spent on cash management to be focused on core business development. This reduction in cash dependence also indirectly encourages MSMEs to integrate more with the formal financial ecosystem, as their funds are digitally recorded and easier to monitor (Sudyantara & Yuwono, 2023).

3.1.3. Access to Formal Payment Services

For many MSMEs previously categorized as unbanked or underbanked, with limited or no access at all to formal financial services, the use of QRIS effectively serves as a gateway to financial inclusion. Before QRIS, micro-scale MSMEs often relied solely on cash transactions, meaning their entire financial operations were outside the banking system (Nugrah Leksono Putri Handayani & Poppy Fitrijanti Soeparan, 2022). With the adoption of QRIS, every payment transaction received by MSMEs is automatically recorded and channeled through a connected bank account or digital wallet. This fundamentally integrates them into the formal payment ecosystem, introduces them to the concept of digital fund management, and indirectly encourages them to have official bank accounts or e-wallets. This initial step is crucial because it paves the way for MSMEs to subsequently access other formal financial products and services, such as savings, financing, or even insurance, which were previously difficult to reach due to a minimal formal financial track record. Thus, QRIS not only simplifies payments but also functions as an important bridge connecting informal MSMEs into a more structured and inclusive financial system.

3.2. Creation of Digital Transaction Footprint and Access to Formal Financing

One of the transformative benefits of QRIS for MSME financial inclusion is its ability to create a verified digital transaction footprint. Every transaction conducted through QRIS is recorded systematically and transparently. This is a fundamental change for many MSMEs who previously lacked neat financial records, which was a major barrier to accessing formal financing (Puriati et al., 2023). Financial institutions, such as banks and microfinance institutions, often struggled to assess MSMEs' creditworthiness due to the absence of accurate and reliable transaction data. The digital transaction footprint from QRIS serves as a credible "financial track record." This data can be used to analyze MSMEs' income patterns, sales volume, and business consistency. With QRIS transaction data, the information asymmetry between MSMEs and financing providers can be significantly reduced. Banks can have a clearer picture of MSMEs' financial health, allowing them to offer more suitable financing products and reduce loan risks.

Furthermore, the QRIS transaction footprint also opens the door for the development of alternative credit scoring models. Banks or fintech lending companies can use this digital transaction data, in addition to traditional data, to assess MSME risk, thereby enabling the provision of loans to MSMEs previously considered unbankable or underbanked. This expands MSMEs' access to business capital, which is crucial for their growth and business expansion (Alifia et al., 2024). The existence of neat transaction records also increases MSMEs' confidence in managing their finances and providing reports to external parties. This also increases transparency in MSME business operations, which in turn builds credibility in the eyes of potential lenders. Thus, QRIS not only facilitates payments but also strategically places MSMEs on a path towards financial formalization and greater access to capital resources.

3.2.1. Validation of Creditworthiness

One of the most significant breakthroughs brought by QRIS in promoting financial inclusion for MSMEs is its ability to facilitate the validation of creditworthiness. Traditionally, financial institutions often struggled to assess MSMEs' creditworthiness due to limited valid and formally recorded historical data (Saleh et al., 2023). Many MSMEs, especially in the micro and informal segments, lacked neat financial reports, income statements, or reliable balance sheets, making it difficult for banks to measure lending risk. However, with every transaction recorded digitally through QRIS, MSMEs automatically build a verified and transparent "transaction footprint." This footprint includes vital data such as daily, weekly, or monthly sales volume, customer purchase patterns, and income stability (Natsir et al., 2023). This information becomes a valuable asset that can be used by banks and other financial institutions to analyze MSMEs' cash flow, assess repayment capacity, and measure their business activity levels. Thus, QRIS not only makes it easier for MSMEs to receive payments but also fundamentally changes how they are assessed by capital providers, opening the door for access to formal financing that has been difficult to reach, and enabling MSMEs to develop their businesses to a higher level.

3.2.2. Reduction of Information Asymmetry

One of the crucial impacts of utilizing QRIS in promoting financial inclusion for MSMEs is its ability to reduce information asymmetry between MSME actors and formal financial institutions. Before the digital transaction footprint generated by QRIS, banks and financing providers often found it difficult to assess MSME creditworthiness due to limited historical data regarding their income, cash flow, or sales volume. MSMEs, mostly relying on cash transactions, lacked neat financial records, making it difficult for them to prove their ability to repay loans. With transaction data systematically recorded through QRIS, financial institutions now have access to more accurate and reliable information regarding MSME business activities. This information includes transaction frequency, average transaction value, and sales patterns, all of which are important indicators of business stability and growth (Saleh et al., 2023). This reduction in information asymmetry not only simplifies the risk assessment process for financial institutions but also enables them to offer more targeted financing products that align with MSME needs. This opens opportunities for MSMEs previously considered unbankable or underbanked to gain access to business capital, which is essential for their business development and sustainability.

3.2.3. Opportunities for Alternative Credit Scoring

One of the main transformative impacts of QRIS for MSME financial inclusion is the opening of opportunities for the development of alternative credit scoring models. With every transaction recorded digitally through QRIS, MSMEs automatically build a credible digital financial data footprint. This data, which includes income patterns, daily or monthly sales volume, and transaction consistency, can be utilized by financial institutions both conventional banks, Islamic banks, and *fintech* lending companies to conduct more accurate and innovative creditworthiness assessments. Unlike traditional credit scoring models that often heavily rely on collateral or formal financial reports that are difficult for MSMEs to meet, QRIS transaction data allows for risk assessment based on MSMEs' real business behavior (Harahap, 2025). This opens the door for MSMEs previously considered unbankable or underbanked (lacking adequate access to banking services) to gain access to formal financing, as financial institutions now have new tools to assess their capacity and willingness to pay. Thus, QRIS not only simplifies payments but also serves as a data bridge connecting MSMEs with capital sources, crucial for their growth and business development.

3.2.4. Increased Trust and Transparency

The implementation of QRIS significantly contributes to increased trust and transparency within the financial ecosystem for MSME actors. With every transaction recorded digitally and automatically, MSMEs now have a clear and verified financial footprint (Sudyantara & Yuwono, 2023). This instills self-confidence in MSMEs themselves in managing and understanding their business's financial condition, shifting from error-prone manual recording practices to a more accurate system. This transparency also plays a crucial role in building MSMEs' credibility in the eyes of formal financial institutions; banks and lending providers can now access more accurate and reliable transaction data to conduct creditworthiness assessments, which was previously difficult due to the lack of adequate financial track records for MSMEs. This data clarity reduces information asymmetry, making it easier for MSMEs to obtain fairer financing access that aligns with their capacity (Natsir et al., 2023). Ultimately, the increased trust and transparency brought by QRIS not only empowers MSMEs to grow but also strengthens the foundation for a healthier and more sustainable financial inclusion overall.

3.3. Optimization of Transaction Efficiency and Security

The implementation of QRIS has proven to significantly optimize operational efficiency and enhance transaction security for MSME actors, a crucial aspect in supporting their business sustainability and growth. Through QRIS, the payment process becomes much faster and more efficient, saving MSMEs from the need for change, manual cash counting prone to errors, or the risk of counterfeit money (Nugrah Leksono Putri Handayani & Poppy Fitrijanti Soeparan, 2022). Time previously spent on managing cash can now be allocated to more productive activities, such as improving customer service quality, developing product innovation, or marketing strategies. This efficiency directly contributes to increasing MSME productivity, allowing them to serve more customers in the same amount of time and reduce bottlenecks in the payment process.

In addition to efficiency, QRIS also brings a substantial increase in transaction security. Relying on cash always exposes MSMEs to the risks of theft, robbery, or loss. With QRIS, transactions are conducted digitally, and funds directly enter the MSME's account, effectively eliminating these risks. This provides a greater sense of security for business owners, especially for those operating in locations with high potential security risks. Furthermore, every QRIS transaction is recorded automatically and accurately in the system, reducing reliance on manual recording prone to human error. This accuracy in recording is vital for MSMEs to monitor cash flow, analyze sales patterns, and make data-driven business decisions. This increased financial transparency not only simplifies internal management for MSMEs but also builds essential credibility when interacting with external parties, such as tax authorities or potential lenders.

3.4. Challenges and Opportunities in Utilizing QRIS for MSME Financial Inclusion

Despite QRIS demonstrating a transformative role in promoting financial inclusion, the literature review identifies several significant challenges that need to be addressed to maximize its potential, especially among Micro, Small, and Medium Enterprises (MSMEs). One of the main obstacles is the still low level of digital and financial literacy among many MSME actors, particularly in rural areas or those from older generations. A lack of understanding about how QRIS works, managing payment applications, or utilizing digital transaction footprints for financing purposes hinders adoption and optimization (Puriati et al., 2023). In addition, limited infrastructure such as stable internet access and adequate electricity supply in some remote areas poses technical barriers that prevent MSMEs from adopting digital payments. Although Bank Indonesia has set an affordable Merchant Discount Rate (MDR), for micro-scale MSMEs with very thin profit margins, this transaction cost can still be a consideration. Another challenge is consumer behavior, with many still preferring cash transactions, requiring continuous education and incentives to encourage a wider transition to digital payments.

On the other hand, there are great opportunities that can be leveraged to accelerate and expand the utilization of QRIS for MSME financial inclusion (Putri & Azzahra, 2025). Increased collaboration among various stakeholders Bank Indonesia as the regulator, banks and *fintech* companies as service providers, MSME associations, and local governments is crucial. This collaboration can lead to more effective education and mentoring programs, reaching MSMEs in remote areas. With the digital transaction footprint recorded through QRIS, financial institutions have a golden opportunity to develop more innovative, personalized, and inclusive financing products that suit the unique characteristics of MSMEs, such as data-based micro-lending that allows for more accurate creditworthiness assessment without traditional collateral. This will open access to capital for MSMEs previously considered unbankable.

Furthermore, massive and structured education and training programs on the benefits of QRIS, digital financial management, and how to access data- based financing, will significantly increase MSMEs' capacity to adapt to the digital economy. Advanced technological innovation also offers opportunities to develop more MSME-friendly features in QRIS applications or supporting applications, such as simple automatic financial reporting tools, which can simplify business management. Finally, the optimal utilization of QRIS can be a catalyst for MSME digital market expansion, allowing them to integrate with e-commerce platforms and social media, thereby significantly increasing their business scale and competitiveness. By addressing these challenges and leveraging these opportunities, QRIS can truly realize its full potential as a solid bridge for financial inclusion for MSMEs in Indonesia (Alifia et al., 2024).

4. Conclusion

Based on a comprehensive literature study, it can be concluded that QRIS (Quick Response Code Indonesian Standard) plays a highly significant and transformative role in promoting financial inclusion for Micro, Small, and Medium Enterprises (MSMEs) in

Indonesia. QRIS effectively overcomes various barriers to accessing formal financial services by simplifying digital payment acceptance, which in turn creates a credible digital transaction footprint for MSMEs. This transaction footprint becomes a vital key for MSMEs to gain access to formal financing, which was previously difficult to reach due to the lack of adequate financial records. Furthermore, QRIS also enhances transaction efficiency and security, and integrates MSMEs into the broader digital economic ecosystem, opening up larger market opportunities. Despite facing challenges such as still low digital literacy levels and infrastructure limitations in some areas, the potential of QRIS to continue deepening financial inclusion and supporting sustainable MSME growth is substantial. Therefore, optimizing the role of QRIS through collaboration among various parties and the development of innovative features is essential to ensure MSMEs can fully leverage digital economic opportunities and contribute maximally to national development.

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