

# Transforming MSMEs to a Digital Economy: Bank Mandiri's Role Through QRIS as a Financial Inclusion Instrument in Ketimang Village

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## ABSTRACT

**Objective:** This study examines the contribution of QRIS to the digital transformation of MSMEs in Ketimang Village through collaboration with Bank Mandiri and the support of the KKN program. **Method:** A descriptive qualitative method was employed using observation, interviews, documentation, and questionnaires. **Results:** The findings indicate that QRIS positively impacts transaction efficiency (4.55), financial transparency (4.46), and digital market expansion (4.34). Bank Mandiri plays a vital role in strengthening MSME competitiveness (4.48), while the KKN program effectively enhances digital literacy and provides technical assistance (4.51). Product innovation is also considered important, with a score of 4.45. Challenges remain in terms of limited capital (4.07) and insufficient digital literacy (4.45). The highest-rated aspect is stakeholder synergy (4.70), highlighting that multiparty collaboration is fundamental for establishing an inclusive and sustainable MSME ecosystem. **Novelty:** The digital transformation of MSMEs through QRIS can be optimized through continuous improvements in digital literacy, better access to financing, and sustained collaborative support among stakeholders.

## INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) occupy a strategic position in the national economic structure. The resilience of this sector is reflected in its ability to survive during the 1997 monetary crisis and its consistent contribution to economic growth to this day. According to the Ministry of Cooperatives and MSMEs (2018) report, MSMEs contribute 61.97% to Gross Domestic Product (GDP) and absorb about 97% of the total workforce in Indonesia [1]. With its strategic role, MSMEs not only function as the main driver of economic activities but also contribute to achieving a more equitable distribution of wealth in society [2]. Despite its significant contributions, MSMEs face new challenges in the digital era. Changes in consumer behavior push business actors to adapt by utilizing information technology [3]. However, limitations in access to financing and low digital literacy remain major obstacles for MSME development. Therefore, the role of financial institutions, particularly the banking sector, plays a crucial role in supporting the sustainability and enhancing the competitiveness of MSMEs [4].

In the context of MSME development, the banking sector plays a highly strategic role as a partner in providing capital access, financial services, and facilitating the digitalization of transactions. Banks function as the main intermediary institutions that allow MSMEs to obtain more structured sources of financing, which strengthens business capacity and enhances productivity [5]. Banking institutions also contribute to promoting financial inclusion through services for MSME actors, ranging from People's Business

Credit (KUR), digital savings, to technology-based transaction services [6]. The synergy between Micro, Small, and Medium Enterprises (MSMEs) and the banking sector can create a business ecosystem that is not only stronger and more inclusive but also has sustainable competitiveness [7]. This is important in strengthening national economic resilience, as MSMEs are the backbone of the economy that requires support from formal financial systems to develop optimally. This synergy is also considered strategic in responding to the dynamics of economic globalization and accelerating digital transformation, which demands structural and functional adaptations from all business actors to survive and compete in a technology-based economy [8]. One of the conventional banks cooperating with MSMEs is Bank Mandiri, a state-owned banking institution focused on fulfilling market needs and striving to provide optimal value for stakeholders [9].

As a response to the significant contribution of MSMEs to the national and regional economy, digitalization plays a key role in strengthening the resilience of MSMEs. The implementation of digital transformation has been proven to drive productivity improvements, operational efficiency, and business sustainability in the long term [10]. The implementation of digitalization positively impacts business performance and the level of MSME competitiveness, whether through optimizing digital marketing, applying environmentally friendly innovations, or expanding market access [11][12]. Recent literature affirms that digitalization is a crucial element in strengthening MSME resilience, especially in facing global crisis dynamics such as pandemics [13].

One concrete form of digitalization in the MSME sector is the implementation of cashless payment systems. The presence of instruments such as digital wallets, mobile banking, and the QR Code Indonesian Standard (QRIS) provides convenience for business actors and consumers in making transactions [14]. The advancement of digital payment systems through QRIS (Quick Response Code Indonesian Standard) also significantly contributes to strengthening MSMEs. This initiative, introduced by Bank Indonesia in 2019, aims to integrate various QR-based payment methods so that they become more universal, easily accessible, and efficient [15]. The implementation of QRIS not only accelerates transactions and reduces dependence on cash but also plays a role in minimizing fraud risks while expanding market access for MSMEs [16].

For MSMEs, cashless payment systems can increase efficiency because transactions can be automatically recorded, are safer, and minimize the risk of financial record errors [15]. The use of this method also extends market reach, as consumers now tend to prefer fast and practical transactions. The implementation of cashless payments promotes financial transparency, which in turn can be an essential basis for MSMEs to obtain access to capital from formal financial institutions [14]. Digitalization through cashless payment systems not only supports operational smoothness but also acts as a driver for developing more competitive business capacity.

In addition to providing efficiency in transaction processes, the implementation of cashless payments also presents strategic value that can drive MSMEs to transform towards a more inclusive digital business ecosystem. The opportunities offered by

cashless payment systems for MSMEs are significant [17]. This opens up opportunities for business actors to expand their market networks, especially through e-commerce platforms and social media that are increasingly developing. Digital payment systems also simplify financial integration with various banking and fintech services, making it easier for MSMEs to access business financing [15]. Government support through digital economy policies, such as the national implementation of QRIS, further strengthens the position of MSMEs in facing the challenges of globalization [17]. The opportunities created by the implementation of cashless payments can become an important driver for MSMEs to level up and be more competitive in the digital era. Although it still faces challenges such as low digital literacy and limited infrastructure, QRIS is still considered a strategic tool in promoting financial inclusion, improving transaction efficiency, and strengthening MSME competitiveness in the digital era [18].

The purpose of this research is to improve the digital literacy of MSME actors regarding the benefits and use of cashless payments, identify the level of understanding and readiness of MSME actors in adopting QRIS, encourage the optimization of more efficient, transparent, and secure transactions, and build awareness that digitalization through QRIS is an important strategy for MSMEs to expand market networks, increase competitiveness, and strengthen business resilience amid global economic competition.

## RESEARCH METHOD

This research uses a descriptive qualitative approach as it focuses on deeply understanding the empirical conditions of Micro, Small, and Medium Enterprises (MSMEs) in Ketimang Village in the process of adopting digitalization through QRIS. This approach is considered relevant as it can systematically, factually, and contextually describe the phenomenon according to the realities in the field.

The research was conducted in Ketimang Village, an area with significant MSME potential but still facing various limitations, especially in terms of digital literacy, access to capital, and the implementation of cashless payment technology. The research subjects included MSME groups in the food, beverage, and household business sectors, as well as parties collaborating in digitalization socialization activities, including Bank Mandiri as a strategic partner in the QRIS implementation.

The research focuses on several key aspects: identification of MSME profiles in Ketimang Village, including types of businesses, production capacity, and obstacles faced; analysis of the level of understanding and readiness of business actors in adopting QRIS as a digital payment instrument; study of the role of Bank Mandiri in improving digital literacy and financial inclusion; and assessment of the impact of QRIS implementation on transaction efficiency, market network expansion, and MSME competitiveness.

Data collection was carried out through various techniques, including observation aimed at directly observing MSME activities related to transaction patterns, in-depth interviews with business actors, village officials, and Bank Mandiri representatives to gain an understanding of experiences and challenges in QRIS implementation;

documentation in the form of activity notes, photos, MSME profiles, and socialization materials; as well as direct participation through training, which was conducted to assist MSMEs in implementing the digital payment system.

The data obtained were analyzed using qualitative methods through three stages. First, data reduction, which is the process of selecting and simplifying relevant data from observations, interviews, and documentation. Second, data presentation in the form of descriptive narratives to facilitate understanding and interpretation. Third, drawing conclusions that focus on interpreting the research findings, especially regarding the effectiveness of QRIS implementation and the contribution of Bank Mandiri in strengthening financial inclusion and MSME competitiveness in Ketimang Village.

## RESULTS AND DISCUSSION

The research results show that the implementation of digitalization through QRIS has proven to improve transaction efficiency for MSME actors in Ketimang Village with an average score of 4.55. This finding reflects that most respondents have felt the tangible benefits of using QRIS in accelerating the transaction process and minimizing operational barriers that previously often occurred in cash-based payment systems.

However, there are still constraints related to limited digital literacy with an average score of 4.45. This condition indicates that although MSME actors are relatively open to adopting technology, their knowledge and skills in optimizing its utilization still need to be improved. This finding is in line with literature that mentions low digital literacy as one of the main obstacles in MSME transformation processes in Indonesia.

Banking support, especially from Bank Mandiri, received an average score of 4.48. This emphasizes the importance of the role of financial institutions not only in providing access to capital but also through facilitating the implementation of cashless payment systems and technical assistance. Meanwhile, the aspect of training and technical assistance through the KKN program received a score of 4.30, indicating the effectiveness of this activity in helping MSMEs improve product quality, packaging design, and adaptation to digital technology, although it still requires intensification of the program on a continuous basis.

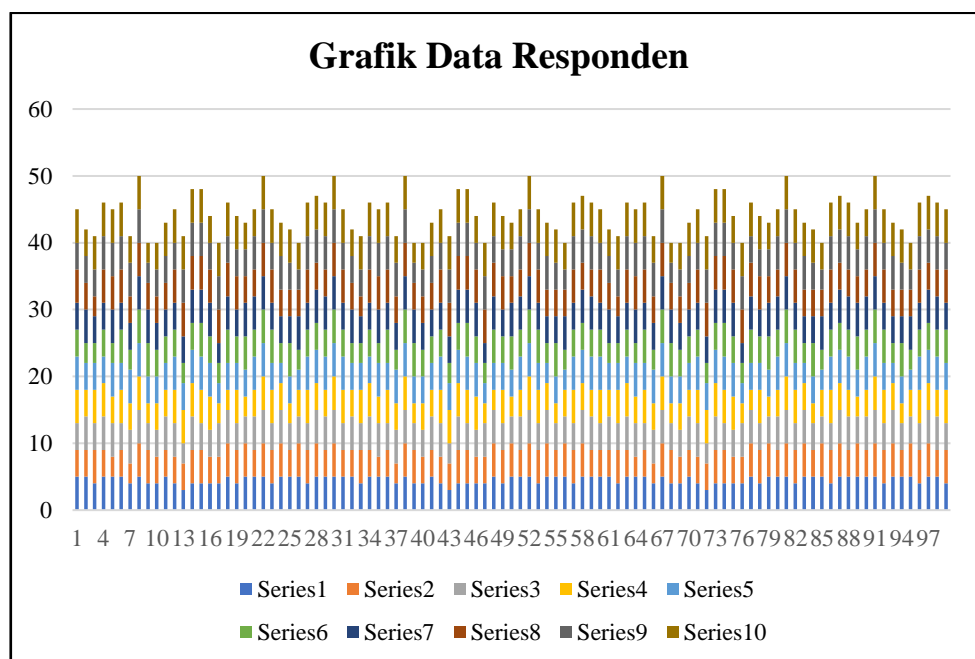
Furthermore, the implementation of QRIS was also considered to support the expansion of MSME market networks towards digital platforms and e-commerce with a score of 4.34. This shows that business actors are beginning to realize the broader market opportunities through the integration of digital payment technology. However, the aspect of limited capital received the lowest score, 4.07, emphasizing that capital remains a fundamental obstacle to business development even though digitalization has opened up larger market opportunities.

In terms of transparency and security, the implementation of QRIS received a score of 4.46, indicating that the cashless payment system contributes positively to improving the accuracy of financial records while instilling a sense of security for business actors. The KKN program also received a high score of 4.51, reflecting the significant contribution of community-based interventions in strengthening digital literacy and

MSME readiness to face digital transformation. Furthermore, product innovation in terms of diversification, quality improvement, and attractive packaging received a score of 4.45, emphasizing that product creativity remains a key factor in enhancing competitiveness.

The most important finding in this research is the high score in the aspect of synergy between MSMEs, the village government, and financial institutions, which reached 4.70. This value indicates that multi-party collaboration is the most crucial factor in creating an inclusive and sustainable MSME ecosystem. Therefore, the success of MSME digital transformation is not only determined by technology adoption but also by structural support, continuous assistance, and close cooperation between stakeholders.

Overall, this research confirms that the implementation of QRIS with the support of Bank Mandiri and the KKN program has a positive impact on improving efficiency, transparency, and MSME competitiveness in Ketimang Village. However, challenges such as limited capital and low digital literacy still require continuous interventions so that MSME digital transformation can proceed optimally, inclusively, and sustainably.



**Figure 1.** Respondent data graph.

Source: Processed data from the research questionnaire (2025)

The research graph shows that all indicators of QRIS implementation in MSMEs in Ketimang Village obtained an average score above 4.0, indicating a positive response from business actors towards digitalization. The highest value was found in the synergy aspect between MSMEs, the village government, and financial institutions (4.70), emphasizing that multi-party collaboration is the key to creating a sustainable business ecosystem. Furthermore, transaction efficiency (4.55) and the contribution of the KKN program (4.51) are considered highly beneficial as they help accelerate transactions and increase MSMEs' readiness to adopt cashless payment systems. The role of banking (4.48),

increased financial transparency (4.46), and product innovation (4.45) are also considered significant in strengthening MSME competitiveness. However, the aspect of limited capital (4.07) remains the main challenge, while the limitation of digital literacy (4.45) indicates the need for continued support and assistance so that technology utilization can be more optimal.

**Table 1.** Questionnaire evaluation aspects.

No	Evaluation Aspect	Average Score
1	The implementation of digitalization through QRIS increases transaction efficiency	4.55
2	Digital literacy of MSME actors remains a major obstacle	4.45
3	Banking support (Bank Mandiri) strengthens MSME competitiveness	4.48
4	Training and technical assistance improve product quality	4.30
5	The implementation of QRIS expands MSME market networks	4.34
6	Limited capital remains the main obstacle	4.07
7	Cashless payment (QRIS) improves financial transparency and security	4.46
8	The KKN program significantly contributes to supporting digital transformation	4.51
9	Product innovation (diversification, packaging, quality) affects MSME competitiveness	4.45
10	The synergy between MSMEs, the village government, and financial institutions creates a sustainable business ecosystem	4.70

Source: Processed data from the research questionnaire (2025)

The table of respondent evaluations shows that all aspects of QRIS implementation in MSMEs in Ketimang Village obtained an average score above 4.0, meaning that the majority of business actors provided positive feedback. The aspect with the highest score was the synergy between MSMEs, the village government, and financial institutions (4.70), indicating the importance of multi-party collaboration in building a sustainable business ecosystem. Transaction efficiency (4.55) and the contribution of the KKN program (4.51) also received high scores because they were considered effective in accelerating payments and improving MSMEs' readiness to adapt to digitalization. Banking support (4.48), financial transparency (4.46), and product innovation (4.45) demonstrate significant roles in strengthening competitiveness. Meanwhile, digital literacy (4.45) still shows the need for further assistance, and limited capital received the lowest score (4.07), emphasizing that capital remains the main obstacle for MSME development.



**Figure 2.** QRIS implementation socialization.

Source: Researcher documentation (2025)

The image above shows the socialization activity of QRIS implementation that took place at the Ketimang Village Hall. This activity involved local MSME actors in a formal and interactive atmosphere, where participants followed the material through projector presentations and direct explanations from facilitators. This documentation shows that the socialization not only functions as a medium for delivering information about the benefits and procedures of using QRIS but also serves as an educational platform to deepen MSME actors' understanding of the urgency of digital transformation in business management. This strengthens the research finding that socialization and training programs contribute significantly to improving digital literacy and encouraging MSMEs' readiness to adapt to a cashless payment system that is more practical, transparent, and secure.

## CONCLUSION

**Fundamental Finding :** This study confirms that the implementation of QRIS has made a significant contribution to strengthening MSMEs in Ketimang Village. Digitalization through QRIS has proven to enhance transaction efficiency, improve financial transparency, and open broader digital market access. Bank Mandiri plays a strategic role in supporting MSME competitiveness, both through financial services and technical assistance, while the KKN program also contributes to improving digital literacy and product innovation. **Implication :** The results highlight the critical importance of enhancing digital literacy and providing access to capital for MSMEs. While the program has been successful in terms of transaction efficiency and market expansion, MSMEs still face challenges in capital access and digital skills. The findings suggest that a sustainable approach to MSME development should focus on continuous digital education, financial support, and fostering stronger partnerships with financial institutions and local governments. **Limitation :** Despite the positive contributions of

QRIS, the study acknowledges that the main issues faced by MSMEs are limited capital and low digital literacy. These challenges may impede the full potential of digital transformation within the sector. Furthermore, the study focuses on a single village, which limits the generalizability of the findings to broader regional or national contexts. **Future Research** : Future research could explore strategies for overcoming capital constraints and enhancing digital literacy among MSMEs in different regions. It would also be beneficial to investigate the long-term impact of multi-party synergies on MSME sustainability and growth. Expanding the study to include multiple villages or districts could provide deeper insights into the scalability of digital transformation initiatives across diverse contexts.

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