



Special Issue:

ICMS2025**Master of Management Postgraduate Program**

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<http://www.openjournal.unpam.ac.id/index.php/SNH>

Qris Optimizes Business Process At Umkm Administrative Village Jakarta Selatan

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Abstract. Digital transformation in the Industry 4.0 era has encouraged Micro, Small, and Medium Enterprises (SMEs) to adopt technology, including non-cash payment systems such as QRIS (Quick Response Code Indonesian Standard). SMEs play a crucial role in the Indonesian economy, significantly contributing to the GDP and labor absorption, making the utilization of technology a strategic necessity to remain competitive. Various studies indicate that digitalization can enhance operational efficiency, expand market access, and strengthen business resilience, although obstacles such as low digital literacy and limited internet infrastructure still exist. This research aims to analyze the implementation of QRIS in SMEs within the Setiabudi Sub-district, identify the constraints encountered, and assess the benefits obtained for optimizing business processes. The study employs a phenomenological approach, involving ten SME actors who have used QRIS for a minimum of six months. Data were collected through observation, semi-structured interviews, and documentation, then analyzed using a qualitative descriptive method. The research findings show that QRIS significantly impacts the acceleration of transactions, improves the accuracy of financial record-keeping, and enhances customer satisfaction. Furthermore, QRIS helps expand the market due to consumers' high preference for digital payments. However, several constraints, such as network disruptions, limited understanding of digital features, and concerns related to transaction security, remain major obstacles. Overall, the study concludes that QRIS is an essential instrument in supporting the digital transformation of SMEs. Optimizing its implementation requires increasing digital literacy, improving internet infrastructure, and providing continuous assistance from the government and service providers.

Keywords: SMEs, QRIS, digital payment, transaction efficiency, digital transformation.

INTRODUCTION

Micro, Small, and Medium Enterprises (SMEs) play a vital role in the national economy, especially in developing countries like Indonesia. SMEs not only serve as major labor absorbers but also as a driving force for economic growth, income distribution, and poverty reduction. According to the Ministry of Cooperatives and SMEs data, over 99% of business actors in Indonesia are from the SME sector, contributing more than 60% to the national Gross Domestic Product (GDP). In the current Industrial Revolution 4.0 era, the application of advanced technology,

supported by integrated network systems and fiber technology, has significantly contributed to various sectors, including the economy, consumption, and production. This development is triggered by the rapid progress in data storage technology, communication networks, and artificial intelligence in the industrial world. One key element of this industrial revolution is technology's ability to efficiently manage and transform data. The Industrial Revolution 4.0 offers various opportunities for the growth of SMEs. Therefore, SME actors are demanded to adapt and maximize the use of technological advancements to gain optimal benefits from this era. Amid increasingly tight digital competition, mastering digital literacy is no longer an option but an absolute necessity for SMEs. Currently, SMEs are encouraged to be able to follow the changing technological and digital ecosystem, including running businesses through online platforms and utilizing internet connectivity. This adaptation is an important step for business sustainability amid the continuously evolving digital transformation.

Electronic money (e-money) and virtual money are modern payment instruments that emerged along with digital technology advancements. These payment types are designed to meet the needs of micro-transactions that require speed and cost efficiency, as the transaction value can be stored directly in a certain digital system that is secure, fast, and low-cost. The emergence of e-money is also supported by regulator policies, specifically through Bank Indonesia Regulations No. 11/12/PBI/2009 and No. 16/8/PBI/2014, which aim to encourage the public's transition towards a non-cash payment system or a less-cash society. According to Bank Indonesia data in 2019, the use of electronic money recorded transactions amounting to IDR 95.75 trillion, a significant increase from IDR 60 trillion in the previous year. This growth indicates that e-money is increasingly sought after as a non-cash payment alternative, along with the development of various digital payment system products, such as chip-based e-money cards, servers, digital wallet applications (e-wallet), and banking accounts. Non-cash payments using electronic money open up new opportunities utilized by users for ease and speed in transactions. Generally, electronic transactions allow the payment process to proceed faster and more practically compared to using cash, especially for small-value transactions. In addition to practicality and speed, non-cash transactions also create more transactions for consumers, thus increasing potential business revenue, reducing operational costs, supporting digitalization and business efficiency, and enhancing customer satisfaction and loyalty. The benefits of using QRIS impact both consumers and business actors.

On the cnbcindonesia.com webpage in July 2025, Bank Indonesia recorded that the transaction volume of QRIS reached 1.76 billion throughout January to May 2025. This amount grew by 188% compared to the same period last year. Citing Bank Indonesia's Instagram account, South Jakarta is the region with the highest QRIS usage in DKI Jakarta. The total transaction volume reached 676 million throughout January to May 2025. This proves that the people in South Jakarta have high mobility and a fast-paced lifestyle that values efficiency and non-cash payments. This success is the result of synergy and collaboration between Bank Indonesia, the provincial government, Payment Service Providers (PJP) both Bank and Non-Bank, associations, and the community. The growth of QRIS in South Jakarta is also supported by a broader digitalization trend, including in public transportation, markets, grocery stalls, street vendors (PKL), and parking lots, which are also adopting non-cash payment systems. Based on observations on several vendors in the South Jakarta area who have been using QRIS, in its implementation to date, there are several common problems among vendors, including: (1) Internet interference causing transaction delays at certain times, (2) Limited digital literacy, (3) Administration fees and deductions from the service provider, and (4) Uneven distribution of supporting facilities.

The objectives of this research are to determine the application of QRIS by business actors in the South Jakarta region, identify the obstacles in QRIS implementation, determine the benefits gained from QRIS implementation in optimizing profits and business processes, and find solutions to the problems of QRIS implementation. The optimization of QRIS usage by business actors in the South Jakarta area is viewed through an observation review of the parties using QRIS and the consumer's perspective as a person who has conducted transactions using QRIS. This research is expected to contribute to the development of SMEs in Indonesia by providing a more comprehensive understanding of the influence of digital transformation on SME performance. The results of this study are expected to be a consideration for the government and related

stakeholders in formulating effective policies and programs to encourage the adoption of digital technology by SMEs in Indonesia. Thus, SMEs in Indonesia can utilize digital technology optimally to improve their performance, competitiveness, and growth in the digital era.

LITERATURE REVIEW

Micro, Small, and Medium Enterprises (SMEs) hold a strategic role in the Indonesian economy by being the main contributor to the Gross Domestic Product (GDP) and labor absorption. Based on data from the Ministry of Cooperatives and SMEs, over 99% of business actors in Indonesia are SMEs, contributing more than 60% to the national GDP. According to Tambunan (2019), SMEs play an important role in economic equity, poverty reduction, and strengthening regional economies. Technological development in the Industry 4.0 era encourages digitalization across various sectors, including SMEs. Schwab (2017) explains that this era is characterized by the integration of digital technology, artificial intelligence, and sophisticated communication networks that change production and consumption patterns. Therefore, SMEs are required to adapt to digital technology, such as the use of online platforms and electronic payment systems, to remain competitive.

One important innovation in the digital payment system is the use of electronic money (e-money) and QRIS (Quick Response Code Indonesian Standard). Bank Indonesia (2019) recorded electronic money transactions reaching IDR 95.75 trillion, indicating a significant increase in the adoption of non-cash payments. QRIS, as the national standard for QR codes, enables the easy and efficient integration of various digital payment platforms. According to CNBC Indonesia (2025), the volume of QRIS transactions reached 1.76 billion throughout January–May 2025, growing by 188% compared to the previous year. South Jakarta is noted as the region with the highest QRIS usage, supported by community mobility and the development of the SME sector, especially culinary businesses. The implementation of QRIS is considered capable of improving transaction efficiency, expanding market access, and promoting business digitalization, although challenges such as low digital literacy and uneven infrastructure still exist.

A number of studies show that digitalization is a key factor in enhancing SME competitiveness amidst modern technological developments. R. Rahayu & Day (2017) state that the adoption of digital technology by SMEs is influenced by three main aspects: technological awareness, organizational readiness, and external pressure. SMEs that are able to integrate information technology into their business operations tend to experience an increase in efficiency and productivity. In line with this, research by Priyono et al. (2020) reveals that digital transformation encourages SMEs to innovate their business models, especially in marketing and customer service management through digital platforms. This illustrates that digitalization is not only an operational tool but also a strategy for creating added value. A number of studies show that digitalization is a key factor in enhancing SME competitiveness amidst modern technological developments. R. Rahayu & Day (2017) state that the adoption of digital technology by SMEs is influenced by three main aspects: technological awareness, organizational readiness, and external pressure. SMEs that are able to integrate information technology into their business operations tend to experience an increase in efficiency and productivity. In line with this, research by Priyono et al. (2020) reveals that digital transformation encourages SMEs to innovate their business models, especially in marketing and customer service management through digital platforms. This illustrates that digitalization is not only an operational tool but also a strategy for creating added value.

In the context of digital payments, several studies assert that the use of e-money and QRIS significantly impacts the improvement of SME performance. According to Wulandari (2021), the use of non-cash payment systems can accelerate the transaction process, improve the accuracy of financial record-keeping, and reduce the risk of physical money loss. Furthermore, a Bank Indonesia study shows that SME merchants adopting QRIS experienced an increase in transaction volume by 30–50% within the first three months of use. This increase is mainly due to the ease of transaction for customers, cross-platform payment accessibility, and consumer trends towards a cashless lifestyle. Other literature also highlights the challenges of digitalization for SMEs. According to Kusumawardhani (2017), the main barriers for SMEs in adopting digital technology

include low digital literacy, limited capital for technology investment, and minimal training related to technology implementation in business. Similar research by Nuryani et al. (2022) confirms that the disparity in digital infrastructure between urban and rural areas is a factor hindering the even penetration of QRIS. Nevertheless, researchers emphasize that government support through digital onboarding programs, 'go-digital' SME training, and the expansion of internet access plays a major role in promoting the use of digital payment technology in the SME sector.

Meanwhile, research by Y. Rahayu (2021) found that perceived ease of use and perceived usefulness are two dominant factors influencing SMEs' intention to adopt QRIS. This aligns with the Technology Acceptance Model (TAM) theory, which explains that technology acceptance is influenced by users' perception of the technology's benefits and ease. Therefore, the effectiveness of socialization, technology education, and the quality of payment system provider services are important factors in increasing QRIS adoption widely. Research on SME digitalization is also widely discussed in international literature. According to the OECD (2020), digitalization helps small businesses improve connectivity with customers, expand markets, and increase operational efficiency through process automation. This indicates that digital transformation is no longer an option but a prerequisite for survival in global competition. In line with this, Matarazzo et al. (2021) emphasize that digital capability is a strategic asset that can increase organizational agility, especially in responding to changes in consumer behavior that increasingly point toward digital transactions and preference for fast, contactless payments.

Another study by Kraus et al. (2021) reveals that SMEs that successfully digitalize tend to experience a revenue increase up to 2.8 times greater than those that have not transformed. The driving factors for this success include the use of e-commerce platforms, digital payment systems, and the integration of customer data for business decision-making. In the Indonesian context, research by Nugroho et al. (2021) mentions that the use of digital financial services simplifies cash management for SMEs, minimizes recording errors, and increases financial transparency, which ultimately supports access to financing from formal financial institutions. Some studies also review the aspect of consumer behavior in the use of QRIS among SMEs. According to Yuniningsih et al. (2022), consumers prefer merchants that provide digital payment options because they are considered faster, more hygienic, and practical. This strengthens the argument that QRIS adoption is not only beneficial from the business actor's side but also meets the expectations of modern consumers who increasingly prioritize convenience. Furthermore, a study by Prabowo & Putri (2023) shows that QRIS adoption encourages an increase in customer loyalty due to a more efficient transaction process and a better shopping experience.

There is also literature discussing the macro-economic impact of payment digitalization. Data from Ozili (2022) mentions that the integration of digital payments in the SME ecosystem contributes to the expansion of financial inclusion, opening access for the informal sector to connect with the national financial system. Thus, QRIS and e-money not only increase transaction efficiency but also play a strategic role in inclusive economic development. A study by Nambisan et al. (2021) also asserts that SME digitalization can strengthen a country's economic resilience, especially in facing crisis situations such as the COVID-19 pandemic. Some literature also identifies risks and challenges that need attention. According to Zhang & Kumar (2023), low understanding of cybersecurity and data protection is one of the main barriers for SMEs in utilizing digital payment systems. The threat of phishing, digital fraud, and minimal education on technology security are important issues that need to be addressed. In addition, research by Putra (2024) shows that internet network instability, especially in areas outside Java, is a cause of suboptimal QRIS usage. Therefore, the equitable distribution of digital infrastructure and an increase in technological literacy are critical factors for the success of SME digitalization.

The totality of this literature indicates that digitalization through QRIS, e-money, and other technology platforms has great potential in improving SME performance. However, the success of its implementation requires support from various aspects, including government policy, technological readiness, digital literacy of SME actors, and consumer education. The integration between technological innovation and strengthening SME capacity is key to realizing a sustainable digital economic ecosystem. From this various literature, it can be concluded that digitalization through the use of e-money and QRIS is not just a trend but a strategic necessity for SMEs to survive and thrive in the digital economy era. However, the success of its implementation is highly

dependent on the readiness of human resources, infrastructure support, and government policies that strengthen the national digital ecosystem.

RESEARCH METHODOLOGY

This study uses a phenomenological approach involving SME actors operating in the culinary, retail, or service sectors, with a sample of 10 SME actors who have been using the QRIS payment system for at least 6 months. This research will explore in depth the meaning of the personal experience of SME actors regarding the digitalization of their business processes, through direct observation of SME actors in the field. This approach was chosen because it can provide a holistic and contextual understanding of the real experiences of SME actors in the field, including the challenges they face and the strategies applied in managing the digital system. The research was carried out in the Setiabudi sub-district, South Jakarta, which is one of the areas with the highest level of QRIS usage in DKI Jakarta. This location was chosen because it has a high concentration of SMEs. The research was conducted during November 2025.

The data used in this study consists of two types: Primary data: Obtained directly from interviews, observations, and the distribution of questionnaires to SME actors. Secondary data: Obtained from official sources such as relevant scientific publications on QRIS usage and non-cash transactions. Data collection techniques in this research were carried out through: Direct Observation: Of QRIS usage in the field. Semi-structured Interviews: With SME actors to explore experiences, constraints, and perceived benefits in implementing QRIS. Documentation: In the form of collecting secondary data from related economic media. The data obtained will be analyzed using qualitative descriptive analysis. The analysis stages include: Data reduction, Data presentation, and Conclusion drawing.

RESULTS AND DISCUSSION

The research results indicate that the implementation of QRIS among Micro, Small, and Medium Enterprises (SMEs) in the Setiabudi Sub-district, South Jakarta, provides a significant impact on optimizing business processes. Based on field findings, most SME actors have understood the benefits of using QRIS and have begun to integrate this digital payment method into their daily operational activities. The direct use of QRIS accelerates the transaction process, reduces customer waiting time, and increases the accuracy of financial record-keeping. Many SME actors admit that they previously still used manual payment methods, which required more time and risked recording errors, especially during busy hours. The presence of QRIS, therefore, offers a practical solution that automates this process. In the culinary sector, which is the majority business field in the Setiabudi area, the use of QRIS has proven to be very helpful. Food and beverage business actors state that the high intensity of transactions makes them greatly in need of a fast and efficient payment system. With QRIS, customers only need to scan the code without having to wait for change, reducing queues, and enhancing consumer satisfaction. Furthermore, instantly recorded digital transactions allow business owners to know their daily revenue in real-time through the connected application. This certainly provides convenience in compiling daily, weekly, and monthly financial reports, which were often neglected before due to time constraints and the administrative capacity of SME actors.

In addition to the efficiency aspect, the research results also reveal that QRIS has a positive impact on market expansion. Modern consumers, especially office workers who are active in the Setiabudi area, show a high preference for non-cash payments. SMEs that provide QRIS are considered more professional and more up-to-date with developments compared to SMEs that only accept cash payments. This modern business image influences the increasing number of new customers and boosts the chances of retaining old customers. Some SME actors even state that after providing QRIS, the number of transactions increased because consumers felt more comfortable shopping without having to carry cash. Besides supporting increased competitiveness, QRIS also contributes to the transparency of financial management. Many SMEs have long faced problems with inconsistent recording, often based only on estimation. With an integrated digital transaction system, SME actors can view a complete transaction history, from the payment nominal, time of transaction, to the type of service used. This transparency helps business owners perform simple analysis regarding the best-selling products, peak transaction times, and potential

business expansion. Indirectly, QRIS encourages SMEs to be more disciplined in managing cash flow, thereby reducing errors in calculating income and expenses.

Nevertheless, the research also found several constraints that hinder the maximal optimization of QRIS in the Setiabudi SME environment. The main barrier still frequently encountered is the uneven level of digital literacy. Not all SME actors, especially the older ones, can understand the advanced functions of QRIS, such as business management features, digital catalogs, and automatic sales reports. Many of them only use QRIS as a tool to receive payments, without realizing that the application actually provides many other features that can enhance business professionalism. The lack of continuous assistance and socialization from banks, fintech service providers, and local government causes the utilization of QRIS to be suboptimal. Another constraint found in the study is the limitation of the internet network in several points in the Setiabudi area. Although this area is in the center of Jakarta, some business locations, such as small stalls in narrow alleys or densely populated residential areas, still experience signal disturbances at certain times. This causes digital transactions through QRIS to sometimes experience delays or even fail to process. Although the intensity of the disturbance is not too high, this problem still disrupts the smooth flow of transactions and has the potential to cause inconvenience for customers. Some SME actors then circumvent this problem by providing additional hotspots, but this certainly becomes a considerable operational cost for small businesses.

Additionally, the research found that some SME actors do not feel completely confident about the security of digital transactions. Although there were no concrete cases regarding data leakage or transaction misuse, this concern arises due to a lack of understanding of the digital security system used by QRIS service providers. This concern causes some SME actors to still maintain a preference for cash transactions, especially for large nominal transactions. This condition indicates the need for further education on digital transaction security so that SMEs can be more trusting and maximize the use of QRIS in their business processes. In the context of operational efficiency, QRIS actually also opens up broader automation opportunities, such as integration with inventory systems, digital accounting, and online marketing. However, the research shows that the utilization rate of these advanced technologies is still very low. Many SME actors do not understand how to connect QRIS with other supporting applications, even though this integration can provide great benefits in terms of sales analysis and inventory management. The low utilization of this technology is due to the lack of continuous digital training and minimal assistance from related parties.

Overall, the results and discussion of this study affirm that QRIS has a strategic role in accelerating the digital transformation of SMEs in the Setiabudi Sub-district. QRIS is proven capable of increasing transaction efficiency, simplifying financial recording, expanding the market, and enhancing the professional image of SMEs in the eyes of consumers. Nevertheless, the success of QRIS in optimizing business processes is highly dependent on the readiness of SME actors to understand and utilize the available features. Issues of digital literacy, internet network limitations, and a lack of technical assistance are factors that need to be overcome so that QRIS implementation can run more optimally. Considering the research results, it can be concluded that the presence of QRIS is an important step in supporting the creation of a more modern, efficient, and competitive SME business environment. To achieve full optimization, synergy is needed between the government, financial service providers, and SME actors in providing digital training, improving the quality of internet infrastructure, and continuous socialization regarding the benefits and security of QRIS. If these challenges can be overcome, QRIS has the potential to become the main instrument in strengthening the digital economic ecosystem in urban areas such as the Setiabudi Sub-district, South Jakarta.

CONCLUSION AND RECOMMENDATIONS

This research indicates that the use of QRIS significantly impacts the optimization of SME business processes in the Setiabudi Sub-district, South Jakarta. The majority of SMEs have utilized QRIS in transaction activities due to its ease, efficiency, and high consumer demand for non-cash payment methods. The use of QRIS is proven to be able to: Increase operational

efficiency, simplify bookkeeping and financial reporting processes, improve customer experience, build a more modern and data-driven business process, and increase competitiveness. Although it provides many benefits, challenges such as digital literacy, internet connection disruptions, and the adaptation of certain consumers still require attention. Overall, QRIS is a strategic tool with the potential to support the digital transformation of SMEs and enhance business sustainability in the future.

It is recommended that SME Actors are advised to optimize the use of QRIS not only as a payment tool but also as a means for sales analysis, stock management, and customer service improvement. Integrating QRIS with digital bookkeeping or cashier applications can result in more accurate financial records, while digital marketing strategies and participation in digital literacy training will help business actors increase competitiveness in the non-cash transaction era. Local Government and Relevant Agencies need to strengthen support for SMEs through continuous digital literacy training, improving the quality of the internet network, and digital assistance programs such as the use of POS and bookkeeping applications. Digital security education campaigns are also important to foster trust among business actors, accompanied by collaboration with payment service providers to expand access, features, and technical assistance for SMEs. Bank Indonesia and Payment Service Providers are recommended to enhance the stability of the QRIS system, especially during busy transaction hours, and develop more comprehensive business reporting features. QRIS-based promotion programs can expand adoption from both the business actor and consumer side, while the presence of a quick help desk will facilitate the resolution of technical constraints and support the smooth operation of SMEs.

ACKNOWLEDGEMENTS

The authors fully express sincere gratitude to the University of Pamulang - UNPAM Tangerang Selatan, Banten, which has given us the opportunity to develop this paper. The authors also are very appreciative to Dr. Taswanda Taryo, M.Sc. who has reviewed and given guidance and hence this paper can finally submitted to and present at the International Conference on Management and Science 2025. The authors finally expected this paper research will be very worthwhile for the related-matter community in Indonesia

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