

The Role of Digital Payment in Promoting MSME Financial Inclusion: Implications for Innovation-Based Community Service Activities

Irwan Moridu^{1*}, Adrian Polim², Nurcahya Hartaty Posumah³, Debiyanti Kune⁴, Fitriani⁵

^{1,2,3,4,5}Universitas Muhammadiyah Luwuk, Indonesia, irwanmoridu@gmail.com

Abstract

The transformation of digital technology has driven significant changes in payment systems, contributing to the expansion of financial inclusion, particularly for Micro, Small, and Medium Enterprises (MSMEs). This study aims to analyze the role of digital payment in promoting MSME financial inclusion and its implications for innovation-based community service activities, while also enriching the literature on community engagement within the digital economy context. The method employed is a literature review using a qualitative approach through descriptive analysis of sources obtained from Google Scholar and various credible websites spanning the period 1964–2026. From an initial pool of 50 identified articles, a rigorous selection process resulted in 34 relevant articles for further analysis. The findings indicate that digital payment plays a significant role in enhancing MSMEs' access to formal financial services, strengthening transaction transparency, and supporting the creation of financial track records that contribute to improved access to financing. The discussion also reveals that successful technology adoption is influenced by factors such as digital literacy, infrastructure availability, and trust in the system. Innovation-based community service activities play a strategic role in bridging these gaps through contextual education, training, and mentoring.

Keywords: Digital Payment, Financial Inclusion, MSMEs, Community Service, Digital Innovation, Financial Literacy, Digital Transformation

Peran Digital Payment dalam Mendorong Inklusi Keuangan UMKM: Implikasi bagi Kegiatan Pengabdian Masyarakat Berbasis Inovasi

Abstrak

Transformasi teknologi digital telah mendorong perubahan signifikan dalam sistem pembayaran yang berdampak pada perluasan inklusi keuangan, khususnya bagi pelaku Usaha Mikro, Kecil, dan Menengah (UMKM). Penelitian ini bertujuan untuk menganalisis peran digital payment dalam mendorong inklusi keuangan UMKM serta implikasinya bagi kegiatan pengabdian masyarakat berbasis inovasi, sekaligus menambah referensi terkait pengabdian masyarakat dalam konteks ekonomi digital. Metode yang digunakan adalah tinjauan pustaka dengan pendekatan kualitatif melalui analisis deskriptif terhadap literatur yang diperoleh dari Google Scholar dan berbagai website kredibel dalam rentang tahun 1964–2026. Dari 50 artikel awal yang teridentifikasi, dilakukan seleksi ketat sehingga diperoleh 34 artikel yang relevan untuk dianalisis lebih lanjut. Hasil kajian menunjukkan bahwa digital payment berperan dalam meningkatkan akses UMKM terhadap layanan keuangan formal, memperkuat transparansi transaksi, serta mendukung penciptaan rekam jejak keuangan yang berkontribusi pada peluang akses pembiayaan. Pembahasan juga mengungkap bahwa keberhasilan adopsi teknologi dipengaruhi oleh faktor literasi digital, ketersediaan infrastruktur, serta tingkat kepercayaan terhadap sistem. Kegiatan pengabdian masyarakat berbasis inovasi memiliki peran strategis dalam menjembatani kesenjangan tersebut melalui edukasi, pelatihan, dan pendampingan yang kontekstual.

Kata kunci: Digital Payment, Inklusi Keuangan, UMKM, Pengabdian Masyarakat, Inovasi Digital, Literasi Keuangan, Transformasi Digital

INTRODUCTION

The rapid development of digital technology over the past decade has significantly transformed global financial systems, including in developing countries such as Indonesia. One of the most prominent innovations is digital payment, which encompasses various instruments such as e-wallets, mobile banking, and QR code payments. The emergence of digital payment systems has reshaped transaction patterns in society while creating new opportunities for Micro, Small, and Medium Enterprises (MSMEs) to improve operational efficiency and expand market access (Matekaire & Siriram, 2025). This phenomenon is closely related to the issue of financial inclusion, which continues to face disparities in access to formal financial services. Most MSMEs still operate in the informal sector without adequate financial system support. Digital payment is therefore viewed as a tool capable of accelerating the integration of business actors into the modern financial system in a more efficient and measurable way.

Financial inclusion refers to a condition where all segments of society have access to affordable, secure, and user-friendly formal financial services, including MSMEs that are often in vulnerable positions. The literature suggests that low financial inclusion is influenced by limited infrastructure, low levels of financial literacy, and relatively high conventional transaction costs for small businesses (Song et al., 2025). Digital payment offers an alternative that can reduce transaction costs while enhancing transparency in financial activities. The use of such systems enables MSMEs to build systematically documented transaction records. These records can serve as a basis for credit assessment by financial institutions. This highlights the role of digital payment as an instrument that promotes access to financing and strengthens the economic capacity of business actors.

Empirical findings from various studies indicate a positive relationship between digital payment adoption and improved MSME performance. Businesses utilizing digital payment systems tend to experience increased transaction volumes and greater operational efficiency (Birigozzi et al., 2025). The ease of transactions enhances consumer convenience while expanding market reach through integration with digital platforms. Digital payment also contributes to increasing consumer trust, as transactions are transparently recorded and traceable. Integration with digital ecosystems such as e-commerce and distribution services further strengthens MSMEs' position within the economic value chain (Marín et al., 2023). This situation demonstrates that digital payment functions as a catalyst in accelerating the digital transformation of the small business sector. Its impact is reflected in improved competitiveness and contributions to overall economic growth.

However, the implementation of digital payment among MSMEs still faces several structural and cultural challenges. Low levels of digital and financial literacy remain major barriers affecting the adoption of such technologies (El Amri et al., 2026). Many business actors do not yet fully understand the benefits and mechanisms of digital payment systems. Limited infrastructure, such as uneven internet access, also slows down the digitalization process in various regions (Abdurrahman, 2025). Trust in the security of digital systems is another concern, particularly regarding data protection and potential

fraud risks (Jafri et al., 2024). These factors create obstacles that require adaptive and educational approaches. Enhancing MSMEs' understanding and readiness is therefore essential in accelerating the adoption of digital payment technologies.

Innovation-based community service activities play a strategic role in bridging the gap between technological advancement and MSME readiness. Such programs can be designed as platforms for education, training, and mentoring aimed at improving digital literacy and financial management capabilities. A participatory approach encourages active involvement of business actors in the learning process, resulting in more practical and applicable understanding. Collaboration among academics, government, and the private sector can create an ecosystem that supports digital transformation (Akhtar et al., 2025). Contextually designed programs are more likely to be accepted by target communities. In this context, community service contributes to strengthening MSME capacity in a sustainable manner, which is reflected in increased technology adoption and stronger local economic structures.

Innovative approaches in community service can be developed through the use of technologies that align with the real needs of MSMEs. The use of digital financial recording applications, QRIS implementation training, and transaction simulations represent relevant and practical methods. Hands-on experience in using technology helps build trust and enhance business actors' skills. Interactive learning methods, such as case studies and practical exercises, can accelerate the learning process. Adapting to participants' characteristics is a key factor in determining program success. Innovation in training methods fosters more effective and easily understood learning processes (Kwangmuang et al., 2021). Community service activities thus evolve into a space for social experimentation in promoting inclusive technology adoption.

From a theoretical perspective, strong foundations are needed to understand digital payment adoption behavior among MSMEs. Models such as the Technology Acceptance Model (TAM) explain that perceived usefulness and ease of use influence individuals' decisions to adopt new technologies (Venkatesh et al., 2003). The Diffusion of Innovation Theory emphasizes the role of social factors in accelerating the spread of innovation within society (Rogers et al., 2019). The heterogeneous characteristics of MSMEs make these approaches relevant for contextual analysis. Psychological and social aspects interact with technical factors in determining technology adoption levels. Implementation strategies that consider these dimensions are more effective in increasing digital payment usage. These theoretical frameworks provide direction for designing targeted interventions.

Research on the role of digital payment in promoting MSME financial inclusion is highly relevant in the context of current digital economic transformation. This study contributes to the development of literature linking technology, finance, and community economic empowerment. The findings can serve as a foundation for designing more effective and sustainable community service programs. Empirical insights may also inform policy formulation supporting MSME digitalization. The synergy between research and field practice creates a more comprehensive approach to addressing financial inclusion

gaps. A focus on innovation and empowerment is key to strengthening MSME competitiveness in the digital era. This direction is expected to foster a more inclusive and sustainable economic system.

Digital Payment

Digital payment refers to technology-based payment systems that enable transactions to be conducted electronically through digital devices such as smartphones or computers without the use of cash (Dinh, 2024). This system encompasses various instruments, including e-wallets, mobile banking, debit cards, and QR codes integrated within the digital ecosystem. The main advantages of digital payment lie in its speed, efficiency, and the ease of automatic transaction recording. In the context of MSMEs, the use of this system helps business actors improve the quality of financial management and expand access to more modern markets. Digital payment also plays a role in creating transaction transparency that supports business accountability. The development of this technology continues to drive changes in societal behavior toward more practical and integrated transaction systems.

Financial Inclusion

Financial inclusion refers to a condition in which all segments of society have access to affordable, secure, and appropriate formal financial services (Broekhoff et al., 2024). This concept emphasizes equal access to financial products such as savings, credit, insurance, and payment systems. In the context of MSMEs, financial inclusion is a crucial factor in supporting business sustainability, as it relates to access to financing and improved financial management. Low levels of financial inclusion are often caused by limited literacy, inadequate infrastructure, and administrative barriers. Efforts to enhance financial inclusion aim to reduce economic disparities and strengthen the resilience of the small business sector. The role of digital technology has become increasingly relevant in accelerating this inclusion process.

Micro, Small, and Medium Enterprises (MSMEs)

Micro, Small, and Medium Enterprises (MSMEs) are a vital economic sector that plays a significant role in job creation and national economic growth (Ausat et al., 2022). MSMEs include various types of businesses ranging from micro to medium scale, typically managed independently or by families. Their main characteristics include business flexibility, limited capital, and restricted access to technology and formal financing. In the digital era, MSMEs are required to adapt to technological developments to remain competitive. Digital transformation has become one of the key strategies to improve efficiency and expand market reach. Given their significant role, MSMEs are a primary focus of various economic empowerment programs.

Community Service

Community service represents one of the implementations of the higher education tri dharma, aimed at providing tangible contributions to society through educational

activities, training, and mentoring (Lutfiyah, 2025). These activities are oriented toward empowering communities to develop the capacity to address various challenges, including those in the economic sector. In the context of MSMEs, community service is often focused on enhancing the capacity of business actors through knowledge and skills transfer. The approach is typically participatory, encouraging active community involvement in the learning process. Effective programs are capable of creating sustainable change. The role of community service is increasingly strategic in supporting digital transformation at the grassroots level.

Digital Innovation

Digital innovation refers to the application of digital technologies to create new solutions that enhance efficiency, productivity, and added value across various sectors (Kraus et al., 2021). This includes the development of applications, digital platforms, and technology-based systems that transform conventional ways of working into more modern approaches. In the MSME context, digital innovation helps optimize business processes, from marketing to financial transactions. The adoption of digital innovation enables MSMEs to compete in broader and more dynamic markets. Adaptation to innovation is a key factor in responding to changes in the business environment. The advancement of digital innovation continues to open new opportunities for community economic empowerment.

Financial Literacy

Financial literacy refers to an individual's ability to understand, manage, and make sound financial decisions (Rehman & Mia, 2024). This includes knowledge of income management, savings, investment, and the use of financial services. In the context of MSMEs, financial literacy is a critical aspect of maintaining business sustainability, as it relates to cash flow management and financial planning. Low levels of financial literacy are often a primary cause of business development challenges. Improving financial literacy can be achieved through structured education and training. This capability also supports the more optimal utilization of financial technologies.

Digital Transformation

Digital transformation is a comprehensive process of change in organizational or societal activities through the utilization of digital technologies (Reis & Melão, 2023). This process involves changes in workflows, business models, and interactions with consumers, which are increasingly technology-driven. In the context of MSMEs, digital transformation is an essential strategy for enhancing competitiveness and operational efficiency. The use of technologies such as digital payments, e-commerce, and digital management systems is part of this transformation process. Adapting to these changes requires human resource readiness and infrastructure support. Digital transformation fosters the creation of a more modern and integrated economic ecosystem.

METHOD

The research method employed in this study is a literature review with a qualitative approach, focusing on the exploration, classification, and interpretation of various scientific findings related to the role of digital payment in promoting MSME financial inclusion. This approach was chosen because it provides a comprehensive understanding of the phenomenon through the synthesis of diverse theoretical and empirical perspectives. This study is specifically directed at enriching references related to community service, particularly those based on digital innovation in the context of MSME empowerment. This focus distinguishes the study from previous research, which tends to emphasize business or technological aspects alone. Through this approach, the study aims to construct knowledge that can enhance community service practices in the field of digital economics.

Data collection was conducted through a systematic search of literature from various credible scientific sources, including databases such as Google Scholar, official institutional websites, reputable international journals, and reports from relevant global financial institutions. The publication timeframe spans from 1964 to 2026 to ensure that the analyzed data reflects the latest developments in digital payment and financial inclusion. The keywords used in the search include “digital payment,” “financial inclusion,” “MSMEs,” “fintech,” and “community service innovation.” The initial stage of data collection yielded 50 articles considered relevant to the research topic. These articles were compiled as the initial database for further selection.

The selection stage was conducted rigorously based on predefined inclusion and exclusion criteria. Inclusion criteria included topic relevance, methodological clarity, contribution to digital payment or financial inclusion studies, and relevance to community service practices. Meanwhile, articles with limited full access, duplication, or weak academic foundations were excluded from the analysis. After a systematic screening process, a total of 34 articles met the criteria and were included in this study. These selected articles were then analyzed in depth to identify patterns, key themes, and relationships among concepts emerging in the literature.

The data analysis technique used in this study is descriptive qualitative analysis, aimed at systematically and structurally interpreting the content of the literature. Each article was analyzed based on key aspects such as research objectives, methods used, main findings, and implications for MSME development and community service activities. The results of the analysis were then synthesized to generate a more comprehensive understanding of the role of digital payment in enhancing financial inclusion. This approach enables researchers to integrate diverse findings into a more cohesive conceptual framework. The process ultimately produces an in-depth and relevant scientific narrative as a foundation for developing innovation-based community service programs.

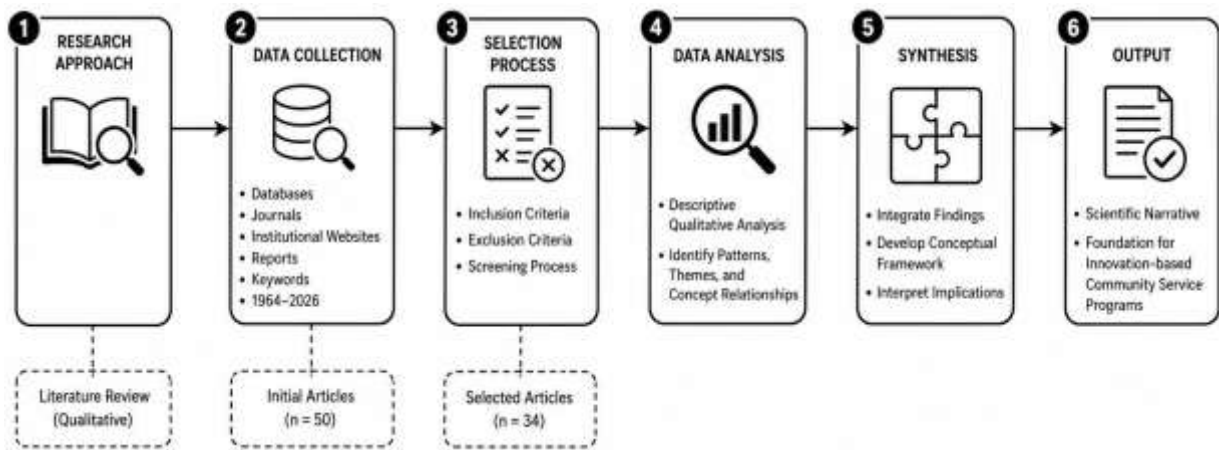


Figure 1. Research Methodology Flowchart

FINDING AND DISCUSSION

Digital transformation in payment systems has created a new configuration in MSME economic activities that goes beyond merely changing transaction tools, toward a broader restructuring of economic interaction patterns. Digital payment enhances operational efficiency through faster transaction processes, reduced administrative costs, and improved accuracy in financial record-keeping, which was previously often done manually (Shahen & Sharaf, 2026). This system enables business actors to build a systematic financial database, facilitating continuous business performance evaluation. The shift from cash-based transactions to digital systems reflects changes in economic behavior driven by technological advancement and increasingly dynamic market demands. MSMEs that successfully integrate digital payment technologies into their operations tend to demonstrate improved competitiveness, both in terms of efficiency and their ability to reach wider consumer markets through digital channels. This dynamic positions digital payment as a key element within the modern economic ecosystem, supporting connectivity between business actors and formal financial systems. Digital transformation in payments should not be understood merely as a technical phenomenon, but rather as a structural process that influences production, distribution, and consumption at the microeconomic level.

Theoretical approaches provide a stronger analytical foundation for explaining the adoption of digital payment among MSMEs, particularly through the frameworks of the Technology Acceptance Model (TAM) and the Diffusion of Innovation Theory. TAM emphasizes that an individual's decision to adopt technology is strongly influenced by perceived ease of use and perceived usefulness in daily business activities (Venkatesh et al., 2003). In the MSME context, these perceptions are shaped by practical experience, interaction with other users, and the level of technological understanding. The Diffusion of Innovation Theory complements this perspective by explaining how innovation spreads within a social system through stages involving communication, observation, and adaptation (Rogers et al., 2019). The social network-based nature of small business communities makes trust and environmental influence highly dominant in the diffusion

process. The interaction between individual cognitive factors and collective social dynamics creates variations in digital payment adoption levels among business actors. This theoretical analysis shows that the success of technology implementation depends heavily on the alignment between the characteristics of the innovation and the socio-economic context of its users. This understanding serves as a basis for designing more effective intervention strategies to promote technology adoption in the MSME sector.

Findings from previous studies provide consistent empirical evidence regarding the contribution of digital payment to improving financial inclusion, particularly in expanding MSMEs' access to formal financing sources. The use of digital payment systems enables the creation of systematically documented transaction records, which can be used as indicators of creditworthiness by financial institutions (Ramayanti et al., 2024). Transparency in transaction records increases financial institutions' trust in business actors, thereby reducing information asymmetry, which has long been a major barrier in credit distribution (Jun & Ran, 2024). Other studies indicate that transaction digitalization also contributes to improved financial discipline among business actors due to more structured and accessible recording systems. The relationship between digital payment and financial inclusion demonstrates a mutually reinforcing mechanism between technology and economic access (Trotta et al., 2026). This condition fosters the development of a more inclusive and adaptive financial ecosystem. Digital payment acts as a strategic bridge that gradually and sustainably integrates the informal sector into the formal financial system.

The first case study can be observed in the implementation of QRIS in Indonesia, which demonstrates a significant impact on MSME performance in accelerating payment digitalization. Data from monetary authorities show that by 2023, approximately 29.6 million merchants had adopted QRIS, with a strong dominance of MSMEs (92%) that previously operated largely in cash-based systems (Haryono, 2023). This surge in adoption is accompanied by a significant increase in digital transaction volumes reaching trillions of rupiah each month, reflecting a shift in consumer behavior toward more practical and efficient payment systems. MSMEs adopting QRIS reported sales increases ranging from 20–30 percent, driven by transaction convenience and enhanced consumer comfort in making payments (Alifia et al., 2024). This phenomenon can be analyzed through the lens of market efficiency and transaction cost reduction as described in institutional economics theory, where digitalization reduces friction in economic exchange (Wang et al., 2025). QRIS also functions as an interoperability standard connecting various payment service providers, thereby expanding the economic network accessible to MSMEs. The adoption of digital payment technology through QRIS directly contributes to increased productivity and more inclusive microeconomic growth.

The second case study is reflected in the use of OVO in supporting MSME digitalization, particularly in the retail and culinary sectors, which have high transaction intensity. Data indicate that more than 700,000 merchants have adopted OVO as a payment method, with user growth continuing alongside the expansion of digital services across various cities (Ubaidillah, 2025). MSMEs using this system reported transaction

increases of up to approximately 50 percent, influenced by ease of payment access and growing consumer preference for cashless transactions. Incentive programs such as cashback and promotions serve as significant drivers in increasing the attractiveness of digital payment usage among consumers. This phenomenon can be explained through a behavioral economics perspective, highlighting how financial incentives influence consumption decisions and technology adoption. The integration of OVO with various e-commerce platforms and digital services further expands MSMEs' market reach dynamically. Incentive strategies within digital payment systems can accelerate technology adoption while simultaneously increasing economic activity in the small business sector.

Despite its significant potential in promoting financial inclusion, digital payment adoption among MSMEs still faces complex and interrelated challenges. Low digital literacy remains a major barrier, limiting business actors' ability to optimally utilize technology, particularly in understanding features, security, and system integration into daily business activities. Many MSMEs remain at a basic usage level without being able to develop more strategic utilization to enhance efficiency and competitiveness. Limited internet access in certain regions, particularly semi-urban and rural areas, slows digital technology penetration and creates disparities in adoption levels. Concerns regarding transaction security and data protection also influence user trust, which, from the perspective of perceived risk theory, becomes a key determinant in technology adoption decisions (Alrawad et al., 2023; Handoyo, 2024). These challenges indicate that digital payment adoption is influenced by interconnected social, economic, and psychological factors. Partial approaches are insufficient to address these issues, necessitating comprehensive and integrated strategies.

The first solution focuses on strengthening digital literacy through hands-on training programs designed according to MSME characteristics and needs. Kolb's (1984) experiential learning approach is particularly relevant, as it enables business actors to learn through direct experience in using digital payment technologies. Community service activities can serve as a platform for implementing such programs through collaboration among academics, technology practitioners, and local business communities. Training materials that are simple, contextual, and practical can enhance understanding and adaptability to new technologies. Continuous learning processes, supported by periodic evaluation, allow training methods to remain relevant to technological developments and participant needs. From the perspective of human capital theory, improving human resource capacity is a long-term investment that enhances productivity and business competitiveness (Becker, 1964). Digital literacy is not merely a technical skill but a fundamental foundation for driving technology-based economic transformation in the MSME sector.

The second solution relates to strengthening digital infrastructure as a primary prerequisite for supporting the widespread use of electronic payment systems across regions. The availability of stable and affordable internet networks is a crucial factor in ensuring equal access to technology for all MSMEs. Collaboration between the

government and private sector is necessary to accelerate digital infrastructure development, particularly in underserved areas. Expanding telecommunications networks will enable business actors to connect with the digital economic ecosystem and access formal financial services. Consistent and sustainable policy support is essential to ensure the continuity of infrastructure development. From the perspective of economic development theory, digital infrastructure acts as an enabler of more productive and efficient economic activities (Chen & Xing, 2025). Infrastructure readiness plays a strategic role in determining the success of MSME digitalization and in reducing regional economic disparities.

The third solution emphasizes enhancing trust in digital systems through strengthening security and user data protection. Trust is a critical factor in technology adoption, especially in financial transactions involving risks of data loss or misuse. Digital payment service providers must ensure that their systems meet high security standards, including data encryption and robust authentication mechanisms. Educating MSMEs about digital security practices, such as personal data protection and fraud prevention, will improve their readiness to use technology safely. Transparency in data management and clear privacy policies also contribute to building user trust. Strong and clear government regulations provide legal protection and enhance the legitimacy of digital systems in the eyes of the public. Within the framework of trust-based adoption theory, trust is a primary determinant influencing technology usage decisions (Lukyanenko et al., 2022). Strengthening security and trust is therefore a strategic step in accelerating widespread digital payment adoption among MSMEs.

The role of community service activities becomes increasingly relevant in bridging the gap between rapid technological development and the diverse adaptive capacities of MSMEs. These programs can be directed toward continuous mentoring that is not only educational but also transformative in building practical capabilities for using digital payment systems. A participatory approach enables business actors to be actively involved in the learning process, resulting in deeper knowledge internalization compared to one-way methods. These activities serve as a medium for knowledge transfer from academics to society, while also providing a space for interaction and experience-sharing among business actors. The integration of theory and practice in community service programs enhances the relevance of the material to real-world needs. From a community-based development perspective, community service plays a role in strengthening local capacity through sustainable empowerment processes (Heryanti et al., 2025). It holds a strategic position in accelerating digital economic transformation at the grassroots level.

The integration of digital payment and community service activities creates synergy that accelerates financial inclusion in a more systematic and targeted manner. Innovation-based programs allow for the design of interventions tailored to the specific characteristics of MSMEs across sectors, both in terms of technological needs and user readiness. Community-based approaches enhance implementation effectiveness by leveraging existing social networks as channels for innovation diffusion. Cross-sector collaboration involving academics, government, and industry actors strengthens the supporting

ecosystem required for digital transformation. Developing adaptive community service models that respond to technological changes and market dynamics will improve long-term program sustainability. Within the framework of innovation system theory, interactions among actors are key to generating impactful innovations (Onumah et al., 2023). Innovation in community service can act as a catalyst that accelerates socio-economic change through the utilization of digital technologies.

This discussion leads to the understanding that digital payment plays a highly significant role in promoting MSME financial inclusion through various mechanisms integrated within the digital economic ecosystem. Theoretical frameworks such as TAM, Diffusion of Innovation, and institutional economics provide a strong foundation for explaining the adoption process and technological impacts on business actors. Empirical findings and case studies demonstrate how digital payment enhances efficiency, transparency, and access to formal financial services. Emerging challenges can be addressed through systematic and collaborative strategies involving multiple stakeholders. The role of community service becomes a key element in accelerating technology diffusion at the grassroots level through contextual and participatory approaches. The synergy between technology, public policy, and community empowerment creates a foundation for more inclusive economic development. This direction opens opportunities for building an economic system that is adaptive to change, sustainable in the long term, and capable of improving the overall welfare of MSME actors.

Table 1. Key Findings on the Role of Digital Payment in MSME Financial Inclusion

Aspect	Key Findings	Implications
Digital Transformation	Payment digitalization reshapes MSME economic interactions beyond transactions, affecting production, distribution, and consumption	Structural shift toward a more modern and integrated economic system
Operational Efficiency	Faster transactions, lower costs, and accurate financial records	Improved business performance and financial management
Competitiveness	MSMEs adopting digital payment gain wider market access and higher efficiency	Increased competitiveness in digital markets
Theoretical Perspective	Adoption influenced by perceived usefulness, ease of use (TAM), and social influence (Diffusion of Innovation)	Need for user-centered and socially adaptive implementation strategies
Financial Inclusion	Digital payment creates transaction records that support credit access and reduce information asymmetry	Expands MSMEs' access to formal financial services
Case Study: QRIS	29.6 million users (92% MSMEs), sales increased 20–30%	Demonstrates strong impact on MSME growth and transaction efficiency
Case Study: OVO	700,000+ merchants, transaction increase up to 50%	Incentives and ease of use drive adoption and economic activity
Key Challenges	Low digital literacy, limited infrastructure, and lack of trust	Barriers to optimal adoption of digital payment
Solution: Digital Literacy	Hands-on training and experiential learning improve adoption capability	Strengthens human capital and technological readiness

Solution: Infrastructure	Internet access and digital ecosystem development are critical	Ensures equal access and reduces regional disparities
Solution: Trust & Security	Data protection, system security, and regulation increase user confidence	Essential for sustained technology adoption
Role of Community Service	Participatory training and mentoring accelerate technology diffusion	Bridges gap between technology and MSME capability
Integration & Collaboration	Cross-sector collaboration enhances ecosystem support	Enables sustainable and inclusive digital transformation
Overall Impact	Digital payment acts as a strategic bridge integrating MSMEs into formal financial systems	Supports inclusive, adaptive, and sustainable economic development

CONCLUSION

The discussion demonstrates that digital payment plays a significant role in promoting MSME financial inclusion by enhancing access to formal financial services, improving transaction efficiency, and enabling the creation of structured financial records. The integration of digital payment technologies into business activities expands opportunities for MSMEs to connect with the broader digital economic ecosystem. Theoretical frameworks such as the Technology Acceptance Model and the Diffusion of Innovation clarify that technology adoption is influenced by perceived usefulness, ease of use, and social factors. Empirical findings and case studies further confirm that the use of digital payment has a tangible impact on improving business performance. The challenges that arise are related to digital literacy, infrastructure, and user trust. Innovation-based community service plays a key role in accelerating technology adoption among MSMEs. Overall, the findings suggest that digital payment is a strategic instrument in creating a more inclusive and adaptive economic system.

The implications of this study encompass both academic and practical aspects that complement each other in advancing digital-based financial inclusion. From an academic perspective, this study enriches the literature on the relationship between digital payment, financial inclusion, and MSME empowerment through a community service approach. The integrative perspective developed can serve as a reference for future research exploring similar topics in greater depth. From a practical standpoint, the findings provide direction for designing more contextual and needs-based community service programs for MSMEs. Educational institutions can utilize these insights as a foundation for developing effective training and mentoring models. Governments and industry actors can also use these findings as a reference in formulating policies and strategies for MSME digitalization. These implications highlight opportunities for cross-sector collaboration in strengthening the digital economic ecosystem.

This study has several limitations that should be considered when interpreting the findings. The literature review approach means that the results depend on the quality and scope of the analyzed sources. Although the selected articles have undergone a rigorous screening process, there remains a possibility of selection bias. The publication period

limited to 1964–2026 may have excluded earlier studies with potential historical relevance. Variations in geographical contexts and MSME characteristics across studies may also affect the generalizability of the findings. The descriptive qualitative analysis provides in-depth understanding but does not offer specific quantitative measurements. These limitations open opportunities for future research that is more comprehensive and based on primary data.

Future research is recommended to combine qualitative and quantitative approaches to produce more comprehensive and measurable analyses. The use of primary data through surveys or direct interviews with MSME actors can provide more contextual insights. Comparative studies across regions may help explain variations in digital payment adoption levels. Community service programs should be designed sustainably with approaches tailored to local needs and participant characteristics. Collaboration among academics, government, and the private sector needs to be strengthened to create an inclusive digital ecosystem. Enhancing digital literacy and transaction security should become primary focuses in every empowerment program. This direction is expected to accelerate MSME digital transformation while expanding financial inclusion more evenly.

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