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The Effect of Digital Payments on Financial Inclusion in Rural West Java

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Abstract

In today's digital era, financial inclusion is one of the main challenges, especially in rural areas of Indonesia, which still face limited access to financial services. With only 70.13% of the rural population financially included, many people remain dependent on the informal sector, which often falls short of meeting optimal financial needs. Amid these challenges, digital payment technology emerges as a promising solution to bridge the financial access gap. This study examines the impact of digital payments on financial inclusion in rural West Java, using a quantitative survey method through questionnaires distributed to digital payment users. The analysis results indicate that the use of e-wallets and QR payments significantly increases community access to financial products and services. This research provides valuable insights for policymakers and stakeholders in designing more effective strategies to enhance financial inclusion in rural areas, thereby promoting economic growth and overall community well-being.

Keywords

Financial Inclusion, Digital Payments, Economy, Financial Services

1. Introduction

Communities with low levels of financial inclusion tend to experience economic inequality and reduced productivity, ultimately hindering economic growth and regional development. This inequality is notably prevalent among rural communities in Indonesia, where access to financial products and services remains a significant challenge (Arinnis et al., 2022). In remote areas, geographic distance from economic centres, limited infrastructure, and a lack of knowledge about formal financial services are major barriers to financial inclusion (Ali, 2021).

Financial inclusion refers to a situation where individuals and businesses can access financial products and services that are beneficial and affordable, meeting their specific needs, such as for transactions, payments, savings, loans, and insurance, all offered in a responsible and sustainable manner (Wahid & Sarfiah, 2021). With financial inclusion, communities have greater opportunities to manage finances effectively, supporting individual financial stability and broadening economic opportunities at the regional level (Risambessy, 2023). Consequently, low financial inclusion limits the financial options available to rural residents, particularly in accessing financial services that can enhance well-being and open up broader economic opportunities (Gallego-Losada et al., 2024).

Consequently, restricted access to formal financial services in rural areas impacts not only individuals but also the economic potential of the region as a whole. Many rural inhabitants lack access to formal financial services and thus often depend on informal financial options, which can be disadvantageous, such as high-interest loans from local lenders. The informal financial sector frequently fails to provide safe and affordable services, leaving rural communities trapped in financial constraints that are difficult to overcome (Putranti et al., 2020). Therefore, effective solutions must be developed to bridge the gap between the formal and informal financial sectors, particularly by leveraging advances in digital financial technology.

In today's digital era, financial inclusion challenges in rural Indonesia remain high, with many communities still dependent on the informal sector, while digital payment technologies like e-wallets and QR payments offer potential solutions to bridge this gap by expanding access to formal financial services, thereby improving well-being and promoting economic growth in rural areas. However, success depends on digital financial literacy, adequate infrastructure, and government support (Putri & Afandy, 2020). Therefore, utilizing digital technology in financial services can help underdeveloped regions catch up with the economic growth achieved by more developed areas. However, this will only be beneficial if supported by adequate infrastructure and productive use (Pramaswara et al., 2023). Financial inclusion plays an essential role in economic development, especially in rural areas, by providing opportunities for saving, investing, and accessing credit, which, in turn, drives local economic growth and poverty reduction (Suryaningrum et al., 2023).

In line with this, the success of financial technology adoption is strongly influenced by users' knowledge levels, while digital financial literacy does not significantly impact decisions to use this technology (Sari et al., 2023). In this context, the Indonesian government targets 90% financial inclusion by 2024 by encouraging multi-party collaboration to create inclusive and sustainable financial access for rural communities. To support this goal, the Financial Services Authority (*Otoritas Jasa Keuangan/OJK*) collaborates with the Central Statistics Agency (*Badan Pusat Statistik/BPS*) to conduct the National Survey on Financial Literacy and Inclusion (*Sistem Layanan Informasi Keuangan/SNLIK*) to gain a better understanding of the national state of financial literacy and inclusion and to map the necessary strategies. According to SNLIK's 2024 results, Indonesia's financial inclusion index reached 75.02%, while financial literacy stood at 65.43%. In rural areas, the financial inclusion index only reached 70.13%, lower than urban areas at

78.41%. Additionally, the financial literacy index in rural areas was also lower at 59.25% compared to 69.71% in urban areas. This gap indicates significant challenges in accessing financial services in rural areas compared to urban regions.

Previous studies have shown that digital payment technology can help expand access to formal financial services, particularly in hard-to-reach areas. For example, research by Az-zahra and Ajija suggests that the government needs to extend financial service coverage by enhancing services that allow people to use banking services anywhere (Az Zahra & Ajija, 2023). Similarly, research by Budiastuti & Muid (2020) supports the importance of financial technology by highlighting that ease of use, trust, and positive attitudes significantly increase people's interest in using e-commerce-based accounting information systems, as seen in Shopee's application. However, in their findings, perceived usefulness and risk did not significantly influence user interest.

In efforts to address this gap, the government and OJK are striving to accelerate the digitalization of financial services, including expanding the use of e-wallets and QR payments in rural areas. Research by Hendra (2016) also shows that the easier employees can access internet banking, the greater the benefits they experience, thereby encouraging more frequent and intensive use. However, Hendra (2016) found no significant impact of perceived benefits on the intention to use internet banking, indicating other factors influencing usage intention (Hanggiani et al., 2024).

Therefore, this study aims to examine and analyse the influence of digital payments on financial inclusion in rural West Java (Amirudin et al., 2024). The expectation of this research is to provide valuable insights for stakeholders and policymakers in designing programs to enhance financial inclusion in rural areas through digital technology (Ramadhan et al., 2024). Thus, this research can serve as a critical reference in addressing financial inclusion disparities across various regions in Indonesia, particularly through a digital financial technology approach (Shah, 2022).

2. Methods

This study employs a quantitative method with a survey approach. Data were collected by distributing online questionnaires via Google Forms to digital payment service users in rural areas of West Java. The questionnaire aims to measure users' perceptions regarding ease of use, perceived benefits, and their attitudes toward using digital payments. Once the data were gathered, analysis was conducted using descriptive and inferential statistical techniques to identify the relationship between digital payment usage (e-wallets and QR payments) and financial inclusion. The collected data were processed using statistical software to draw conclusions on the impact of digital payments on access to financial services.

3. Results and Discussion

The research findings indicate that the use of digital payments, such as e-wallets and QR payments, positively impacts financial inclusion in rural West Java. Based on data collected via the questionnaire, a majority of respondents (85%) reported using digital payments with varying usage frequencies: 40% use digital payments daily, and 30% use them several times a week. These results suggest that, despite variations in frequency, digital payments have gained acceptance within rural communities in West Java.

Table 1. Frequency of Digital Payment Usage

No	Usage Frequency	Percentage (%)
1	Daily	40
2	Several times a week	30
3	Several times a month	20
4	Never	10

Beyond increasing access, digital payments also provide efficiency and security in transactions. Methods such as e-wallets and QR payments allow rural residents to perform daily transactions without carrying cash, thus enhancing security. These services also facilitate personal financial management, especially for those with limited access to formal financial services (Demirgüç-Kunt & Singer, 2017).

These findings align with the study by Saragih & Rikumahu (2022), which shows that e-wallet implementation can overcome barriers to financial service access in hard-to-reach areas. As noted in inclusive finance theory, technologies like e-wallets and QR payments play a crucial role in making formal financial services accessible to communities previously isolated from the financial system. Additionally, another study highlights that improved financial inclusion is closely linked to financial system stability in Asia, particularly in countries with higher GDP per capita. This suggests that financial inclusion impacts not only individuals but also regional economic stability (Haris & Tantimin, 2022).

Furthermore, the study's findings reveal that 70% of respondents find digital payments make transactions easier and save time. Additionally, 50% of respondents feel more confident in managing finances after using digital payment services. This indicates that digital payments not only expand access to the financial services sector but also offer significant practical benefits for rural communities in West Java.

Table 2. Perceived Benefits of Digital Payment Usage

No	Benefit	Percentage (%)
1	Ease of Transactions	70
2	Time Savings	50
3	Transaction Security	30
4	Ease in Financial Management	40

Furthermore, the benefits of digital payments extend beyond the individual level, positively impacting the community economy as a whole. With increased transaction transparency and easier access to financial services, rural communities that previously faced transactional challenges now have greater opportunities to engage in productive economic activities, thereby contributing to local economic growth (Demirgüç-Kunt & Singer, 2017). However, to maximize these benefits, digital financial literacy is essential. This finding aligns with research by Putri et al., which indicates that digital financial literacy plays a significant role in ensuring users fully benefit from financial technology (Putri et al., 2023). Without adequate literacy, rural communities may not fully understand the benefits and risks associated with this technology.

The data also show that 60% of respondents believe that adequate infrastructure and government support are crucial for the successful implementation of digital payments in rural areas. Other factors, such as risk management understanding and social support, are also found to be important in adopting digital payment technology. As shown in Kesa (2019), attitudes significantly impact financial inclusion among unbanked rural communities in Indonesia, while behaviour, knowledge, and skills are not significant predictors. This may be influenced by psychological factors and social norms embedded within the community, affecting

economic decisions. Further research by Tan & Syahwildan (2022) emphasizes the importance of financial literacy and risk management in maximizing the benefits of fintech, especially among MSMEs with limited knowledge of financial technology. This indicates that a comprehensive approach, including infrastructure development, improved financial literacy, and government support, is necessary to accelerate the adoption of digital payments in rural areas.

Table 3. Factors Influencing the Success of Digital Payments

No	Factor	Percentage (%)
1	Adequate Infrastructure	60
2	Government Support	55
3	Risk Management Understanding	40

Overall, financial technology (fintech) plays a critical role in enhancing financial inclusion by expanding access to financial services, reducing barriers to obtaining credit, increasing transaction efficiency, and supporting financial literacy. However, challenges related to regulation, data security, and digital literacy remain and must be addressed to accelerate financial inclusion in Indonesia (Marginingsih, 2021). As concluded by Nainggolan (2023) study in Medan, financial literacy has a positive and significant effect on financial inclusion, which, in turn, supports improved MSME performance. Therefore, although digital payment technology offers many benefits, enhancing digital financial literacy in rural areas is essential to achieve broader and deeper financial inclusion.

4. Conclusion

The findings indicate that implementing digital payments, such as e-wallets and QR payments, positively impacts financial inclusion in rural West Java. A majority of respondents in rural areas have adopted digital payment technology, with most experiencing practical benefits, such as ease of transactions and time savings. The increased access to digital financial services can accelerate financial inclusion, which in turn can support economic growth in rural areas. Although digital payments have a positive impact, digital financial literacy remains a crucial factor for maximizing the benefits of this technology. Adequate infrastructure and government support also play a significant role in the successful implementation of digital payments in rural areas. Limitations in understanding risk management and digital financial literacy in rural areas need to be addressed to expand the use of digital payments. The findings suggest that without adequate infrastructure and risk management knowledge, the adoption of this technology may not fully optimize financial inclusion. Based on these findings, it is recommended to enhance digital financial literacy and provide supportive infrastructure for rural communities. The government and policymakers should design more inclusive policies, engaging multiple stakeholders to support the expansion of financial technology adoption. Additionally, more focused outreach on risk management and digital payment usage is necessary to maximize its benefits in promoting financial inclusion in rural areas.

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