

Research Horizon

ISSN: 2808-0696 (p), 2807-9531 (e)

Research Horizon

Volume: 05

Issue: 01

Year: 2025

Page: 117-124

The Impact of Digital Payments on Financial Inclusion in Rural Areas

Mohammad Yuko^{1*}, Mochammad Suratin¹, Mahfudz¹, I Made Sukresna¹

¹ Universitas Diponegoro, Semarang, Indonesia

* Corresponding author: Mohammad Yuko (mohammad.yuko@gmail.com)

Abstract

In the modern digital era, achieving financial inclusion remains a significant challenge, particularly in rural areas of Indonesia, where access to financial services is still limited. With only 70.13% of the rural population financially included, a substantial portion of individuals continue to rely on the informal financial sector, which often fails to meet their financial needs effectively. In response to these challenges, digital payment technology has emerged as a viable solution to bridge the gap in financial access. This study investigates the impact of digital payments on financial inclusion in rural East Java, employing a quantitative survey approach through questionnaires administered to digital payment users. The findings reveal that the adoption of e-wallets and QR payments significantly enhances community access to financial products and services. These results offer valuable insights for policymakers and stakeholders in formulating more effective strategies to improve financial inclusion in rural areas, thereby fostering economic growth and enhancing the overall well-being of communities.

Keywords

Financial Inclusion, Economic Growth, Technology, Digital Payments

1. Introduction

Communities with low levels of financial inclusion often face economic inequality and reduced productivity, ultimately impeding economic growth and regional development. This disparity is particularly pronounced among rural communities in Indonesia, where access to financial products and services remains a significant challenge. In remote areas, geographic isolation, inadequate infrastructure, and limited awareness of formal financial services serve as major barriers to achieving financial inclusion (Asif, 2021; Friska et al., 2023). Financial inclusion refers to a condition where individuals and businesses can access useful and affordable financial products and services tailored to their needs, such as transactions, payments, savings, loans, and insurance, provided responsibly and sustainably. Enhanced financial inclusion empowers communities to manage their finances more effectively, fostering individual financial stability while creating broader economic opportunities at the regional level. Conversely, limited financial inclusion restricts rural residents' access to essential financial services that could improve their well-being and expand economic opportunities (Assalmani, 2021; Gallego-Losada et al., 2024).

The lack of access to formal financial services in rural areas affects not only individual livelihoods but also the economic potential of the entire region. Many rural inhabitants rely on informal financial mechanisms, which can be disadvantageous, such as high-interest loans from local moneylenders. The informal sector often fails to provide safe and affordable services, leaving rural communities in persistent financial constraints (Susilawati et al., 2022; Ndahiro & Luswata, 2023). To address these challenges, it is essential to develop effective strategies that bridge the gap between formal and informal financial systems, leveraging advancements in digital financial technology. In the digital era, financial inclusion challenges in rural Indonesia remain significant, with many communities still dependent on informal sectors. However, digital payment technologies, such as e-wallets and QR-based payment systems, offer promising solutions by expanding access to formal financial services (Mulyana et al., 2022). These technologies can enhance well-being and drive economic growth in rural areas. Success in these efforts, however, depends on improving digital financial literacy, developing adequate infrastructure, and ensuring robust government support (Putri & Afandy, 2020; Shifa & Harto, 2024). Digital financial services have the potential to help underdeveloped regions reduce economic disparities with more developed areas, provided they are supported by appropriate infrastructure and productive applications (Pramaswara et al., 2023; Prameswari et al., 2024).

Financial inclusion plays a pivotal role in economic development, particularly in rural areas, by enabling opportunities for saving, investing, and accessing credit, which, in turn, fosters local economic growth and poverty reduction (Suryaningrum et al., 2023). However, the success of adopting financial technology depends significantly on users' knowledge levels, as digital financial literacy alone does not directly determine decisions to utilize such technology (Sari et al., 2023). Recognizing this, the Indonesian government has set a target of achieving 90% financial inclusion by 2024, emphasizing multi-stakeholder collaboration to ensure inclusive and sustainable financial access for rural communities. To support this initiative, the Financial Services Authority collaborates with the Central Statistics Agency to conduct the National Survey on Financial Literacy and Inclusion to assess the state of financial literacy and inclusion nationwide and to formulate targeted strategies. According to the 2024 National Survey on Financial Literacy and Inclusion results, Indonesia's financial inclusion index reached 75.02%, with financial literacy at 65.43%. In rural areas, the financial inclusion index stood at 70.13%, lower than the 78.41% observed in urban areas. Similarly, the financial literacy index in

rural areas was 59.25%, compared to 69.71% in urban areas. These figures highlight substantial disparities in financial access between rural and urban regions.

Research has demonstrated that digital payment technologies can significantly expand access to formal financial services, particularly in underserved areas. For instance, Az-Zahra & Ajija emphasize the need for government initiatives to extend banking service coverage, enabling access from remote locations (Keong, 2020; Az Zahra & Ajija, 2023). Similarly, Budiastuti & Muid (2020) highlight the role of financial technology in enhancing user trust and fostering positive attitudes towards digital platforms, such as e-commerce-based accounting systems, though perceived risk and usefulness did not significantly impact user interest (Budiastuti & Muid, 2020). To bridge the financial inclusion gap, the government and Financial Services Authority are accelerating the digitalization of financial services by promoting the adoption of e-wallets and QR payment systems in rural areas. Hendra's research underscores that ease of access to internet banking enhances user satisfaction and frequency of use, although other factors also influence the intention to adopt such services (Hendra, 2016). This study aims to analyze the impact of digital payments on financial inclusion in rural East Java. It seeks to provide actionable insights for stakeholders and policymakers in designing programs that leverage digital financial technology to improve financial inclusion. By addressing disparities in financial inclusion, particularly in rural regions, this research aspires to serve as a critical reference for advancing inclusive economic development across Indonesia.

2. Methods

This study adopts a quantitative research design utilizing a survey approach. Data were collected through the distribution of online questionnaires via Google Forms, targeting users of digital payment services in rural areas of East Java. The survey was designed to assess users' perceptions regarding ease of use, perceived benefits, and their attitudes toward utilizing digital payment systems. After data collection, descriptive and inferential statistical methods were employed to analyze the relationship between the usage of digital payment services—specifically e-wallets and QR payments—and financial inclusion. The data were processed using statistical software to derive insights and conclusions about the impact of digital payments on access to financial services in rural communities.

3. Results

The findings of this study demonstrate a positive relationship between the adoption of digital payment methods, such as e-wallets and QR payments, and financial inclusion in rural East Java. Analysis of the questionnaire responses revealed that a significant proportion of respondents (85%) reported using digital payment services, with varying frequencies: 40% indicated daily usage, while 30% reported using such services several times per week. These results highlight the growing acceptance and integration of digital payment systems within rural communities in East Java, despite differences in usage patterns.

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

In addition to expanding access, digital payments enhance efficiency and security in financial transactions. Services such as e-wallets and QR payments enable rural residents to conduct daily transactions without the need to carry cash, thereby increasing safety. These digital solutions also assist individuals in managing their personal finances, particularly those with limited access to formal financial services (Demirgüç-Kunt & Singer, 2017; Abror & Muharam, 2024).

These findings are consistent with research by Saragih & Rikumahu (2022), which demonstrates that implementing e-wallet technology can help overcome barriers to accessing financial services in remote areas. According to the theory of inclusive finance, technologies like e-wallets and QR payments play a pivotal role in bridging the gap for communities previously excluded from formal financial systems. Additionally, other studies suggest a strong link between improved financial inclusion and financial system stability in Asia, particularly in countries with higher GDP per capita. This underscores the dual impact of financial inclusion on both individuals and broader regional economic stability (Haris & Tantimin, 2022).

Moreover, the findings of this study indicate that 70% of respondents believe digital payments simplify transactions and save time, while 50% report increased confidence in managing their finances after adopting digital payment services. These insights highlight that digital payments not only enhance access to financial services but also provide tangible practical benefits for rural communities in East 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

The advantages of digital payments extend beyond individual benefits, positively influencing the broader community economy. With enhanced transaction transparency and improved access to financial services, rural communities that previously faced significant transactional barriers now have greater opportunities to engage in productive economic activities, thereby driving local economic growth (Demirgüç-Kunt & Singer, 2017).

However, maximizing these benefits requires a strong foundation in digital financial literacy. This aligns with the findings of Putri et al. (2023) which highlight that digital financial literacy plays a critical role in enabling users to fully leverage financial technology. Without adequate knowledge, rural communities may struggle to comprehend both the potential advantages and associated risks of digital payment systems.

Survey results further reveal that 60% of respondents emphasize the importance of adequate infrastructure and government support for the effective implementation of digital payments in rural areas. Other factors, such as understanding risk management and fostering social support, also play a key role in the adoption of digital payment technologies. Research by Kesa (2019) underscores that attitudes significantly influence financial inclusion among unbanked rural communities in Indonesia, whereas behaviors, knowledge, and skills are less impactful predictors. These findings suggest that psychological factors and community-specific social norms significantly shape economic decision-making.

Additionally, studies by Tan & Syahwildan (2022) emphasize the necessity of financial literacy and risk management in maximizing the benefits of financial technology, particularly for Micro, Small, And Medium Enterprises (MSMEs) with

limited understanding of such technologies. These findings highlight the importance of a comprehensive strategy—encompassing infrastructure development, enhanced financial literacy, and government support—to accelerate the adoption of digital payment systems in rural areas effectively.

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

Financial technology (fintech) plays a pivotal role in advancing financial inclusion by broadening access to financial services, reducing barriers to credit, enhancing transactional efficiency, and promoting financial literacy. However, challenges related to regulatory frameworks, data security, and digital literacy persist and must be addressed to accelerate financial inclusion in Indonesia (Abhiseva Eco, 2024).

As demonstrated by Nainggolan (2023) study in Medan, financial literacy exerts a positive and significant influence on financial inclusion, which, in turn, enhances the performance of micro, small, and medium enterprises (MSMEs) (Nainggolan, 2023). Thus, while digital payment technologies provide numerous advantages, improving digital financial literacy in rural areas remains essential for achieving comprehensive and sustainable financial inclusion

4. Conclusion

The findings of this study indicate that the adoption of digital payment systems, such as e-wallets and QR payments, positively impacts financial inclusion in rural East Java. A significant proportion of respondents have embraced digital payment technologies, reporting practical benefits such as simplified transactions and time efficiency. Enhanced access to digital financial services has the potential to accelerate financial inclusion and contribute to economic growth in rural regions.

Despite these positive outcomes, digital financial literacy is a critical factor in maximizing the benefits of digital payment technologies. The availability of adequate infrastructure and consistent government support are equally important for the successful implementation of these systems in rural areas. Challenges related to limited knowledge of risk management and insufficient digital financial literacy must be addressed to ensure broader adoption and effective use of digital payments. Without these efforts, the full potential of financial inclusion through digital payment systems may not be realized.

Based on these findings, it is recommended to prioritize the improvement of digital financial literacy and the provision of necessary infrastructure for rural communities. Policymakers and government agencies should formulate inclusive policies that engage multiple stakeholders to facilitate the widespread adoption of financial technology. Additionally, targeted outreach programs focusing on risk management and the effective use of digital payment systems are essential to maximize their benefits and promote financial inclusion in underserved rural areas.

References

- Abhiseva Eco. (2024). *Peran Teknologi Finansial (Fintech) Dalam Meningkatkan Inklusi Keuangan*. abhiseva.id. <https://abhiseva.id/economy/peran-teknologi-finansial-fintech-dalam-meningkatkan-inklusi-keuangan/>
- Abror, G., & Muharam, H. (2024). Impact of Ultramicro Holding on Financial Performance and Business Sustainability. *Research Horizon*, 4(4), 47-54.
- Asif, M. (2021). Evaluation of factors affecting carbon accounting information disclosure: A case of ASEAN countries. *Arthatama*, 5(2), 39-50.
- Assalmani, M. A. (2021). Corporate criminal liability in Indonesian law concerning fund transfer. *Research Horizon*, 1(6), 229-236.
- Az Zahra, D. A., & Ajija, S. R. (2023). The Effect of Financial Inclusion On Inclusive Economic Growth In Indonesia. *Jurnal Ilmu Ekonomi Terapan*, 8(1).
- Budiastuti, A. D. P., & Muid, D. (2020). Analisis faktor-faktor pengaruh minat penggunaan sistem informasi akuntansi berbasis e-commerce pada aplikasi shopee dengan menggunakan Technology Acceptance Model (TAM). *Diponegoro Journal of Accounting*, 9(4).
- Demirgüç-Kunt, A., & Singer, D. (2017). Financial inclusion and inclusive growth: A review of recent empirical evidence. *World bank policy research working paper*, 8040.
- Friska, R., Pramono, A. J., Susanto, H., Akbar, B., & Suwarno, S. (2023). Empirical Study of The Effect of Career Development on Auditor Performance in Public Sector in Indonesia. *Research Horizon*, 3(3), 133-150.
- Gallego-Losada, M.-J., Montero-Navarro, A., Gallego-Losada, R., & Rodríguez-Sánchez, J.-L. (2024). Measuring financial divide in the rural environment. The potential role of the digital transformation of finance. *International Entrepreneurship and Management Journal*, 20(4), 2791-2810.
- Haris, M. T. A. R., & Tantimin, T. (2022). Analisis Pertanggungjawaban Hukum Pidana Terhadap Pemanfaatan Artificial Intelligence di Indonesia. *Jurnal Komunikasi Hukum (JKH)*, 8(1), 307-316.
- Hendra, J. (2016). Aplikasi model TAM terhadap pengguna layanan internet banking di kantor Bank Jatim cabang Situbondo. *Jurnal Ilmiah Ecobuss*, 4(1), 40-48.
- Keong, O. C. (2020). Determinants of intentions to engage in sustainability accounting & reporting (SAR) and moderating role of internal audit function: The perspective of accountants. *Arthatama*, 4(1), 33-43.
- Kesa, D. D. (2019). Realisasi Literasi Keuangan Masyarakat dan Kearifan Lokal: Studi Kasus Inklusi Keuangan Di Desa Teluk Jambe Karawang Jawa Barat. *Jurnal Sosial Humaniora Terapan*, 1(2), 6.
- Mulyana, M., Din, M., Mustamin, M., Amir, A. M., Karim, F., & Betty, B. (2022). Local government own-source revenue and general allocation funds on capital expenditure: Economic growth as moderating variable. *Arthatama*, 6(1), 44-54.
- Nainggolan, E. P. (2023). Peran Mediasi Inklusi Keuangan pada Literasi Keuangan dan Kinerja UMKM di Kabupaten Deli Serdang. *Balance: Jurnal Akuntansi Dan Manajemen*, 2(1), 10-21.
- Ndahiro, R., & Luswata, F. (2023, Maret 23). *Bridging the informal-formal divide in financial services - UN Capital Development Fund (UNCDF)*. <https://www.uncdf.org/article/8190/bridging-the-informal-formal-divide-in-financial-services>
- Pramaswara, M. A., Athoillah, M., Pembangunan, E., Ekonomi, F., Bisnis, D., & Brawijaya, U. (2023). Pengaruh Inklusi Keuangan Di Era Ekonomi Digital Dalam Meningkatkan Pertumbuhan Ekonomi. *Journal of Development Economic and Social Studies*, 2(1), 205-221.
- Prameswari, B. G., Rahman, A., Muharam, H., & Tjahjana, R. H. (2024). Product Inventory Optimization with EOQ Approach in the context of Circular Economy. *Research Horizon*, 4(4), 389-398.
- Putri, R. A., & Afandy, C. (2020). Dampak Dimensi Individual Financial Literacy Terhadap Financial Inclusion Pada Masyarakat Pedesaan. *Managemnt Insight: Jurnal Ilmiah Manajemen*, 15(1), 33-48.
- Putri, V. Y., Halim, R. M., Fahira, T. N., & Janice, S. N. (2023). Keuangan generasi z: Tingkat literasi dalam rangka peningkatan inklusi keuangan digital. *Jurnal Inovasi Hasil Pengabdian Masyarakat (JIPEMAS)*, 6(2), 188-200.

- Saragih, Y. W., & Rikumahu, B. (2022). Analisis Faktor Adopsi E-Wallet Gopay, OVO, dan DANA dengan Model UTAUT2 pada Masyarakat Jawa Barat. *Nominal Barometer Riset Akuntansi Dan Manajemen*, 11(1), 98–121.
- Sari, D. W., Pristiyono, P., & Pitriyani, P. (2023). Inklusi Keuangan Digital Melalui Loyalitas Dalam Membangun Finansial Teknologi. *Owner: Riset dan Jurnal Akuntansi*, 7(3), 2750–2761.
- Shifa, D., & Harto, P. (2024). The Impact of CSR Environmental Disclosure and Institutional Ownership on Company Value. *Research Horizon*, 4(4), 55–64.
- Suryaningrum, D. A., Zulfikri, A., & Elisabeth, C. R. (2023). Peran Inklusi Keuangan dalam Pembangunan Ekonomi: Bukti dari Negara-Negara Berkembang. *Jurnal Ekonomi dan Kewirausahaan West Science*, 1(03), 246–259.
- Susilawati, W., Alamanda, D. T., Fajri, S. G. R. S., & Ramdani, R. M. (2022). Map of the Best Selling Health Products During the Covid-19 Pandemic Period on the Popular Marketplace in Indonesia. *Research Horizon*, 2(5), 532–542.
- Tan, E., & Syahwildan, M. (2022). Financial Technology dan Kinerja Berkelanjutan Usaha Mikro Kecil: Mediasi Literasi Keuangan dan Inklusi Keuangan. *Jurnal Ilmiah Manajemen dan Bisnis*, 23(1), 1–22.



Copyright: © 2025 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution-ShareAlike 4.0 International License (<https://creativecommons.org/licenses/by-sa/4.0/>).