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RESEARCH ARTICLE

Utilization of E-Wallets in Financial Transactions as an Innovation in Digital Payments

Farhah Lailatul Mustaghfiroh[1], Muhammad Iqbal Fasa[2], Anggun Okta Fitri[3]

[1,2,3] State Islamic University Raden Intan Lampung, Indonesia
Correspondence ✉ farhahlailatulm@gmail.com

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E-wallet, Digital Transactions, Financial Innovation, Electronic Payment, Digital Literacy

Abstract
The advancement of digital technology has significantly transformed the landscape of financial transactions. One of the most prominent innovations is the use of e-wallets (digital wallets) as an alternative to cash payments. This study aims to analyze the utilization of e-wallets in financial transactions, identify the factors influencing their adoption, and evaluate the impact of e-wallet usage on the efficiency and security of digital transactions. This research employs a literature review method and secondary data analysis sourced from various references, including industry reports, academic journals, and government publications. The findings indicate that e-wallets have become a popular payment method in various countries, including Indonesia, due to the convenience, speed, and security they offer. Factors such as trust, ease of use, promotional incentives, and technological infrastructure play a critical role in driving the adoption of e-wallets. Moreover, the use of e-wallets has proven to enhance transaction efficiency and minimize the risk of cash loss. However, the study also identifies several challenges in the implementation of e-wallets, including cybersecurity concerns, limited digital literacy, and technological access gaps. Therefore, collaborative efforts from the government, e-wallet service providers, and society at large are essential to addressing these challenges and maximizing the potential of e-wallets as a digital transaction innovation.

Kata Kunci:
E-wallet, Transaksi Digital, Inovasi Keuangan, Pembayaran Elektronik, Literasi Digital

Abstrak
Perkembangan tehnologi digital saat ini telah mengubah lanskap transaksi keuangan secara signifikan. Salah satu inovasi yang paling menonjol adalah penggunaan e-wallet (dompet digital) sebagai alternative pembayaran tunai. Penelitian ini bertujuan untuk menganalisis pemanfaatan e-wallet dalam transaksi keuangan, mengidentifikasi faktor-faktor yang mempengaruhi adopsi e-wallet, serta mengevaluasi dampak penggunaan e-wallet terhadap efisiensi dan keamanan transaksi digital. Metode penelitian yang dilakukan adalah studi literatur dan analisis data sekunder dari berbagai sumber, termasuk laporan industri, jurnal ilmiah, dan publikasi pemerintah. Hasil penelitian ini menunjukkan bahwa e-wallet telah menjadi metode pembayaran yang populer di berbagai Negara, termasuk Indonesia, karena kemudahan, kecepatan, dan keamanan yang ditawarkan. Faktor-faktor seperti kepercayaan, kemudahan penggunaan, promosi, dan infrastruktur tehnologi berperan penting dalam mendorong adopsi e-wallet. Selain itu penggunaan e-wallet juga terbukti meningkatkan efisiensi transaksi, dan meminimalkan risiko kehilangan uang tunai. Penelitian ini juga mengidentifikasi beberapa tantangan yang dihadapi dalam pemanfaatan e-wallet, seperti masalah keamanan siber, kurangnya literasi digital, dan kesenjangan akses tehnologi. Oleh karena itu, diperlukan upaya kolaboratif dari pemerintah, penyediaan layanan e-wallet, dan masyarakat untuk mengatasi tantangan ini dan memaksilmalkan potensi e-wallet sebagai inovasi transaksi digital.

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INTRODUCTION

The advancement of digital technology in recent decades has brought significant changes in various aspects of life, including in the financial transaction system. This transformation was triggered by the development of information and communication technology, especially the internet and mobile devices, which has given birth to various payment innovations that are increasingly efficient and easy to use by the public. One of these innovations is e-wallet or digital wallet, which is an electronic payment service that allows users to make various forms of transactions digitally without having to use cash or physical cards (Nugroho, 2016; Rahmayani, 2018; Shaikh & Karjaluoto, 2015). E-wallets provide a number of advantages such as convenience, speed, and security, which make them increasingly popular in the digital society, especially among the younger generation(Sihombing et al., 2023).

The growth of e-wallet usage in Indonesia shows a very rapid trend. The Bank Indonesia report (2023) noted that the value of electronic money transactions in 2022 reached Rp399.6 trillion, an increase of 30.38% compared to the previous year(Bank Indonesia, 2023) . This data indicates that e-wallets have become an integral part of the national financial system. Several service providers such as GoPay, OVO, DANA, and LinkAja have succeeded in attracting millions of users through integrated features and supporting the daily transaction needs of the digital community. This is in line with the concept of electronic payments, which according to Tella (2012) and Fatonah (2018), is a digital fund transfer process through the internet network, enabling efficient and real-time financial management (Fatonah et al., 2018; Tella, 2012).

The phenomenon of increasing the use of e-wallets is also reinforced by academic findings. Anggraeni and Sari (2021) reveal that the use of e-wallets can increase efficiency and convenience in financial transactions, especially among urban communities (Anggraeni & Sari, 2021). In addition, Putri and Kusuma (2020) added that e-wallets not only facilitate transactions, but also play a role in reducing dependence on cash and encouraging digital transformation in the economic sector(Putri & Kusuma, 2020) . In the context of e-commerce, Kosiur (2016) emphasizes that digital transactions are part of a business transformation that is no longer just buying and selling, but a comprehensive change in the way companies carry out their business processes online(Kosiur, 2016). Shofiyullah Mz even sees e-commerce as a form of digital muamalah that eliminates physical interaction between transaction actors through the use of information and communication technology (Shofiyullah, 2021).

E-wallet is also part of the spectrum of financial innovation. Wachter (2006) states that financial innovation includes not only the creation of new products and services, but also service processes such as mobile banking, ATMs, and e-banking (Wachter, 2006). In a broader perspective, Jacque (2004) divides financial innovation into various categories, ranging from innovations in financial instruments and markets, to digital techniques and services such as e-wallets (Jacque, 2004). This innovation not only opens wider access to finance, but also encourages the efficiency of the payment system in the context of financial digitalization, namely the shift from manual transactions to technology-based transactions (Farahdiba, 2019).

On the other hand, the existence of e-wallets is inseparable from quite complex challenges. Some of the main issues of concern are cybersecurity problems, low levels of digital literacy, and unequal access to technological infrastructure, especially in remote areas (Gomber et al., 2018; Sulistianingsih, 2021). Digital literacy itself, according to Sulistianingsih (2021), includes not only technical skills, but also understanding the meaning and context of responsible use of technology (Sulistianingsih, 2021). Strong literacy is needed so that people can understand the risks of using financial technology wisely.

In a more macro context, e-wallets are also part of the financial technology (fintech) architecture, which is a digital infrastructure-based financial service system that aims to provide convenience in payment, lending, investment, and other financial activities (McKinsey & Company, 2016). Fintech disrupts the traditional financial system by providing services without the need for physical presence or conventional bank accounts, thus supporting the expansion of financial inclusion and transaction cost efficiency.

Based on this description, it can be concluded that e-wallet is a digital financial innovation that has great potential in increasing transaction efficiency, expanding financial access, and supporting digital economic development. However, the success of its utilization is highly dependent on a number of factors, such as the level of user trust, ease of use, system security, and digital literacy support. Therefore, it is important to conduct an in-depth study of the factors that influence e-wallet adoption and its impact on efficiency, security, and expansion of digital financial access.

This research aims to analyze the use of e-wallets in financial transactions, identify factors that influence their adoption, and evaluate their impact on transaction efficiency, data security, and expansion of financial access. Thus, the results of this study are expected to provide comprehensive insights into the role of e-wallets as a form of digital transaction innovation that is relevant and strategic in supporting inclusive and sustainable digital economic development. In addition, this research also provides constructive policy recommendations for the government, e-wallet service providers, and the wider community in optimizing the benefits of this digital financial technology.

METHODS

This research uses a descriptive qualitative approach with a *library research* method. This approach was chosen to obtain an in-depth understanding of the use of e-wallets in digital financial transactions and the factors that influence their adoption. Descriptive research aims to describe systematically and accurately about the phenomenon under study without manipulating variables (Sugiyono, 2019). The literature study method is used because this topic focuses on reviewing concepts, theories, and secondary data from various written sources.

The data source in this research is secondary data obtained from various references such as books, scientific journals, academic articles, official reports from Bank Indonesia, the Financial Services Authority (OJK), as well as publications of other trusted institutions and sites. Data collection techniques were carried out through a process of searching, selecting, and reviewing literature relevant to the research topic. In accordance with the opinion of Zed (2004), literature study is a method that emphasizes the importance of exploration and processing of information from documents as the main basis in answering the formulation of research problems (Zed, 2004).

The data analysis process was carried out using the content analysis method, namely identifying, classifying, and interpreting the contents of the reviewed literature to find thematic patterns and interrelationships (Moleong, 2019). Data validity is maintained through source triangulation, by comparing information from various references to obtain data reliability and objectivity. With this method, the research is expected to provide a comprehensive and relevant picture of the utilization of e-wallets as an innovation in digital financial transactions in the modern economic era.

RESULTS AND DISCUSSION

1. Analysis of Factors Driving E-Wallet Growth

The development of e-wallets as a form of digital transaction innovation has experienced rapid growth in recent decades, mainly triggered by the information technology revolution and changes in consumer behavior patterns. According to Donald (2012), from 2007 to 2011 there was a significant increase in the use of non-cash payment methods, and this trend continues to this day (Amoroso, 2012). Handayani (2020) also confirms that consistent technological advances have driven an exponential increase in the number of e-wallet users. This phenomenon shows that e-wallets are not just an alternative, but have become a necessity in the digital lifestyle of modern society (Handayani & Novitasari, 2020).

One of the major factors in the growth of e-wallets is the change in consumer behavior. Millennials and Gen Z who grew up with the internet prefer practical, fast, and efficient solutions in transactions. They tend to leave conventional payment systems and switch to digital transactions because they provide convenience and flexibility in financial management. This is reinforced by Rahmayani's research (2018), which states that globalization and digitalization have created new preferences in the way consumers carry out economic activities(Rahmayani, 2018).

Another factor that plays an important role is technological innovation. The advancement of mobile devices, the development of applications with user-friendly interfaces, and the improvement of internet network quality have accelerated the adoption of e-wallets. In addition, the application of encryption technology, biometric authentication systems, and two-step verification further increases public confidence in the security of digital transactions. Priya (2020) added that e-wallets also offer automatic transaction recording features that greatly assist users in managing personal finances efficiently without having to record manually (Priya, 2020).

In addition to technological and behavioral factors, ease of access and user experience are key components in attracting people to use e-wallets. A simple registration process, 24-hour service, and ease of top-up and payment make e-wallets a transaction tool that can be used by various groups, including those who are not too familiar with technology (non-tech-savvy).

Then, the variety of service options in one platform also increases the added value of e-wallets. Users can not only make payments, but also transfer funds, purchase credit, pay bills, and access promo features, cashback, and reward points. These features encourage user loyalty while creating an integrated digital ecosystem.

Equally important is the support from the government and the private sector. The Indonesian government through Bank Indonesia and OJK has issued various policies that encourage digital financial inclusion, such as the implementation of QRIS and regulations related to electronic money. On the other hand, retail companies, e-commerce, and service providers are also expanding payment channels by adding payment options through e-wallets. This synergy between regulators and business actors has helped expand the reach and acceptance of e-wallets in the community.

Overall, the factors driving e-wallet growth can be summarized in five main elements: (1) changes in consumer behavior, (2) technological innovation, (3) ease of access and use, (4) diversity of services, and (5) regulatory and corporate support. However, this progress is still accompanied by challenges, such as data security issues, low digital literacy, and gaps in access to technology in underdeveloped areas. Therefore, collaborative efforts between the government, industry players, and the community are key in ensuring that the growth of e-wallets is able to create an inclusive, safe, and sustainable digital transaction system.

2. Policy Implications for E-Wallet Ecosystem Development

The development of e-wallets in Indonesia shows great potential in supporting inclusive and efficient digital financial transformation. However, this technological advancement will not be optimal without the support of policies that are adaptive, structured, and in favor of the public interest. The government as a regulator, together with other stakeholders, plays an important role in ensuring that the e-wallet ecosystem develops in a healthy, fair and sustainable manner. Policy implications in this context are not only aimed at supporting the growth of the financial technology industry, but also protecting consumers and ensuring the stability of the national financial system.

First, adaptive and pro-innovation regulations are needed. Regulations must be designed flexibly to keep pace with the pace of innovation without inhibiting the creativity of business actors. Bank Indonesia (2023) states that the payment regulatory system must bridge between encouraging innovation and protecting consumers and financial stability (Bank Indonesia, 2023). In this regard, a regulatory sandbox approach or innovation test zone can be an effective strategy to test new policies without directly burdening fintech players. Such regulations have been implemented in countries such as the UK and Singapore, where they have proven effective in balancing innovation and supervision.

Second, strengthening cybersecurity is an urgent matter that should be the focus of policy. Cyberattacks targeting the digital financial sector are increasing from year to year. For this reason, the government needs to impose minimum security standards for all e-wallet service providers, such as the implementation of ISO 27001, end-to-end encryption, multi-factor authentication, and periodic security audits. In addition, collaboration between regulators, service providers, and law enforcement agencies is crucial to prevent and deal with cybercrime responsively.

Third, the development of an inclusive e-wallet ecosystem requires increased digital literacy and financial education. Based on the APJII survey (2023), the digital literacy gap is still an obstacle, especially in rural areas and the elderly. Therefore, the government needs to initiate digital education programs based on communities, schools, pesantren, and community institutions to expand public understanding of the benefits, risks, and safe ways to use e-wallets. Digital literacy must also be linked to financial literacy so that people are not only able to use technology, but also wise in managing their digital finances.

Fourth, equal distribution of digital infrastructure is an absolute requirement in realizing technology-based financial inclusion. Fast and affordable internet access, as well as equitable availability of digital devices, remains a major challenge in many parts of eastern Indonesia. Therefore, digital infrastructure development should be prioritized as part of national strategic policy, along with the implementation of the government's digital transformation agenda.

Fifth, it is important to strengthen collaboration among stakeholders. The government, e-wallet service providers, banks, industry players, academics, and the public must be involved in policy dialog, joint research, and drafting industry standards. This collaboration will strengthen the governance of the e-wallet ecosystem and encourage synergy between sectors.

In addition, public policies should also prioritize financial inclusion, by expanding access to digital financial services to vulnerable groups such as MSME players, farmers, fishermen, and communities in disadvantaged areas. This effort can be done through the provision of internet access subsidies, financial digitization training, and the development of local-based e-wallets that suit the needs of the community.

Partnerships with the private sector also need to be formalized through collaborative frameworks such as Public Private Partnerships (PPPs) that facilitate the development of product innovations, technology updates, and security information sharing systems (threat intelligence). The private sector is also expected to play an active role in providing loyalty programs and continuous consumer education.

In addition, economic incentives are an important strategy to encourage widespread use of e-wallets. The government can provide fiscal incentives to fintech companies that run financial inclusion programs or develop user-friendly technology. On the other hand, incentives for consumers in the form of cashback, discounts, or free transaction fees can significantly increase the adoption of e-wallets, especially in groups of people who are new to this service.

Finally, supervision of the number and quality of e-wallet platforms in circulation needs to be tightened. The growing number of e-wallet platforms without standardization can confuse consumers and increase the risk of fraud. Thus, it is important for regulators to develop an interoperability system between service providers and set minimum technical, security, and customer service standards.

By paying attention to the nine policy implications above, it is expected that the e-wallet ecosystem in Indonesia can develop in an inclusive, innovative and safe manner. This will not only accelerate the national digital financial transformation, but will also strengthen the economic resilience of the community through wider and more efficient financial access.

3. Evaluation of E-Wallet's Impact on Financial Efficiency and Inclusion

Digital transformation in the financial sector has provided great opportunities to improve transaction efficiency and expand financial inclusion, especially through the use of e-wallets. As one of the products of digital financial innovation, e-wallets not only facilitate the payment process, but also open access to financial services for groups of people who were previously not served by the formal financial system. Evaluation of the impact of e-wallet usage covers two main dimensions: transaction efficiency and expansion of financial inclusion.

a) Impact on Transaction Efficiency

The use of e-wallets has significantly increased efficiency in people's transaction activities. According to the results of a survey of e-wallet users in the trade and public service sectors, most respondents stated that transactions were faster, more cost-effective, and easier to manage. This is consistent with the findings of Muhammad (2022), which states that speed and convenience are the main reasons consumers switch from cash to digital transactions (Muhammad, 2020).

First, e-wallets allow for a faster transaction process. Users can complete payments with just a QR code scan or screen touch, without having to wait in line, count change, or fill out transaction forms. This speed is invaluable, especially in high-frequency economic activities such as online transportation, retail, and public services.

Second, e-wallets offer reduced transaction costs. For example, interbank transfer fees can be reduced, and it is not uncommon for e-wallet providers to offer administration fee-free promos or certain discounts. This is in contrast to traditional banking services that tend to have higher routine fees.

Third, the aspects of automation and accountability also improve the efficiency of user financial management. E-wallets automatically record the entire transaction history that can be accessed at any time by the user. This feature allows individuals to track daily expenses, plan budgets, and evaluate consumption habits, all of which contribute to more disciplined and transparent personal financial management (Sihombing et al., 2023).

b) Impact on Financial Inclusion

In addition to increasing efficiency, e-wallets are also proven to play a role in expanding the inclusiveness of the financial system. In the Indonesian context, many people in remote areas or vulnerable groups such as informal workers, MSME players, and people with low income, previously did not have access to conventional banking services.

According to the Financial Services Authority (2022), around 50% of e-wallet users in Indonesia are individuals who were previously unreached by the formal banking system. E-wallet has become an inclusive financial access tool, as it only requires a mobile device and internet connection to use. This provides an opportunity for millions of citizens to participate in the national financial ecosystem.

E-wallets also contribute to user empowerment. With the availability of digital financial services, individuals have more control over their funds. They can save, make payments, and even invest on a micro scale. This is especially important for people who work in the informal sector and have high mobility.

Furthermore, the use of e-wallets promotes improved financial literacy. Through an educative interface and features such as payment reminders, expense reports, and access to financial product information, users are increasingly familiar with the basic principles of personal financial management. This education is the first step in creating a more financially savvy and digitally literate society (Sulistianingsih, 2021).

c) Challenges and Barriers

Although it provides various benefits, an evaluation of the impact of e-wallets must also look at the challenges that still hinder its optimal penetration and adoption. First, security and trust are the main issues. The threat of data leakage, digital fraud, and phishing is often the reason users hesitate to use e-wallet services regularly. According to Hadi (2021), public trust is a crucial factor in determining the success of digital financial services (Hadi, 2021).

Second, uneven digital literacy is also an obstacle in reaching all levels of society. The elderly, rural communities, or users with low education levels often have difficulty in understanding the mechanism of using e-wallet applications. Therefore, digital literacy campaigns should be an integral part of the national e-wallet development strategy.

Third, the issue of digital infrastructure availability has not been fully resolved. In some areas, especially in Eastern Indonesia and rural areas, internet access is still limited and network quality is not adequate. This condition causes e-wallet services to not be optimally utilized by the entire population.

Addressing these challenges requires cross-sector collaboration between the government, financial technology service providers, as well as educational institutions and civil society. The government should prioritize the development of digital infrastructure and provide policy support that supports security and inclusion. Meanwhile, e-wallet providers need to continue to improve their technology and expand their service coverage evenly.

CONCLUSION

The utilization of e-wallet as a form of innovation in the digital transaction system has brought significant changes in the way Indonesians conduct their daily financial activities. E-wallets are proven to be able to increase transaction efficiency through a fast process, reduced administrative costs, and automation features that support better financial management. In addition, e-wallets also contribute significantly to the expansion of financial inclusion by reaching segments of society that were previously untouched by formal financial services.

This research has analyzed the utilization of e-wallets in financial transactions as part of the digital transformation in Indonesia. The results show that e-wallet has become a popular and widely accepted payment tool, with significant growth in the number of users and transaction volume. Some of the main factors driving e-wallet adoption include the shift in consumer behavior towards digitalization, advancement in information and communication technology, user-friendly interface, variety of services offered, and active support from the government and private sector.

Although it has a positive impact on transaction efficiency, financial inclusion, and changes in people's financial behavior, the use of e-wallets also faces a number of challenges. These challenges include data security issues, low digital literacy in some community groups, and limited technological infrastructure in remote areas. Therefore, the development of a healthy and sustainable e-wallet ecosystem requires adaptive and pro-innovation policy support, increased cybersecurity, equal distribution of digital literacy, and multi-stakeholder collaboration. With this approach, e-wallets not only act as a modern transaction tool, but also as a strategic instrument in supporting inclusive and sustainable digital economic development in Indonesia.

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