Information Management and Business Review (ISSN 2220-3796)
Vol. 16, No. 4(S), pp. 1-8, 2024

E-Wallets Unplugged: Navigating Benefits and Challenges in a Post-Pandemic World

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Abstract: The COVID-19 pandemic has expedited the utilization of digital payment alternatives, with e-wallets becoming a significant component of the financial ecosystem. This study examines the diverse benefits and challenges of e-wallets in a post-pandemic context. The researchers conducted a systematic literature review (SLR) of peer-reviewed academic papers utilizing the Emerald Insights database. Forty-four articles published between January 2021 and September 2024 were reviewed, highlighting the study's benefits and challenges. The findings indicate that e-wallets enhance financial inclusion, promote convenience and accessibility, stimulate business and economic growth, support the digital economy, facilitate technological integration, and improve consumer convenience, especially in an increasingly cashless environment. Nonetheless, the study also examines the substantial challenges associated with this swift digital transformation, encompassing security issues, poor adoption rates, insufficient knowledge, trust deficits, regulatory hurdles, feature limitations, and user attitude challenges. This study seeks to elucidate the changing function of e-wallets in influencing the future of commerce through a thorough investigation. The study offers recommendations for e-wallet providers, policymakers, and researchers to successfully manage the complexity of e-wallet adoption, enhancing benefits while resolving the inherent challenges.

Keywords: *e-Wallet, Cashless, Sustainable Development, Benefits, Challenges*

1. Introduction

The emergence of e-wallets offers considerable advantages and distinct challenges. E-wallets are expected to influence consumer behavior substantially, shifting preferences from cash to electronic transactions. (Dimitrova, 2024). As digital payment systems progress, they provide ease and efficiency; nonetheless, they encounter obstacles that may hinder their extensive adoption. In the contemporary digital environment, the shift to cashless transactions is becoming essential, not just for convenience but also as an effective instrument in combating crime. In developing nations, the financial sector empowers consumers to perform contactless transactions (Rahman et al., 2024).

Transitioning to digital currencies and contactless payments can establish a safer environment, where financial transactions are both optimised and safeguarded against unlawful activity. Digital transformation, financial inclusion, financial technology, and e-wallets have advanced significantly due to improvements in information and communications technology and the dependence on smartphones for internet access. (Esawe, 2022). Mobile money accounts have emerged as a crucial method for executing financial transactions for numerous households in developing nations (Nguyen, 2020). This transition not only improves security for persons and businesses but also supports a wider community dedication to crime reduction and the promotion of economic resilience. Criminals frequently deposit their illegal earnings in financial institutions through cash transactions, complicating law enforcement's ability to trace the funds (Alba, 2003, Goel and Mehrotra, 2012). Consequently, nations with substantial cash flows may exhibit increased vulnerability to corruption among officials and bribery recipients.

The COVID-19 pandemic has heightened the demand for digital, contactless services, presenting issues for conventional banking and payment infrastructures. The transition to digital services has intensified, revealing the necessity for safe and dependable systems to manage heightened transaction volumes (Shaikh et al., 2023). The pandemic forced numerous individuals, even those who previously opposed digital banking technologies, to embrace digital banking services (Ahmed & Sur, 2023). Despite the prevalent negativity, the epidemic has afforded numerous chances for countries to implement various digital projects. The epidemic prompted a transition in consumer preferences favoring digital payment options, like e-wallets, over conventional payment systems (Ariffin et al., 2021). The acceptance of cashless transactions is more prevalent in Malaysia, driven by

technological improvements and the digital landscape, alongside the impact of COVID-19 (Kamis, Ismail & Abd Rahman, 2023). The post-pandemic era has experienced a notable transition towards the utilization of e-wallets, propelled by evolving consumer behaviors and the demand for contactless transactions. A primary alteration is that individuals endeavor to evade direct interaction with sick individuals and indirect interaction with objects in proximity to or utilized by infected individuals (Istijanto & Handoko, 2022). The pandemic commenced on March 11, 2020, with the post-epidemic period commencing approximately in March 2022 and extending into 2024 (Топорков, 2024). The post-pandemic phase for COVID-19 is typically regarded as commencing in 2021, following the initial waves of the pandemic and the distribution of vaccines. This study is undertaken post-pandemic, as the health implications of utilizing e-wallets have gained considerable relevance because of the COVID-19 pandemic (Ruslim et al., 2024). As countries progressively recover from the restrictions enforced by the pandemic, comprehending the changing environment is essential for navigating through the new normal. This study seeks to examine the advantages and consequences of the post-pandemic years, namely in the realm of digital finance (fintech), as well as the forthcoming problems.

This study enhances the existing literature on electronic wallets in multiple aspects. Initially, it analyses the development and evolution of e-wallets. Furthermore, it illustrates the significance of addressing the key issues for sustainable development. The methodology of this article was presented to identify benefits and challenges based on the previous literature review using systematic searching strategies. Next, the researchers identified several benefits and challenges particularly related to the e-wallet in post post-pandemic era. Finally, the article provides a detailed insight into the conclusions and recommendations that can be used for further investigation and add to the existing literature.

2. The Importance of Addressing These Key Issues for Sustainable Development

Addressing these critical concerns is essential for attaining sustainable development, as cashless directly influences economic stability, equitable society, and environmental health. The sharing economy, facilitated by digital platforms, effectively aligns the demand and supply of underutilized resources. Global expansion and influence across several industries are providing a novel approach to sustainable resource utilization. The United Nations ratified the Sustainable Development Goals (SDGs) in response to a worldwide initiative aimed at eradicating poverty, safeguarding the environment, and ensuring that all individuals experience peace and prosperity by 2030 (Aref, 2024). The examination of e-wallets is fundamentally associated with multiple Sustainable Development Goals (SDGs), including Goal 1: No Poverty, Goal 8: Decent Work and Economic Growth, and Goal 9: Industry, Innovation, and Infrastructure. E-wallets facilitate cashless transactions and enhance financial accessibility, hence encouraging financial inclusion and enabling individuals in underserved communities to engage in the digital economy. This access alleviates poverty and empowers consumers by equipping them with tools for savings, investment, and effective financial management.

In our progressively digitized society, e-wallets serve as a revolutionary instrument that perfectly corresponds with the Sustainable Development Goals (SDGs). E-wallets facilitate transactions, diminishing the necessity for cash management, hence potentially decreasing operational expenses for enterprises. (Tennyson & Mercy, 2014). Implementing e-wallets is anticipated to enhance banking activities and stimulate economic growth, notwithstanding existing discrepancies in user adoption (Undale et al., 2021). The e-wallet platform aligns with sustainability objectives to reduce paper use and carbon emissions linked to conventional banking (Nawi et al., 2024). Further, digital payments can result in sizable cost reductions and reduced environmental effects, fostering economic sustainability (Salman & Ismael, 2023).

Aside, e-wallets can encourage economic growth by elevating entrepreneurship and innovation, enabling small enterprises to prosper via expanded client access and streamlined payment processing. Aside, it also promotes how technology can close disparities and provide equitable opportunities for all. Digital payment can improve infrastructure, encourage sustainable industrialization, and promote innovation in line with SDG goals. This paper identifies the benefits and challenges of e-wallets, intending to emphasize their potential as drivers of sustainable development. Incorporating e-wallet technology is needed for attaining the Sustainable Development Goals, encouraging inclusive growth, and focusing on the robust global economy.

3. Methodology

This study leverages an extensive literature review as its principal methodology to examine the benefits and challenges related to e-wallets in the post-pandemic era. By systematically compiling and analyzing existing research (journal articles), the study aims to identify the key benefits and challenges related to e-wallet adoption. This literature study will include several views, such as user experiences, security issues, economic effects, and regulatory challenges. This study aims to provide a detailed knowledge of the benefits of e-wallets and the challenges associated with their deployment and widespread adoption by integrating ideas from many sources. This methodology will establish a robust basis for educated discourse regarding the future of e-wallet technology.

This strategy was developed to ensure systematic and methodical searching, based on three subprocesses: identification, screening, and eligibility. Provided that all database queries are reproducible, this procedure can be precisely documented in the review. The procedure of finding synonyms, variations, and associated terms of the study's main keywords is referred to as identification. This study was fixed on the post-pandemic context, with datasets retrieved from January 2021 to September 2024. This utilizes advanced search techniques, including Boolean operators, phrase searching, wildcards, truncation, and field code functions individually. The subsequent primary and enhanced keywords were employed to perform searches across all databases: ("ACCEPTANCE*" OR "ACCEPT*" OR "ACCEPTING*" OR "ACCEPTED" OR "ADOPTION*" OR "ADOPT" OR "ADOPTED") AND ("CASHLESS" OR "CASH-LESS" OR "E-PAYMENT*" OR "ELECTRONIC PAYMENT*" OR "ONLINE PAYMENT*" OR "ON-LINE PAYMENT*" OR "E-WALLET*" OR "ELECTRONIC WALLET*" OR "ELECTRONIC MONEY"). The main database used for this study is Emerald Insight, which offers an extensive array of academic journals concentrated on business, management, and social sciences. Emerald Insight is known for its stringent peer-reviewed material, rendering it an essential resource for obtaining high-quality research articles that explore diverse facets of e-wallet technology, the benefits, challenges, and implications for sustainable development (Ansari & Raza, 2020).

A total of fifty-one (51) articles have been generated because of the identification process in the primary and supplementary databases. Seven (7) items were excluded during the screening and eligibility phase due to non-compliance with inclusion criteria, resulting in the selection of forty-four (44) papers for evaluation.

4. The Benefits of e-wallets

During a time when ease and safety are crucial, electronic wallets and cashless systems have become important tools in modern finance. These digital payment options offer a range of advantages, such as enhanced security, convenient transactions, and instant expense monitoring. Through the utilization of e-wallets, individuals and companies can streamline their financial transactions, reduce the dangers associated with physical cash management, and improve economic productivity. The transition to cashless economies may decrease government expenditures and enhance employment opportunities. Nonetheless, the complete advantages of a cashless economy cannot be attained unless a substantial proportion of the population consistently participates in cashless transactions (Raj et al., 2024).

E-wallets provide instantaneous payments and convenient access to funds, rendering transactions effortless for users. Cashless transactions fulfill the increasing demands of consumers by providing more user-friendly and time-efficient technological applications (Ahmed & Sur, 2023). The prevalence of cash as a prime target for theft and robbery necessitates the implementation of cashless payment systems to substantially diminish chances for criminal activity. Cash facilitates anonymity for terrorists and rebels to conduct undetected transactions, with even a small amount of physical currency sufficient to fund a wide array of illicit activities (Raj et al., 2024). The transition to a cashless society and the proliferation of digital payment methods have streamlined transaction monitoring and diminished avenues for illicit activities and money laundering by providing a transparent record, hence ensuring complete accountability (Sakuntala et al., 2024).

Okonkwo et al. (2023), assert that e-wallets facilitate a range of transactions, encompassing online purchases, utility payments, money transfers, automatic and timely payments, and cost management. E-wallets are among the fastest-growing sectors in future mobile payment technologies because of their simplicity, user-friendliness,

security, and rapid service delivery (Mew & Millan, 2021). The e-wallet invention advantages businesses by facilitating cashless payment transactions, while offering banking institutions an additional revenue stream. Moreover, internet technology can facilitate online buying, especially through expedited transactions and price comparisons across many options (Oloveze, et al., 2022). E-wallets assist firms in augmenting sales, acquiring new clients, and maintaining existing customers (Rahman et al., 2024). The theoretical foundation of digital currency development posits that supply drives financing, hence fostering economic growth and development (Ekong & Ekong, 2022).

E-wallets significantly advance the proliferation of cashless societies, hence improving financial inclusion, particularly in underdeveloped areas (Kamis et al., 2022). The advent of novel digital payment channels in developed countries and their subsequent enhancements aimed at diminishing the extensive reliance on cash and cheques (Oloveze, et al., 2022). Moreover, the growth of digital currency has advantageous consequences for financial inclusion, secure remittances, and exchange rate stabilization, among other benefits (Ekong & Ekong, 2022). Advanced technology such as blockchain and artificial intelligence enhance transaction security and efficiency, hence cultivating user confidence. The quality of online shopping platforms positively influences consumers' online purchasing behavior, hence promoting the use of digital payment methods (Rahman & Hossain, 2023). The implementation of technology has enhanced banking services (Ohiani, 2021).

Therefore, e-wallets signify a substantial progression in the management of financial transactions by individuals and businesses. Their advantages are numerous, including enhanced convenience via seamless digital payments, enhanced financial inclusion by granting access to banking services for unbanked individuals, and heightened security measures that safeguard consumers from fraud. Further, e-wallets involve contactless payments, and expedited transactions, and promote sustainable habits by reducing dependency on cash. The e-wallet adoption can stimulate economic development and become a crucial part of the financial landscape. Thus, by promoting these benefits, the stakeholders can further enhance user acceptance and promote an effective and diverse financial environment.

The Challenges of e-Wallets Ahead

E-wallet technology has emerged as a prominent solution for cashless transactions as the world shifts progressively toward digital finance. E-wallets have transformed how businesses and consumers execute financial transactions by providing ease, speed, and efficiency. Nonetheless, despite their increasing popularity, the adoption and deployment of e-wallets encounter numerous challenges that must be resolved to ensure their sustainability and efficacy. Comprehending these challenges is crucial for stakeholders aiming to navigate through the intricate realm of e-wallet technology and leverage its complete capabilities. This study seeks to identify the primary challenges encountered by e-wallets and suggest several strategies for navigating in a progressively digital environment.

Security issues, regulatory adherence and the digital divide pose substantial obstacles that can hinder user trust and broad acceptance. Concerns about data theft and fraud frequently impede adoption (Mohammed et al., 2024). Privacy and access barriers may hinder the comprehensive adoption of cashless transactions (Dimitrova et al., 2022). The potential for banks and other entities to monitor consumers' online payment activity, which may result in privacy invasions and concerns, is regarded as a significant obstacle (Dimitrova et al., 2022). Customers still have the fear that cybercrime is mostly committed via e-banking platforms Customers continue to retain concerns that cybercrime predominantly occurs through e-banking platforms (Ohiani, 2021). Recognizing the privacy difficulties encountered by service providers and consumers will be crucial for the operation of digital platforms (Aref, 2024). Consequently, consumers said that the application should prioritize robust security for financial transactions to safeguard personal information over user-friendliness; so, they do not anticipate these applications to be straightforward to operate (Okonkwo et al., 2023). The increase in cyber risks during the pandemic has intensified apprehensions over the security of e-wallet transactions, causing customers to be hesitant about embracing these digital payment methods (Undale et al., 2021).

The low adoption is also one of the significant challenges for e-wallet implementation. The e-wallet sector remains in its infancy, with several participants investing significantly to attract customers and merchants, as indicated by studies (Ariffin et al., 2021; Kamis, Ismail, Rahman, et al., 2023). Undale et al. (2021) Noted that

female users exhibited greater concern over e-wallet security than their male users, while middle-income persons demonstrated a higher degree of risk aversion compared to those with lower incomes. This demographic heterogeneity is a challenge for e-wallet providers in meeting the distinct security requirements of various user groups.

Notwithstanding their growing popularity and convenience, a considerable barrier remains a deficiency of awareness among potential customers. This lack of understanding can impede the extensive adoption of e-wallets, as individuals may feel overwhelmed by the technology or unaware of its benefits. A significant number of prospective users, especially within lower-income demographics, may lack adequate knowledge of e-wallet utilization, hence constraining its adoption (Kamis et al., 2022). Inadequate awareness campaigns regarding the advantages of utilizing the device, insufficient policies to bridge this gap, and the baseless assumption of widespread consumer confidence in the e-payment channel contribute to significant challenges (Oloveze, et al., 2022; Sakuntala et al., 2024). Furthermore, inadequate understanding of e-technology among customers also contributes to difficulties in e-wallet navigation (Oloveze, et al., 2022). The retailers' insufficient understanding of m-payment mechanisms poses an obstacle to the adoption of m-payments (Jayarathne et al., 2022). This e-wallet payment method necessitates adequate infrastructure, as consumers in remote locations may possess varying attitudes regarding e-wallet usage (Ariffin et al., 2021). A common issue in digital technology is the tendency to prioritize technology over the essential people skills required for effective transformation (Philip et al., 2023). E-wallets may provide advanced technology; yet, without enough training and assistance for consumers, adoption may be difficult. If e-wallet providers neglect to prioritize user education regarding the advantages and functionalities of their platforms, they jeopardize the engagement of potential clients, especially those with limited digital proficiency.

Besides, trust has been identified as an essential factor in the acceptance of cashless payment systems or e-wallets. Research demonstrates that customer trust in cashless systems is crucial for their sustained utilization since it alleviates perceived threats linked to online transactions (Rahman et al., 2024). Establishing user trust is essential; numerous prospective customers may be reluctant to transition from conventional cash transactions to digital payments due to unfamiliarity or perceived risks. Trust can significantly influence the acceptance and success rate of new technologies (Oloveze, et al., 2022). A study by Nourallah et al. (2023) Affirmed the significance of trust in fostering the intention of younger generations to utilize digital platforms. Consumers find it unattractive due to significant concerns regarding the product quality of online retailers. (Oloveze, et al., 2022). The proliferation of mobile money has resulted in instances of fraud and exploitative practices, especially with mobile money agents, which can erode trust and impede adoption (Shaikh et al., 2023).

Moreover, unclear rules may hinder the efficient execution of e-wallet systems (Mohammed et al., 2024). The existing regulatory framework may insufficiently address the requirements of retailers (SMEs), resulting in diminished confidence in fintech solutions and establishing a barrier to implementation (Saadah & Setiawan, 2024). Supportive regulations can promote innovation and market expansion, but ambiguous guidelines may obstruct the advancement of mobile money efforts (Shaikh et al., 2023).

Although e-wallets provide various new features, such as contactless payments, connection with loyalty programs, and improved security measures, the same features may also pose challenges to user acceptance. The features of e-wallets, including simple interfaces, improved security protocols, and effortless transaction processes, significantly impact user acceptance. Limited screen dimensions impede intricate input for cashless transactions (Raj et al., 2024). The rationale for persisting with e-wallet utilization should extend beyond mere time efficiency and convenience to encompass inclusivity and the maintenance of appealing incentives. Furthermore, conveying the availability of these e-wallet advantages is crucial in marketing initiatives. (Oloveze, et al., 2022). Moreover, e-wallets that offer substantial information or high-quality content will enhance acceptance, and e-wallet providers ought to integrate features that confer a competitive edge through their products (Okonkwo et al., 2023). Istijanto & Handoko (2022) Offer critical insights for developing business strategies, indicating that e-wallet providers must consider both the advantages of e-wallet payments and the disadvantages of cash payments to promote continued usage among customers. According to Tomczak et al. (2023), young users who consider themselves digitally capable frequently immerse in advanced features, including gamification, integration of social networks, and personalized financial management tools. E-wallets

that fail to provide these functionalities may find it challenging to attract and maintain these young users, leading to a competitive disadvantage.

A major challenge impeding the extensive use of e-wallets is user attitude. A considerable number of prospective consumers exhibit skepticism or hesitance toward digital payment systems, frequently driven by concerns about security, privacy, and technological unfamiliarity (Rahman et al., 2024). This anxiety may engender distrust in e-wallet services, leading to reluctance to abandon conventional payment methods like cash or credit cards. Adverse opinions regarding the complexity of e-wallet functionalities may deter users from investigating or employing these services. Therefore, to raise this difficulty, e-wallet providers must adopt techniques that increase familiarity, foster user confidence, increase familiarity, and transform attitudes toward cashless transactions.

5. Conclusion and Recommendations

This study posits to illustrate the benefits and challenges of e-wallets adoption in the post-pandemic context. Based on the past empirical literature, forty-four (44) articles were identified to review. By considering the benefits and challenges, this study proposed various solutions, particularly for e-wallet providers, policymakers, and researchers that could enhance e-wallet adoption, fostering a more inclusive and efficient digital environment.

Firstly, for the e-wallet providers, this study emphasized the creation of user-centric e-wallet products and services, which is essential for increasing adoption. The advanced security features like encryption and two-factor authentication to safeguard customers' financial information, privacy and access issues continue to pose substantial challenges. The marketing efforts for user experience and loyalty should be promoted. Effective marketing methods, such as influencer collaborations, can enhance consumer confidence and awareness of the advantages of online buying. Furthermore, gamification can favorably affect perceptions of e-wallets by increasing user engagement through prizes, so rendering the experience more fun and promoting regular engagements. E-wallet firms must prioritize agility, user experience, and interaction with younger consumers to achieve success. Features such as instantaneous transfers and loyalty program integration render e-wallets appealing substitutes for conventional payment methods, enhancing user familiarity and propensity for adoption.

Policymakers can improve financial inclusion and stimulate innovation in the digital economy through the implementation of targeted initiatives. This entails initiating educational initiatives to enlighten the public regarding the advantages of e-wallets, highlighting simplicity, security, and financial accessibility. Financial incentives like tax deductions or cashback payments may be provided to promote the adoption. Clear laws that safeguard consumers and promote competition among e-wallet providers are essential for establishing trust in digital payment systems. Moreover, facilitating accessibility for all residents, particularly those in rural regions or with restricted digital literacy, via training initiatives and intuitive designs is essential for the extensive use of e-wallets.

Researchers can leverage findings from e-wallet research to investigate broader trends in cashless transactions, digital finance, technology adoption, and financial behavior. Deepening the understanding of how e-wallets might influence economic and social environments could enhance the academic discourse on financial technology and establish a basis for future investigations. Comprehensive e-wallet research is an essential asset for stakeholders, promoting collaboration and informed decision-making in the swiftly changing landscape of digital payments.

Acknowledgment: This research was funded by the Ministry of Higher Education Malaysia through the Fundamental Research Grant Scheme (FRGS), grant number FRGS/1/2022/SS01/UITM/02/16.

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