
DIGITAL WALLET ADOPTION: WORLDCOIN'S IMPACT ON FINANCIAL TECHNOLOGY

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Abstract

This study investigates the adoption of digital wallet technology, particularly Worldcoin, in Thailand's fintech sector. Qualitative research involving interviews was conducted with 10 digital wallet experts, revealing significant adoption factors like convenience, security, and trust. Digital wallets provide benefits such as simplified payment processes, reduced complexity, increased accessibility, cost savings, and improved financial management. However, newcomers like Worldcoin face challenges, including user scepticism, trust issues, the need to attain critical mass, and uncertainties related to cryptocurrency regulations. These digital wallets have a profound impact on the fintech industry, driving competition and innovation and expanding financial inclusion. Nevertheless, strict adherence to regulatory requirements is crucial. Worldcoin and similar digital wallets possess the potential to revolutionise the fintech landscape by offering convenience and benefits while also presenting challenges to the industry and businesses. Success hinges on addressing user needs, ensuring robust security measures, complying with regulations, and fostering trust and innovation.

Key Words

Adoption; digital wallet; Worldcoin; financial technology

INTRODUCTION

The world is witnessing a wave of innovative technologies that are reshaping various aspects of society. With the widespread availability of internet connectivity and smartphone-enabled services, people from diverse backgrounds now have easier access to high-speed technological advancements. Industry 4.0 represents a significant transformation in the global economy and society, driven by technological advancements that are revolutionising both internal and external application models, fostering enhanced digital interactions (Abdelmajied, 2022; Limna & Kraiwanit, 2022; Mourtzis et al., 2022). Simultaneously, the economy is undergoing a shift towards new and emerging forms of consumption. This shift is a result of the convergence of technological, economic, and sociocultural factors, which are presently disrupting traditional modes of commercial exchange (Ertz & Boily, 2019; Javaid et al., 2022). Financial technology, commonly known as fintech, harnesses technology to design and provide financial products and services. Its impact is felt by financial institutions, regulators, customers, and merchants across various industries. The pervasive influence of digital technologies is challenging the core principles of the heavily regulated financial sector, leading to the rise of alternative payment systems, peer-to-peer (P2P) money exchanges, and increased volatility in currency markets. Furthermore, fintech is fundamentally transforming the perception, development, promotion, delivery, and consumption of financial services (Carbó-Valverde et al., 2021; Limna & Kraiwanit, 2022; Siri & Kraiwanit, 2023).

Digital wallets have emerged as a disruptive force in the realm of financial technology, revolutionising the way in which people conduct transactions and manage their finances (Haddad & Hornuf, 2019; Palmié et al., 2020). One such digital wallet that is making waves in the industry is Worldcoin. On 8 May 2023, Worldcoin, a cryptocurrency initiative co-founded by Sam Altman, a co-founder and CEO of ChatGPT creator OpenAI, unveiled its cryptocurrency wallet. The newly released wallet, named "World App", includes support for a beta edition of Worldcoin along with various third-party cryptocurrencies, like Wrapped Ethereum (WETH), Wrapped Bitcoin (WBTC), USD Coin (USDC), and Maker's DAI stablecoin (DAI). The main driving factor behind the creation of Worldcoin was the desire to establish a cryptocurrency that could easily be used by people all over the world. To achieve this goal, Worldcoin has taken advantage of iris scanning technology for user identification, allowing users to access its global currency freely (Dalton, 2023; Dotson, 2023). Digital wallets include technologies that aim to make it easier to store, manage, and carry out transactions using currencies within the digital economy. These wallets provide effective alternatives to payment methods, offering accessibility, convenience, and enhanced security. Understanding the elements that affect the adoption and usage of wallets has become more and more important as their popularity has continued to rise (Agarwal et al., 2020; Ilieva et al., 2023). Because of its advanced features and potential to disrupt the

financial technology sector, Worldcoin has emerged as a competitor in the wallet industry. Worldcoin's offerings aim to change the way in which people interact with currencies and to shape the future of financial transactions (Guo & Renaldi, 2022; Kessler, 2023; Torpey, 2023).

Numerous studies have explored digital wallets. For instance, Liébana-Cabanillas et al. (2020) analysed the intention to use the Apple Pay mobile payment system using structural equation modelling. Furthermore, George and Sunny (2022) employed partial least squares structural equation modelling to integrate elements from the technology acceptance model (TAM) and the information systems (IS) success model, along with promotional offers and situational influence, to explain continued usage intentions towards mobile wallets. Nevertheless, there remains a scarcity of research dedicated to the adoption of digital wallets, particularly with a specific emphasis on Worldcoin. As previously highlighted, Worldcoin has risen as a prominent player in the realm of wallet technologies. Worldcoin's offerings are meticulously crafted to transform individuals' interactions with currencies and exert a profound influence on the future of financial transactions. Consequently, digital wallet adoption, with a specific focus on Worldcoin, emerges as an imperative and highly relevant subject of inquiry. Furthermore, in recent years, the fintech industry has witnessed the rapid rise of digital wallets, with Worldcoin emerging as a prominent player. While these digital wallets offer the promise of convenience, security, and financial innovation, their adoption faces several challenges and uncertainties. User scepticism, regulatory complexities, trust issues, and the need to attain critical mass are among the key issues that have surfaced. This study aims to explore the adoption of wallets, specifically focusing on Worldcoin. Its purpose is to understand the factors that influence individuals' decision to adopt this technology. Additionally, the study seeks to gain insights into the way in which Worldcoin is transforming the financial technology landscape and its impact on individuals and businesses. Accordingly, a thorough analysis of the adoption process will be conducted, along with an evaluation of the benefits, challenges, and user experiences associated with Worldcoin as a financial technology solution. The findings from this research can provide guidance for shaping user behaviour, informing business strategies, fostering innovations, and contributing to regulatory considerations in the financial technology industry. Ultimately, this study aims to contribute to creating an adaptable ecosystem that enables wallets, like Worldcoin, to thrive for both individuals and enterprises.

LITERATURE REVIEW

Digital wallets have become a catalyst in the technology (fintech) industry, bringing about significant changes in the way in which individuals, businesses, and even governments carry out financial transactions. These software-powered platforms, also known as wallets or e-wallets, serve as central hubs for various payment methods, such as credit cards, debit cards, and cryptocurrencies. Digital wallets offer users access to a range of

financial services, including investment management and participation, in decentralised finance (DeFi) ecosystems. The growing popularity of digital wallets can be attributed to the increasing digitisation of financial services and the growing reliance on mobile devices for daily tasks (Kumari & Devi, 2022; Ilieva et al., 2023; Kagan et al., 2023).

Determinants of Digital Wallet Adoption

In recent years, digital wallets have experienced a remarkable global surge in their adoption, fundamentally altering the way in which individuals manage their financial affairs and interact with digital ecosystems. The onset of the COVID-19 pandemic further accelerated this adoption as consumers sought secure and more hygienic payment alternatives (Maynard, 2021; Sutticherchart & Rakthin, 2023; Wei et al., 2023). According to Feng et al. (2022) and Gayá (2022), pivotal trends have materialised, driven by a confluence of factors, including the widespread availability of smartphones, a burgeoning appetite for convenient and contactless payment solutions, and the rapid expansion of online commerce. Esteemed providers of digital wallets, like Apple Pay, Google Pay, and PayPal, have assumed a prominent presence in households worldwide, while the advent of cryptocurrencies, such as Bitcoin, has catalysed the development of blockchain-based wallet solutions. These trends underscore a broader societal shift towards a cashless paradigm, in which digital wallets do not merely act as instruments for transactions but also serve as tools for personal financial management and investment and facilitators of cross-border financial activities (Mirchandani et al., 2020; Zema, 2022).

Understanding the adoption and impact of digital wallets, exemplified here by Worldcoin, has become paramount in comprehending the evolving dynamics of the financial technology industry, both on a global scale and within specific regions, like Thailand. As reported by Pymnts (2023), Worldcoin has introduced a new digital wallet called the World App, aimed at enhancing access to digital identity and global financial services. This wallet is specifically tailored to the Worldcoin ecosystem and serves various purposes, such as authenticating with World ID, acquiring Worldcoin tokens, and facilitating digital money transfers globally. Unlike many other crypto wallets, World App prioritises simplicity and user-friendliness by concentrating on key functionalities for Worldcoin and Ethereum, ensuring that it is accessible to a wide range of users. In addition to website and mobile app authentication via World ID, eligible individuals in certain countries can claim Worldcoin Grants using this wallet. Users can conveniently store and send digital currency as well as gaining insights into and trading select tokens through the World App. According to Okorie (2023), World ID serves as a unique authentication system, allowing users to verify their identity while maintaining their anonymity, thus enabling private digital identity. Worldcoin's World App is now globally accessible in its initial phase after extensive development and limited beta testing in select countries. Worldcoin aims to integrate artificial intelligence (AI) into the app, emphasising the concept of proof of personhood (PoP) as it seeks to

facilitate fair global distribution of digital currencies and pave the way for AI-funded Universal Basic Income (UBI). Unlike many other cryptocurrency platforms, the World App does not support every token or crypto functionality. Instead, it is tailored to focus on key features of Worldcoin and Ethereum. The app's user journey starts with registration and authentication via World ID, followed by verification through an Orb, and it enables users to sign in to websites, mobile apps, and crypto decentralised applications. Notably, the app does not require users to divulge personal information, like their name and email address, during the onboarding process, preserving their privacy.

The Advantages of Digital Wallets

Digital wallets, often known as mobile wallets or e-wallets, have gained widespread popularity due to their unmatched convenience. These platforms enable users to access their payment methods and financial resources effortlessly through their smartphones, simplifying transactions and personal finance management (Julião et al., 2023; Kagan et al., 2023). In addition to convenience, digital wallets excel in efficiency, allowing quick and uncomplicated transactions and reducing wait times at checkout. Security is a top priority, with advanced encryption techniques and biometric authentication enhancing the protection against data breaches. These wallets also support contactless payments, aligning with current hygiene practices. Digital wallets furthermore offer tools for financial organisations, such as storing digital receipts and providing transaction histories. They integrate seamlessly with loyalty programmes, offering exclusive benefits and discounts. Moreover, they simplify cross-border payments, with better exchange rates and lower fees than traditional banking. Digital wallets also contribute to ecological sustainability by reducing the need for physical payment cards and cash. These wallets promote financial inclusion, making digital payments accessible to those without traditional banking services. Their user-friendly design accommodates various technological proficiencies, and they integrate smoothly with other applications (Fareed, 2023; Frąckiewicz, 2023; Ilieva et al., 2023; Putrevu & Mertzanis, 2023).

The Obstacles of Digital Wallets

In addition to their advantages, digital wallets also involve various obstacles and challenges. Security concerns, including vulnerability to hacking and phishing, top the list of obstacles that users face when entrusting their personal and financial data to digital wallets (Chuhan & Wojnas, 2023; Kagan et al., 2023). The absence of industry-wide standardisation adds to the complexity, with different technologies and security measures employed by various providers, leaving users, businesses, and developers with a maze of options. The limited acceptance of digital wallet payments by businesses and users' hesitancy to embrace them for everyday transactions create adoption barriers. Compatibility issues further frustrate users as certain digital wallets are confined to specific devices or operating systems.

Reliance on a stable internet connection and smartphone battery life also pose challenges, making digital wallets inaccessible in areas with poor connectivity and during low battery states. Transaction fees, especially for minor transactions, deter users, while privacy concerns arise from data collection and analysis, further complicated by evolving regulatory landscapes. Complex user interfaces deter less tech-savvy individuals, and heavy reliance on one wallet can result in vendor lock-in, making it cumbersome to switch to an alternative provider. Despite these formidable challenges, the digital wallet industry is in a state of constant evolution, with providers actively addressing security and usability concerns. As technology advances and regulatory frameworks mature, the prospects for mitigating these obstacles and promoting wider adoption of digital wallets appear promising (Abdulrahman et al., 2018; Bosamia & Patel, 2019; Uloli et al., 2020; Mew & Millan, 2021).

The Impact of Digital Wallets

Digital wallets have completely altered the way in which people manage their money and conduct business in the financial sector. The adoption of digital wallets has exerted a significant impact on the fintech sector, fostering innovation, driving market growth, and encouraging partnerships and collaborations. It has also promoted financial inclusion and advanced security technologies within the sector (Finance Magnates, 2023; Wulandari et al., 2023). For individuals and businesses, digital wallets offer unmatched convenience, cost savings, global transaction capabilities, valuable data insights, and increased security awareness. They have reduced the need for cash handling, especially benefiting small businesses, and prompted broader acceptance. As digital wallets continue to evolve, their influence on the financial landscape is expected to expand, shaping the way in which people transact, manage their finances, and interact with the broader fintech ecosystem (Afjal, 2023; Kagan et al., 2023). Similarly, as evidenced by reports in Finance Magnates (2023), digital wallets have transformed traditional banking and financial institutions by reshaping client expectations with their accessibility, security, and convenience. To stay relevant and competitive, these institutions must invest in digital technology, enhance security measures, prioritise customer experience, utilise data analytics, explore collaborations, and educate clients about digital wallets. Embracing these changes is crucial for navigating the evolving financial landscape.

Related Research

The intention to use a digital wallet has become increasingly prevalent in today's digital age. As technology continues to advance and reshape the way in which people conduct financial transactions, individuals are increasingly inclined to embrace the convenience and efficiency that digital wallets offer. Seetharaman et al. (2017) emphasised that perceived usefulness and transaction security exert a significant influence on behavioural intention, whereas innovativeness, critical mass, and the

absence of alternative options wield a strong impact on behavioural intention. Finally, flexibility exhibits a moderate influence on the intention to use a mobile wallet in Singapore.

Soodan and Rana (2020) found that hedonic motivation, perceived security, general privacy, facilitating conditions, performance expectancy, perceived savings, social influence, and price value, in this sequence, influence the intention to adopt e-wallets. Habit and effort expectancy were identified as obstacles with a detrimental effect on e-wallet adoption. Factors such as hedonic motivation, security, and privacy play more significant roles. To enhance adoption, service providers need to prioritise the maintenance of user privacy and security while also captivating customers through adjustments to the existing service offerings and features.

Daragmeh et al. (2021) discovered that, while the COVID-19 pandemic had a significant impact on the adoption of e-wallets, the key determinant influencing their sustained usage is consumer self-efficacy. This study holds implications for both the short and the long term. In the short term, decision makers should leverage health threat constructs as they played a role in motivating consumers to adopt e-wallets during the pandemic. In the long term, banks should formulate strategies aimed at fostering consumer loyalty to e-wallets by assuring customers that these financial services deliver the expected value and benefits, ultimately enhancing their self-efficacy.

Yang et al. (2021) established that perceived usefulness, perceived ease of use, social influence, lifestyle compatibility, and perceived trust have a substantial positive impact on both the intention to use an e-wallet and the adoption of an e-wallet. This study also demonstrated that the intention to use an e-wallet mediates the relationships between these predictors and the adoption of an e-wallet. Furthermore, the age and gender of the respondents play a moderating role in the effect of lifestyle compatibility on the intention to use an e-wallet.

METHODOLOGY

The researchers adhered to a systematic and rigorous approach, involving several key steps, starting with the establishment of clear objectives and the formulation of relevant research questions.

Research Strategy

This study used a mostly qualitative research methodology. The adoption of digital wallet technology, as well as its potential effects on the financial technology industry in Thailand, were examined in depth through qualitative research because it allows this kind of investigation. Insights that are nuanced in nature can be uncovered through qualitative research, which also offers a comprehensive understanding of the phenomenon being studied (Khoa et al., 2023).

Data Collection

An in-depth interviewing process was used to gather the data for this study. The interviewing process was performed in June 2023. One-to-one discussions between the researcher and the participants are central to in-depth interviews, a widely used qualitative data collection technique. This approach was chosen because it can collect in-depth, context-specific data that are rich and detailed directly from users of digital wallets.

The current study implemented measures to ensure participant validity and protection to address ethical concerns. The surveys used in the study underwent a rigorous validation process that involved the expertise of three specialists with backgrounds in business and social science to increase the reliability of the data collection instruments. Strict protocols were established while adhering to ethical standards. These included explicitly excluding individuals below the age of 18 from participating in the study, thereby safeguarding the rights and well-being of vulnerable populations. The participants were provided with comprehensive information about the research objective, and a clear and unequivocal statement emphasised the voluntary nature of their participation and their right to withdraw from the study at any point should they choose to do so. These measures were implemented proactively to address potential ethical concerns and uphold the principles of participant rights, autonomy, and informed consent.

Sample and Sampling

The sample for this study consisted of 10 Thai individuals who have adopted digital wallets. According to Obilor (2023), purposive sampling is a non-probability sampling technique used in research, in which the researcher selectively chooses participants based on their judgement and expertise to align with the study's objectives. It relies on the researcher's discretion and is often used in qualitative research when in-depth insights into a specific phenomenon are needed rather than statistical generalisations. This method is especially useful for small and specific populations. Hence, purposeful sampling was used as a sampling method. In accordance with Jangjarat et al. (2023), a minimum of six interviews appears to be optimal for achieving data saturation in qualitative research. Thus, 10 Thai people who have adopted digital wallets were required to participate in the study. Participants who met the following three requirements were included: 1) participants had to be at least 18 years old as this is the legal age for performing financial transactions and using digital wallet services; 2) participants had to be Thai citizens residing in Thailand to ensure that their experiences were within the Thai context; and 3) participants had to have recent knowledge about and practical experience of using digital wallets. With the aid of these criteria, the participants were guaranteed to be sufficiently knowledgeable about the technology in question and capable of sharing insightful opinions on how it was adopted and used.

Data Analysis

To maintain a textual record of the conversations, every interview session underwent verbatim recording. The identified themes and patterns were analysed and interpreted in accordance with the study's objectives. This process necessitated the drawing of conclusions, making of inferences, and provision of comprehensive explanations for the research findings. The study's chosen qualitative research methodology, content analysis, aligns with this analytical endeavour. Content analysis is a technique that facilitates a comprehensive and objective exploration of specific phenomena, enabling the derivation of reliable conclusions from a variety of data sources, whether they manifest as verbal, visual, or written content (Siripipatthanakul et al., 2022). To enhance the thoroughness and scope of the data analysis, the NVivo software was employed. This software tool holds a reputable position in qualitative research due to its effectiveness in managing and analysing qualitative data, as affirmed by Mortelmans (2019). NVivo streamlined the systematic coding of data, cross-referencing of information, and identification of significant trends within the dataset. The combination of the content analysis methodology with the NVivo software equipped the research team to conduct a comprehensive analysis and interpretation of the extensive data gathered from the in-depth interviews. This method played a pivotal role in delivering an insightful analysis and a nuanced understanding of the subject of the study, ultimately enhancing the study's credibility and depth.

RESULTS

Table 1 displays the information on the respondents as well as the date and time of the interviews. The sample consisted of 10 individuals living in Thailand with recent knowledge and practical experience of using digital wallets. The sample consisted of five males and five females with ages ranging from 22 to 34.

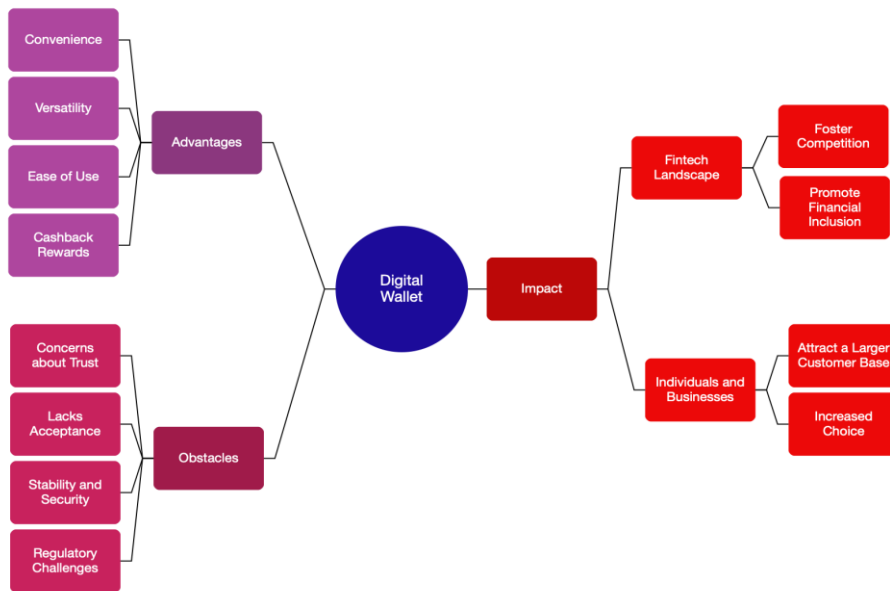
Table 1. Demographic information on the respondents and interview dates and times

Respondent	Gender	Age	Date and Time of Interview
1	Male	31	11 June 2023 at 09:00 a.m.
2	Male	22	11 June 2023 at 10:00 a.m.
3	Male	26	11 June 2023 at 11:00 a.m.
4	Male	28	12 June 2023 at 10:00 a.m.
5	Male	32	12 June 2023 at 11:00 a.m.
6	Female	29	12 June 2023 at 01:00 p.m.
7	Female	34	13 June 2023 at 09:00 a.m.

8	Female	32	13 June 2023 at 10:00 a.m.
9	Female	27	13 June 2023 at 11:00 a.m.
10	Female	33	13 June 2023 at 01:00 p.m.

In the analysis of interview data, the NVivo software was employed in combination with content analysis. After conducting a thorough examination of the participant responses, several significant themes emerged regarding the adoption of digital wallet technology. These themes encompass various critical aspects, including the factors influencing adoption, perceived benefits, challenges faced, impacts on the fintech sector, and broader implications for individuals and businesses, as shown in Figure 1.

Figure 1. Mind map



Source: Own survey.

Figure 2 presents the results visually in the form of a word cloud, showcasing the words used most frequently during the interviews. This visualisation was generated using a word frequency query to enhance the result clarity.

Figure 2. Word cloud



Source: Own survey.

Determinants of Adoption

The adoption of digital wallets like Worldcoin hinges on several critical factors, with convenience, security, and trust being paramount among them. Users seek digital wallets that offer a seamless and user-friendly experience, ensuring easy setup and accessibility across various devices. Swift transaction processing enhances the convenience by minimising wait times. Security is a fundamental concern, demanding robust data encryption, advanced authentication methods, and effective fraud protection measures to safeguard users' sensitive information and transactions. Equally significant is trust, heavily influenced by the reputation of the company offering the wallet, positive user reviews, and adherence to regulatory standards as users are more inclined to embrace digital wallets that they perceive to be reliable and secure. These factors collectively shape the decision-making process when individuals consider adopting digital wallets in their financial lives.

Convenience is a significant factor for me. I've been using several digital wallets, and sometimes some of them are just too complicated for me. If Worldcoin can make the app more convenient and user-friendly, I believe many people, including me, will certainly use it. (Respondent 1)

I've read some stories about digital wallets getting hacked, so security was a concern for me as well. You know, the idea of losing my hard-earned money or personal information to hackers is pretty scary. If Worldcoin can enhance the app's security, like incorporating advanced encryption and robust authentication methods, I believe many people will certainly use it. It would give users peace of mind knowing their funds and data are well-protected. (Respondent 2)

Trust is essential too. I like to know that the company behind the wallet is reputable and follows the rules. If Worldcoin has a good reputation and is fully compliant with financial regulations, that would definitely be a pro for them. Plus, I'll also check user reviews before I start using it, just to get a sense of what the community thinks about their services. (Respondent 3)

Advantages

Digital wallets have gained recognition as a tool due to their versatility and ease of use. They simplify payment procedures by combining payment methods such as credit cards, debit cards, cryptocurrencies, and loyalty cards into a single user-friendly platform. One significant advantage of these wallets is that they eliminate the need for cash and traditional credit cards, promoting a more organised and uncluttered financial lifestyle. Digital wallets also offer the convenience of being accessible from any location with an

internet connection. This is especially useful for people who travel frequently or conduct numerous transactions. Furthermore, digital wallet users can benefit from a range of advantages, such as cashback rewards, discounts, and the ability to avoid currency conversion fees. These wallets also offer tools to enhance financial management skills by enabling users to track expenses and plan budgets effectively. Consequently, digital wallets serve as an asset for individuals seeking to enhance their financial planning abilities.

Digital wallets, like Worldcoin, offer a way to bring together payment methods, such as credit cards, debit cards, cryptocurrencies and loyalty cards, all in one place. This lets users make payments and transactions quickly and efficiently. (Respondent 1)

People can easily use their wallets to start transactions on devices like smartphones or tablets from anywhere with an internet connection. This level of convenience is particularly advantageous for travellers and people involved in transactions. (Respondent 4)

Digital wallets often come with benefits, like cashback rewards. Moreover, when utilising cryptocurrencies, for transactions users can bypass the costs associated with currency conversion fees. (Respondent 5)

Digital wallets frequently provide transaction records, making it easier for users to monitor and manage their expenses. This feature is useful for those who are involved in financial planning. (Respondent 6)

Obstacles

Worldcoin, as a newcomer to the world of wallets and cryptocurrencies, may face scepticism and challenges when it comes to gaining trust. Building a reputation will be crucial but might prove difficult, potentially slowing down widespread user adoption and the growth of network effects. These challenges could become more pronounced if users see value or acceptance of the platform. Moreover, concerns about Worldcoin's stability and security might arise, especially if it relies on technologies. Users may have doubts about risks or attacks that could compromise its security. Additionally, like all cryptocurrencies, Worldcoin may encounter issues and uncertainties. These could lead to the enforcement of restrictions or taxation policies on cryptocurrency transactions, adding another layer of complexity to its adoption and usage.

Because Worldcoin is relatively new to the world of wallets and cryptocurrencies, there may be some scepticism and concerns about trust. Users might choose to wait until there is a proven track record established before embracing it. (Respondent 2)

Establishing a number of users and creating network effects can pose hurdles for Worldcoin or any digital wallet. People might be hesitant to adopt Worldcoin if they believe its usefulness is limited or if it lacks acceptance among their friends, acquaintances, and businesses. (Respondent 4)

If Worldcoin were to depend on unproven technologies, especially considering the possibility of vulnerabilities or security risks, there might be concerns raised about the stability and security of the platform. (Respondent 7)

The use of digital wallets, including Worldcoin, can be influenced by regulatory challenges and uncertainties, including the possibility of restrictions or taxation policies on cryptocurrency transactions. (Respondent 8)

Impacts on the Fintech Landscape, Individuals, and Businesses

Should Worldcoin evolve into a digital wallet or cryptocurrency, it is poised to wield significant influence across the FinTech landscape, affecting users and businesses alike. The adoption of such a digital wallet could foster competition, promote financial inclusion, and usher in shifts in financial behaviours, security measures, and business approaches. However, it would also introduce regulatory complexities that industry players would need to address diligently to facilitate responsible and secure utilisation.

The emergence of Worldcoin as a digital wallet or cryptocurrency would heighten competition within the FinTech sector. Current digital wallet and cryptocurrency providers are expected to react by introducing innovations to safeguard their market presence. This heightened competition has the potential to drive improvements in user experience, features, and security. (Respondent 5)

Increased choice in digital wallets and cryptocurrencies would benefit users, potentially leading to more tailored solutions that align with their financial preferences and goals. If Worldcoin focuses on accessibility and user-friendliness, it may help to increase financial inclusion by providing easy access to digital financial services, particularly for those who do not have traditional banking access. For example, it may make cross-border transactions more affordable than traditional methods. This is especially useful for people who need to send or receive money internationally. (Respondent 6)

Businesses that accept Worldcoin and other digital wallets would benefit from providing customers with a variety of payment options, potentially attracting a larger customer base. (Respondent 9)

To remain competitive, businesses would need to adapt to evolving payment preferences and potentially integrate digital wallet payment options. Failure to do so could lead to a loss of customers to competitors that offer more convenient payment methods. (Respondent 10)

DISCUSSION

This qualitative study delved into the adoption of digital wallet technology, with a specific focus on Worldcoin, and examined its potential to disrupt and bring advantages to the fintech landscape in Thailand. The findings and discussion present a comprehensive view of the factors influencing adoption, the benefits for users and businesses, and the challenges and opportunities associated with this emerging technology.

Determinants of Adoption

The adoption of digital wallets like Worldcoin is influenced by several critical determinants, including convenience, security, and trust. Users prioritise a seamless and user-friendly experience, fast transaction processing, robust security measures, and trustworthiness in the digital wallets that they choose. These factors collectively shape their decision-making process. In alignment with Singh et al. (2017), who elucidated the dimensions of perception and preference, this study's findings highlight a positive relationship between consumers' perceptions and their preferences. Among the variables examined, ease of use, trust, adherence to social norms, attitude, and security emerged as the most influential factors determining individuals' preferences for mobile wallets. In addition, Moghavvemi et al. (2021) confirmed that Malaysian merchants were motivated to adopt mobile payment by factors such as the relative advantage of reducing payment processing time and fees, convenience, and enhanced payment security features. Hossain et al. (2022) established the importance of the link between students' trust and their intention to utilise an e-wallet application.

Advantages

The advantages of digital wallets, such as consolidation of payment methods, reduced clutter, accessibility, cost savings, and improved financial management, make them valuable tools for users. They streamline financial practices, especially for travellers and for international transactions, and offer various financial benefits. Consistent with the findings of Alam et al. (2021), e-wallets exhibit several strengths, including financial inclusion, accessibility, security, ease of integration with other accounts, efficient product and customer service management, and rapid implementation and administration, while also offering benefits, like the potential to enhance customer service and incorporate promotions and loyalty programmes into the overall customer experience.

Obstacles

In addition to the benefits, there are obstacles to overcome, particularly for newcomers like Worldcoin. Scepticism and trust issues may arise due to the lack of an established track record. Achieving critical mass in user adoption and addressing security concerns, especially when relying on new technologies, can be challenging. Regulatory uncertainties and challenges are also common in the cryptocurrency space. In line with the research conducted by Alam et al. (2021), e-wallets are associated with certain threats. These threats encompass issues such as susceptibility to virus attacks, the possibility of simultaneous use of multiple wallets by clients, and concerns about potentially imprudent spending behaviour among e-wallet users. According to Moghavvemi et al. (2021), factors like technological incompatibility, complexity, the cost of investment, and the absence of critical mass and knowledge serve as elements discouraging Malaysian merchants from adopting mobile wallets.

Impacts on the Fintech Landscape, Individuals, and Businesses

The impacts of such digital wallets on the fintech industry, individuals, and businesses are profound. Competition and innovation are likely to increase, benefiting users with more choices and tailored solutions. Financial inclusion could be promoted, but regulatory compliance remains a crucial aspect. Businesses that adapt to evolving payment preferences may gain a competitive edge, while those that fail to do so risk losing customers. Dai (2020) revealed that e-wallet services play a pivotal role in catalysing the growth of micro, small, and medium enterprises in Indonesia. Makina (2019) confirmed that mobile money, enabled by mobile technology, has emerged as the most successful innovation in expanding financial inclusion in Africa.

In essence, digital wallets, including Worldcoin, have the transformative potential to reshape the landscape of the fintech industry. They offer users unparalleled convenience and a myriad of advantages, yet they also present both opportunities and challenges for the broader financial sector and businesses. The ultimate success of these digital wallets is contingent upon their ability to address user needs adeptly, tackle security concerns robustly, and navigate complex regulatory mandates, all while cultivating trust and fostering innovation.

The contributions of this research extend beyond academic inquiry; they hold practical significance for enterprises operating in the digital wallet and fintech sectors. This study underscores the paramount importance of prioritising user education, fortifying security measures, ensuring regulatory compliance, and driving innovation in the development of digital wallet solutions. Furthermore, this research lays a foundation stone for future studies in this domain, paving the way for comprehensive examinations of digital wallet adoption, consumer behaviour, security practices, regulatory impacts, and the broader implications for businesses and society at large. It seeks to foster a deeper understanding of this evolving landscape and the

multifaceted dynamics that define the intersection of technology, finance, and user experience.

CONCLUSIONS

This research delved into the adoption of digital wallet technology, with Worldcoin as a focal point, and its potential implications for Thailand's financial technology sector. The study examined the factors shaping adoption, encompassing elements like convenience, security, and trust, while also spotlighting the advantages for individuals and businesses, such as streamlined financial operations and enhanced accessibility. It further recognised the challenges, including the necessity of establishing credibility and navigating regulatory complexities.

The research underscored the transformative potential of digital wallets, encompassing heightened competition and innovation, potential advantages in terms of financial inclusion, and the critical need for adaptability among businesses operating within the continually evolving fintech landscape. Ultimately, the adoption of digital wallets like Worldcoin holds the potential to exert a significant impact on Thailand's financial technology sector, and stakeholders must thoughtfully assess and adapt to the opportunities and challenges that they introduce.

Looking practically at this study, it underscores the paramount significance of user-centric elements such as convenience, security, and trust in the context of digital wallet adoption. It offers valuable insights for digital wallet providers and financial institutions, underscoring the pivotal role played by robust security measures, regulatory adherence, and user-friendly design in bolstering adoption rates. In a rapidly evolving fintech landscape, the study underscores the necessity for businesses to adapt by accommodating shifting payment preferences and contemplating the integration of digital wallet options.

On the academic front, this research lays a solid foundation for future investigations into digital wallet adoption. It creates opportunities for scholars to delve into aspects like consumer behaviour, security practices, regulatory repercussions, and the broader impacts on both businesses and society. It also paves the way for cross-cultural studies and in-depth examinations of the evolving dynamics within the digital wallet market.

In summary, this study stands as a valuable resource for industry stakeholders and academic researchers alike. It sheds light on the intricacies of digital wallet adoption and its potential to reshape the financial technology landscape. It underscores the necessity of striking a harmonious balance between convenience, security, and trust within the digital wallet ecosystem to propel widespread adoption and innovation.

However, it is important to acknowledge certain limitations of this study. These include a relatively small sample size and a potential lack of diversity among the respondents, suggesting the need for future research involving larger and more diverse participant groups. Additionally, the findings may be context specific, cautioning against broad extrapolations to other regions or

cultural contexts. Recommendations for future research involve exploring specific consumer demographics, examining the influence of cultural factors, and investigating regional disparities in the impact of digital wallet adoption on personal financial practices and behaviours. Furthermore, research efforts should focus on advanced security technologies within digital wallets aimed at enhancing user data and asset protection.

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