"Adoption of e-wallet in the post-pandemic era: A study on Generation X's intention to use e-wallet"

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ADOPTION OF E-WALLET IN THE POST-PANDEMIC ERA: A STUDY ON GENERATION X'S INTENTION TO USE E-WALLET

Abstract

Due to the coronavirus pandemic, electronic wallets have emerged as a preferred alternative to traditional payment methods, mitigating physical touch concerns. This research aims to investigate the effects of security, health, and other determinants on the intention of Generation X's members living in Java Island, Indonesia, to adopt electronic wallets in the post-pandemic era. Addressing the empirical gaps, this research examines how perceived ease of use may determine the attitude and intention to use electronic wallets, introducing novel considerations of security and health based on the Technology Acceptance Model. To collect the data, this research used the survey method by distributing the questionnaires. This research collected 363 valid responses. A partial least squares structural equation modeling method was used. The results confirmed that perceived ease of use and perceived compatibility positively affect perceived usefulness ($p < 0.05$). Perceived usefulness, security, and health aspects were found to positively affect attitude ($p < 0.05$). Security, perceived usefulness, and attitude were also confirmed to positively affect the intention to use electronic wallet ($p < 0.05$). This research further found that perceived ease of use had an insignificant effect on both attitude and intention to use electronic wallet ($p > 0.05$). Based on the testing of the mediating effect, this research confirmed that both security and health aspects positively affect the intention to use electronic wallet through attitude ($p < 0.05$). Furthermore, perceived compatibility was not found to affect intention to use electronic wallet through perceived ease of use ($p > 0.05$).

Keywords	electronic wallet, Technology Acceptance Model, intention to use
JEL Classification	M31, L81

INTRODUCTION

Fintech has transformed the banking sector through the development of modern payment alternatives, such as m-payment, offering a secure alternative to traditional payment systems (Leong et al., 2021). Among these, e-wallets have gained widespread popularity, seamlessly integrating e-money and payment cards into a virtual medium and eliminating the need for physical wallets (Daragmeh et al., 2021). Notably, e-wallets distinguish themselves by avoiding monthly and annual fees associated with credit and debit cards, providing users with additional features like bill payments and phone credit top-ups. With the rise of smartphone usage, countries like Malaysia and India have actively embraced e-wallets as part of their cashless payment campaigns.

Due to its convenience, countries have adopted the usage of e-wallets to support their cashless payment campaigns, such as Malaysia (Muhtasim et al., 2022). In India, government attributes the nationwide initiative to the increasing figure of internet and mobile phone users (Tiwari & Singh, 2019). As the fastest growing economy after India among the G20 countries, Indonesia has experienced a sharp increase

of smartphone users since 2017. By 2026, it is estimated that there will be up to 238,79 million smartphone users (Statista, 2022). Due to its large number of smartphone users, the usage of e-wallet has also grown significantly in the country. E-wallet is a convenient electronic payment method due to its server-based payment system, which is integrated to smartphones. Ashghar and Nurlatifah (2020), referring to the data from Bank Indonesia, have also identified 38 licensed e-wallet companies in Indonesia.

The National Non-Cash Movement (GNNT) has been endorsed by the Indonesian government to create a secure and efficient payment and financial system since 2014. Through the GNNT, the government aims to transform the nation into a cashless society (Bank Indonesia, n.d.). However, according to a survey conducted by dataindonesia.id (2022), 66.8% Indonesians are not accustomed to using e-wallets regularly. Consequently, the Indonesian government needs to encourage the people to switch to e-wallet. The government will benefit from the increased usage of e-wallet greatly, such as reducing costs in printing bank notes, reducing the circulation of counterfeit money, decreasing crime rate related to traditional financial transactions, and promoting social distancing during an epidemic of deadly virus, such as the COVID-19. Therefore, this research aims to study the factors determining the consumers' attitude and intention to use e-wallets in the post-pandemic era in Indonesia.

1. LITERATURE REVIEW

The Technology Acceptance Model (TAM) theory has been adopted by previous research on e-wallets to analyze how customers react to the relatively new mechanism in the payment system (Chawla & Joshi, 2019; Liebana et al., 2015). The TAM theory has been used frequently in the studies related to e-wallet across the globe (Ariffin et al., 2021; Karim et al., 2022). The TAM theory has also been utilized to conduct a study to determine the aspects influencing the adoption of mobile wallets (Singh et al., 2020). Karim et al. (2020) use the theory to study the determinants of the usage of digital wallet among young adults. Moreover, Singh and Kalra (2021) also study the relationship between security and consumer's attitude on mobile wallet.

To study the behavior of computer users, Davis et al. (1989) propose the Technology Acceptance Model (TAM). The TAM theory posits that perceived usefulness and perceived ease of use are linked to the attitude, behavioral intention, and behavior of the users. Perceived usefulness is defined as how the users view the technology to be of use to improve their performances. In similar fashion, the degree to which a user perceives a novel technology to be easy to master or use is referred to as perceived ease of use.

Most individuals will respond to the development of a new technology by judging on how easy it is to learn it and how beneficial the technology will be to add values to their lives. Both aspects shape the users' attitude on the new technology. This attitude will influence the usage intention that drives the users to adopt the technology. However, external factors that are not included in the basic model of TAM theory may also determine consumers' attitude towards a novel system or technology.

Chawla and Joshi (2019) have used the TAM theory as the basic model to develop the extended TAM theory by incorporating other variables that may influence an individual's attitude, such as security, trust, and lifestyle compatibility. This research aims to further the development of the TAM theory. Using the TAM theory as the main model, this research investigates the relationship between perceived compatibility and usage intention of e-wallets, mediated by perceived ease of use and perceived usefulness. Furthermore, this study investigates how security and health aspects may determine an individual's attitude toward e-wallets. The health aspect has recently become more significantly relevant due to the COVID-19 pandemic.

According to Kotler and Armstrong (2021), the age cohort is divided into five categories. The Baby Boomers are the people who were born between 1946 and 1964. Generation X is those who were born between 1965 and 1980. The Generation Y is the people who were born between 1981 and 1996. The Generation Z is the people who were born between 1997 and 2012.

The Generation Alpha is those who were born after 2012. Dolot (2018) also classifies those who were born from 1928 to 1944 as the members of the Silent Generation.

Baby Boomers tend to be workaholics (Dolot, 2018). The older members of the Baby Boomers generation are often considered as people who are trapped in the past. The Baby Boomers are not interested in trying new products or innovations. However, it is suggested not to classify the older Boomers as lagging adopters. Many of the Boomers perceive themselves as older people entering a new phase in life (Kotler & Armstrong, 2021).

Gen Xers respect authority and place a high importance on work-life balance. The members of Generation X often question their purchasing decisions, particularly when related to novel products. The Gen Xers typically do extensive research on a product before buying it. The Gen Xers also prefer quality more than quantity. However, when Gen Xers find a favorite brand, they are likely to become very loyal customers of the brand compared to the members of other age cohorts. Gen Xers were born before the Internet became widely accessible. Gen Xers only started adapting to digital technology during adulthood (Kotler & Armstrong, 2021).

Generation Y, also known as the Millennials, is the people who are familiar with digital technology. The Millennials have adopted technology as their way of life. As the Millennials grow up, Generation Y is introduced to the usage of the internet, computers, mobile phones, and social media. Millennials tend to adopt new technology very easily, such as mobile phones and social media.

The members of Generation Z, also known as the Zoomers, highly involve modern technology in their lives. The Zoomers tend to use social media very productively (Gaidhani et al., 2019). Gen Z represents the future market. More than the Millennials, the Zoomers adopt the technology from such a young age, making them very accustomed to digital technology. The Zoomers adopt Wi-Fi, smartphones, tablets, gaming consoles, and social media almost instantly. The Zoomers are also very mobile and socially connected.

This research studies Gen Xers' behavior in using e-wallets. Gen Xers can be classified into the Late Mainstream category as late adopters of a new technology. Using Gen Xers as research subjects in a study related to electronic payment poses a challenge due to the low number of adopters of new electronic payment methods. However, previous studies that focus specifically on Gen Xers as the research subject based on their digital wallet usage have not been found in the existing literature. This research aims to learn how Gen Xers are driven to adopt e-wallets in Java, Indonesia.

Studies on e-wallets have been done in different countries in the past. In Bangladesh, Karim et al. (2022) explore the users' satisfaction level on digital wallet usage. Among Singaporean users, Seetharaman et al. (2017) have also investigated the aspects determining users' usage intention of e-wallets. Sarmah et al. (2021) developed a model by expanding the TAM theory to explore the behavioral intention and actual use of mobile wallets. All of the previous studies extending the TAM theory found perceived ease of use to be positively linked to perceived usefulness.

Ariffin et al. (2021) explore Malaysian customers' usage intention of digital wallet services. In response to the coronavirus outbreak, researchers have examined the behavioral intention related to the usage of digital wallets among Malaysian users (Samat et al., 2022). Alaeddin et al. (2018) investigate customer behavior in switching to digital wallets. A study has also been conducted to investigate the aspects determining the usage of e-wallets in Indonesia (Kustono et al., 2020). Kumar and Gupta (2021) also identify the elements determining the usage of digital wallets, using financial incentives as the moderating variable. Previous studies agreed that perceived usefulness influences consumers' attitudes positively.

Daragmeh et al. (2021) explore the consumer's intention to use digital wallet in a continuous manner during the coronavirus pandemic. In Bali, Indonesia, Latupeirissa et al. (2020) study the determinants of the digital wallet usage intention. Similarly, Alexandra and Ruslim (2023) identify the factors determining Indonesian customers' intention to use digital wallets continuously. Chawla and Joshi (2019) have also investigated the atti-

tude and usage intention of digital wallets among Indian customers. Previous studies found differing conclusions regarding the influence of perceived ease of use on consumers' attitude towards e-wallet.

Based on the TAM theory, Taufan and Yuwono (2019) analyze the factors affecting the customers' usage intention of digital wallet in Indonesia. Yang et al. (2021) investigate the usage intention of digital wallets for cashless transactions. Lai (2012) uses the TAM theory to study the application of e-wallets for clinic fee payment. Ming and Jais (2022) identify the factors determining the usage intention towards digital wallets during the coronavirus pandemic. Among Generation Z, Persada et al. (2021) have also studied the behavioral intention of the generation in using digital wallets in Indonesia. In India, Singh et al. (2020) have also studied the determining factors of digital wallet usage intention and recommendation behavior. Candy et al. (2022) study the behavioral intention of ShopeePay users living in Batam, Indonesia, and conclude that their behavioral intention is influenced by perceived ease of use and perceived usefulness. Previous research confirmed that perceived usefulness, perceived ease of use, and attitude are positively linked to consumers' usage intention of e-wallets.

However, previous studies differ in their conclusion on how ease of usage influences the attitude and e-wallet usage intention. Consumers' attitudes toward digital wallets have been confirmed to be affected by perceived ease of use (Latupeirissa et al., 2020). On the contrary, Chawla and Joshi (2019) conclude that attitude on digital wallets is not determined by perceived ease of use. Previous studies conducted by Seetharaman et al. (2017), Karim et al. (2020), Hamid et al. (2016), Setiawan and Setyawati (2020), and Putra et al. (2021) differ in their findings regarding the relationship between perceived ease of use and digital wallet usage intention. Herzallah et al. (2022), Laora et al. (2021), and Kurnia and Tandijaya (2023) conclude that perceived ease of use insignificantly affects behavioral intention. Consequently, this study addresses the existing empirical gap by investigating how the perceived ease of use affects attitude and digital wallet usage intention.

Studies incorporating security aspects of e-wallet usage have also been done in the past. Singh and Kalra (2021) study the relationship between security and attitude towards digital wallets. Karim et al. (2020) confirm the impact of digital wallet's security on the m-wallet usage behavior of Malaysian young adults. Shin (2009) also explores the consumer's acceptance of digital wallet by studying the involvement of perceived security. All of the previous studies concluded that security positively influence both attitude and intention.

Health aspect's influence on attitude has been studied in multiple research projects. Sumi and Ahmed (2022) investigate the online purchase behavior of young Bangladeshi consumers throughout the coronavirus pandemic. The effect of health consciousness upon perceived knowledge and belief of milk's purchase intention has also been investigated in Bangladesh (Hoque et al., 2018). Kusumaningsih et al. (2019) investigate the environmental and health factors determining customers' purchase intention of organic meals in Indonesia. Fihartini et al. (2021) further find that health risk significantly affects the online shopping behavior of Indonesian customers.

Despite its relevance due to the recent global epidemic, there have been no studies that investigate the health aspect in relation to the usage of e-wallet. Due to the coronavirus pandemic, shoppers resorted to cashless payments in an effort to minimize the risks posed by cash transactions (Teng & Khong, 2021). Ming and Jais (2022) emphasize the importance of raising the awareness of contactless transactions due to the global coronavirus pandemic. This study addresses the existing theoretical gap by building a construct based on the TAM to investigate the impacts of health aspect and security upon the digital wallet usage intention, mediated by attitude.

The behavior of the younger generation has become the main subject of the existing literature on digital wallet (Sumi & Ahmed, 2022). Some other research also does not specify the age group or generation of the research subjects. To address the population gap, this study investigates the behaviors of Generation X (Gen X) in their usage of digital wallet. People whose birth years start from 1965 to 1980 are classified as the members of Generation X (Kotler & Armstrong, 2021). There have been no studies on e-wallets' usage as one of the electronic transaction methods that use the members of Gen X living in Indonesia as the research subjects. To fill
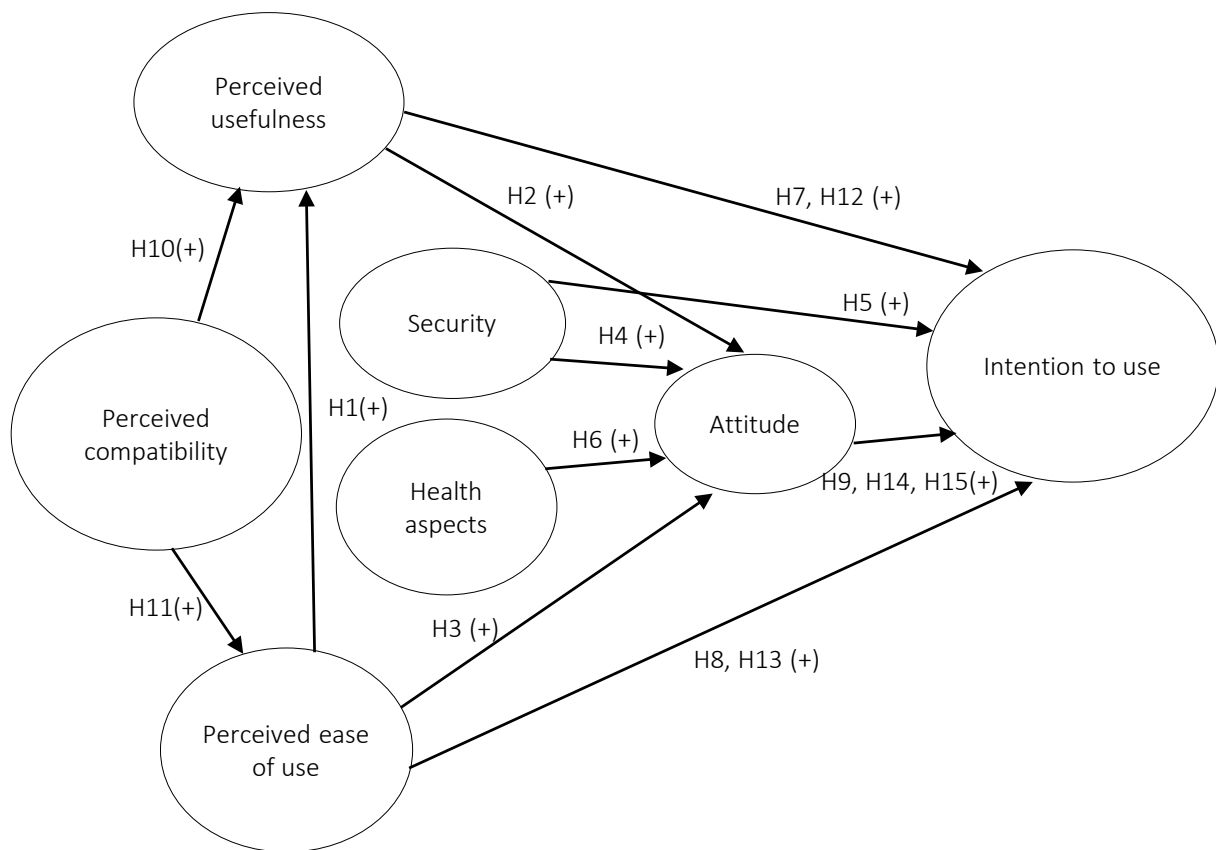
Figure 1. Proposed framework

the existing population gap, this research will specifically assign the members of Gen X living in Java, the most densely populated island in Indonesia, as the participants of the research.

The purpose of this research is studying the determinants of attitude and intention to use e-wallet among the Gen Xers living in Java, Indonesia. By building an extension of the TAM theory, this study explores how perceived compatibility, perceived ease of use, perceived usefulness, health aspect, and security are linked to consumers' attitude and usage intention of the e-wallets. The proposed model is shown in the framework (see Figure 1).

Based on Figure 1, this study proposes the following hypotheses:

H1: *Perceived ease of use is positively linked to e-wallets' perceived usefulness.*

H2: *Perceived usefulness is positively linked to customers' attitudes toward e-wallets.*

H3: *Perceived ease of use is positively linked to customers' attitudes toward e-wallets.*

H4: *Security is positively linked to customers' attitudes toward e-wallets.*

H5: *Security positively is positively linked to customers' intention to use the e-wallets.*

H6: *Health aspect is positively linked to customers' intention to use the e-wallets.*

H7: *Perceived usefulness is positively linked to customers' intention to use the e-wallets.*

H8: *Perceived ease of use is positively linked to customers' intention to use the e-wallets.*

H9: *Attitude is positively linked to customers' intention to use the e-wallets.*

H10: *Perceived compatibility is positively linked to e-wallets' perceived usefulness.*

H11: *Perceived compatibility is positively linked to e-wallets' perceived ease of use.*

H12: *Perceived compatibility is positively linked to the intention to use the e-wallets through perceived usefulness.*

H13: *Perceived compatibility is positively linked to the intention to use the e-wallets through perceived ease of use.*

H14: *Security is positively linked to the intention to use the e-wallets through attitude.*

H15: *Health aspect is positively linked to the intention to use the e-wallets through attitude.*

2. METHODOLOGY

This study used online questionnaires distributed through social media by using the Google Forms, based on the convenience, non-probability sampling technique. The 5-point Likert scale is used to estimate the research questions. The range consists of 5 points (from 1 = strongly disagree to 5 = strongly agree) that represent the respondents' answers (see Table 1 for measurement items). The survey was conducted for 6 consecutive months, starting from July 2023 and ending in December 2023. The survey collected 408 questionnaires. After sorting the answers based on the screening questions, the responses that did not meet the criteria of being Gen Xers living in Java were eliminated. The questionnaires that passed the screening process were reduced to 363 questionnaires. The responses are further analyzed to categorize the respondents' characteristics (see Table 1). The survey responses were tested and analyzed using the partial least squares structural equation modeling (PLS-SEM). To test and analyze the data, this research utilized the SmartPLS3 program.

Table 1. Study's demographic descriptive statistics

	Frequency	Percentage (%)
Gender		
Male	166	45.73%
Female	197	54.27%
Age		
From 36 to 45	193	53.17%
From 46 to 55	142	39.12%
From 56 to 65	28	7.71%

Education		
High school	117	32.23%
Bachelor	195	53.72%
Master	21	5.79%
Ph.D.	4	1.10%
Others	26	7.16%
Monthly expense		
Below 1 million IDR	14	3.86%
From 1 million to 1.5 million IDR	22	6.06%
From 1.5 million to 2 million IDR	27	7.44%
From 2 million to 3 million IDR	28	7.71%
From 3 million to 5 million IDR	59	16.25%
From 5 million to 7.5 million IDR	68	18.73%
Above 7.5 million IDR	145	39.94%
Most frequently used e-wallet		
OVO	95	34.39%
GOPAY	157	43.25%
ShopeePay	88	24.24s%
DANA	17	4.68%
Others	6	1.65%
Domicile		
Jakarta	124	34.16%
Banten	51	14.05%
West Java	61	16.80%
Central Java	58	15.98%
East Java	48	13.22%
Yogyakarta	21	5.79%

Of 363 respondents, 197 (54.27%) were female, and 166 (45.73%) were male. Age distribution indicates that 193 (53.17%) respondents were aged 36 to 45, 142 (39.12%) were aged 46 to 55, and 28 (7.71%) were aged 56 to 65. Regarding monthly expenses, 145 (39.94%) reported spending more than IDR 7,500,000, while the rest spent less. In terms of education, 195 (53.72%) had completed their bachelor's programs, 21 (5.79%) had completed their master's programs, and 117 (32.23%) had a high school diploma. Only 4 (1.10%) had completed their doctoral program, while 26 (7.16%) had other qualifications.

All survey participants confirmed their usage of e-wallets. When asked about their most frequently used e-wallets for financial transactions, 157 (43.25%) respondents favored GO-PAY, 95 (34.39%) preferred OVO, and 88 (24.24%) opted for ShopeePay. Only 17 (4.68%) used DANA, while the remaining respondents chose other e-wallets. Based on their residences, 124 (34.16%) respon-

dents lived in Jakarta, 51 (14.05%) respondents in Banten, 61 (16.80%) respondents in West Java, 48 (13.22%) respondents in East Java, 58 (15.98%) in Central Java, and 21 (5.79%) respondents in Yogyakarta.

3. RESULTS

This study first conducts an outer model assessment of the proposed model. The Average Variance Extracted (AVE) and Factor Loadings (FL) are used to evaluate the convergent validity.

The factor loadings of the indicators are shown to surpass 0.7 (see Table 2). The AVE of each variable is also shown to exceed 0.5. Therefore, the criteria of good convergent validity have been fulfilled (Hair et al., 2019).

Cronbach's Alpha (α) and Composite Reliability (CR) are used to conduct the reliability assessment in this study (see Table 2). The α is shown to exceed 0.7. Similarly, the CR also exceeds 0.7. Therefore, the criteria of reliability have been fulfilled (Ghozali, 2021).

Table 2. Factor Loadings, AVE, Cronbach's Alpha, and Composite Reliability

Measurement items	Source	FL	AVE	α	CR
PEOU = Perceived Ease of Use	Adapted from Wilson et al. (2021), Chawla and Joshi (2019), Schmidthuber et al. (2020), Kumar et al. (2018)		0.789	0.922	0.945
I do not find any difficulties in paying with e-wallet		0.885			
I do not find it difficult to understand how to use e-wallet		0.867			
I do not experience any difficulties in learning the steps of using e-wallet		0.913			
I consider it easy to understand how e-wallet works		0.884			
I find it easy to utilize e-wallet		0.890			
PU = Perceived Usefulness	Adapted from Leong et al. (2021), Chawla and Joshi (2019), Venkatesh znd Davis (2000), Singh et al. (2020), Kumar et al. (2018)		0.811	0.926	0.948
E-wallet helps me to process my payment faster		0.898			
E-wallet offers many practical benefits		0.919			
I consider e-wallet helpful in processing my payments		0.920			
E-wallet helps me to feel more comfortable		0.921			
E-wallet helps me to manage my finances		0.841			
E-wallet gives me a lot of benefits		0.902			
SEC = Security	Adapted from Leong et al. (2021), Liebana et al. (2018), Chawla and Joshi (2019)		0.741	0.927	0.945
E-wallet is more secure than other payment platforms		0.869			
E-wallet has lower risk of mishandling of electronic information (e.g., personal data, financial transactions)		0.847			
I think that e-wallet is safe to use (e.g., using PIN, using fingerprints)		0.860			
I am less likely to lose money when I am using e-wallet		0.868			
PC = Perceived Compatibility	Adapted from Leong et al. (2021), Liebana et al. (2018), Lwoga and Lwoga (2017), Kapoor et al. (2015)		0.810	0.933	0.949
Using e-wallet for my transactions is suitable to my lifestyle		0.902			
Rather than other alternative payment methods, I enjoy using e-wallet better (e.g., bank notes, credit cards)		0.885			
E-wallet is suitable for my situation right now		0.911			
I think that e-wallet is suitable for my transaction needs		0.902			
HA = Health Aspect	Adapted from Sumi and Ahmed (2022), Alam (2020), Kapoor et al. (2019)		0.741	0.884	0.920
Using e-wallet helps me to do social distancing		0.880			
Using e-wallet minimizes the risk of viral transmission		0.868			
E-wallet is more hygienic than other payment methods		0.863			
I prefer using e-wallet because it helps me to keep myself healthy		0.882			
ATT = Attitude	Adapted from Persada et al. (2021), Singh et al. (2020), Liebana et al. (2015)		0.774	0.896	0.928
I think paying with e-wallet is a good idea		0.889			
E-wallet is helpful to process all my transactions		0.861			
E-wallet is trendy		0.883			
Using e-wallet is an entertaining experience		0.870			
I like using e-wallet to complete my payments		0.895			
INT = Intention to Use	Adapted from Singh et al. (2020), Leong et al. (2021), Shaw (2014)		0.819	0.953	0.963
I will use e-wallet		0.899			
I might pay by using one of the e-wallets soon		0.925			
I will use e-wallet more frequently		0.883			
I will increasingly use e-wallet more often in the future		0.913			

The discriminant validity is assessed by using the Heterotrait-Monotrait Ratio analysis. The results indicate that the study has fulfilled the criteria of good discriminant validity (see Table 3), with the Heterotrait-Monotrait Ratio results being lower than 0.9 (Hair et al., 2017).

Table 3. Heterotrait-Monotrait Ratio (HTMT)

	HA	SEC	PU	PEOU	PC	INT	ATT
HA							
SEC	0.836						
PU	0.806	0.770					
PEOU	0.712	0.681	0.853				
PC	0.816	0.835	0.800	0.703			
INT	0.838	0.790	0.830	0.714	0.845		
ATT	0.879	0.858	0.870	0.772	0.870	0.884	

Furthermore, the coefficient of determination (R^2) is used to test the proposed model (see Table 2). Based on the result, the R^2 value of attitude is shown to be 0.782, while the R^2 value of e-wallet's usage intention is 0.670. It is found that the exogenous variables strongly affect the variance of attitude. The result also indicates that exogenous variables moderately affect the e-wallet's usage intention.

This research also tests the effect size (f^2) of the variables (see Table 4). The f^2 values of security, health aspect, and perceived usefulness show small effects upon attitude (between 0.02 and 0.15), while perceived ease of use shows no effect (below 0.02). Usage intention is shown to be moderately affected by attitude (above 0.15). The result further shows that both perceived usefulness and security have small effects upon usage intention (between 0.02 and 0.15). Finally, perceived ease of use is shown to have no effect on usage intention (Hair et al., 2017).

Based on the assessment result of 15 hypotheses in Table 5, 12 hypotheses are supported with t-statistics above 1.65 and p-value below 0.05. Based on the testing result, perceived ease of use is shown to be positively and directly linked to perceived usefulness (p-value = 0.000, *H1* accepted). Perceived usefulness is shown to be positively and directlyassociated with attitude (p-value = 0.000, *H2* accepted). Security is proven to have a positive and direct effect on attitude (p-value = 0.000, *H4* accepted). Security is also shown to be directly and positively linked to intention to use (p-value = 0.002, *H5* accepted). Similarly, health aspect

Table 4. Effect size

Variable	Attitude	Intention to use
ATT	–	0.190
HA	0.142	–
PEOU	0.013	0.000
PU	0.137	0.066
SEC	0.119	0.027

Table 5. Hypotheses testing results

Hypothesis	Path coefficient	t-stats	p-value	Evaluation
H1: PEOU → PU	0.558	7.277	0.000	Significant
H2: PU → ATT	0.344	4.438	0.000	Significant
H3: PEOU → ATT	0.090	1.238	0.108	Not significant
H4: SEC → ATT	0.256	4.764	0.000	Significant
H5: SEC → INT	0.141	2.928	0.002	Significant
H6: HA → ATT	0.297	4.712	0.000	Significant
H7: PU → INT	0.288	3.404	0.000	Significant
H8: PEOU→INT	0.012	0.211	0.416	Not significant
H9: ATT→ INT	0.467	5.787	0.000	Significant
H10: PC→ PU	0.384	5.112	0.000	Significant
H11: PC →PEOU	0.658	13.738	0.000	Significant
H12: PC→ PU→ INT	0.111	2.344	0.010	Significant
H13: PC → PEOU→ INT	0.008	0.208	0.418	Not significant
H14: SEC→ ATT→INT	0.119	3.344	0.000	Significant
H15: HA→ ATT→ INT	0.139	2.996	0.001	Significant

is shown to have a direct influence on attitude (p-value = 0.000, *H6* accepted).

Furthermore, perceived usefulness is shown to be directly and positively linked to the intention to use e-wallet (p-value = 0.000, *H7* accepted). Attitude is shown to positively and directly influence the intention to use e-wallets (p-value = 0.000, *H9* accepted). Perceived compatibility is proven to be positively and directly linked to customers' perceived usefulness (p-value = 0.000, *H10* accepted). Similarly, this research confirms that compatibility positively and directly affects customers' perceived ease of use (p-value = 0.000, *H11* accepted). Indirectly, perceived compatibility is positively linked to intention to use e-wallets, mediated by perceived usefulness (p-value = 0.010, *H12* accepted). Security is shown to be indirectly linked to usage intention of e-wallets through attitude (p-value = 0.000, *H14* accepted). Health aspect is also shown to be indirectly linked to the usage intention of e-wallets through attitude (p-value = 0.001, *H15* accepted).

It is further confirmed that perceived ease of use does not affect attitude (p-value = 0.108, *H3* not accepted). Similarly, perceived ease of use does not affect usage intention (p-value = 0.416, *H8* not accepted). Perceived compatibility is also not shown to have an indirect relationship with the intention to use e-wallets, mediated by perceived ease of use (p-value = 0.418, *H13* not accepted).

4. DISCUSSION

This study is conducted on Generation X members living in Java Island, Indonesia. It investigates the determinants that influence their attitude and intention to use the e-wallet. Based on the validity and reliability assessments, all the indicators are found to be valid and reliable. The result of the f^2 test also shows that each variable has different effects on their attitude and intention to use the e-wallet.

Based on the perceived compatibility, perceived ease of use, perceived usefulness, security, and health aspects, the members of Generation X are found to be accustomed to using smartphones, but their usage of e-wallets remains limited. During

the COVID-19 pandemic, health has become a very important aspect in reducing the spread of the virus. This research is conducted in the post-pandemic era to confirm if Gen Xers are still considering using e-wallets to protect their health.

This study finds that customers who encounter no difficulties in using e-wallet will also find it to be useful. This result supports the conclusions of Karim et al. (2022), Seetharaman et al. (2017), Sarmah et al. (2020), Amin et al. (2014), and Shang and Wu (2017). Customers who experience difficulties in understanding how to use an e-wallet will not be able to use the e-wallet properly. Without proper usage and knowledge on the basic functions of e-wallets, users will not be able to use e-wallets properly. E-wallet should be designed with features that can be easily understood and operated by new users.

Consequently, customers who find the e-wallets to offer many practical benefits show a positive attitude towards the usage of the e-wallet. This result supports the findings of Ariffin et al. (2021), Samat et al. (2022), and Alaeddin et al. (2018). Customers who gain benefits from using e-wallet, such as faster and safer transaction processes, will perceive e-wallet positively compared to other payment methods. On the contrary, this research finds that customers who consider e-wallet to be easy to use do not show an improvement in their attitude towards e-wallet. This result contradicts the results of Latupeirissa et al. (2020) and Daragmeh et al. (2021).

Customers consider the health aspect to be an important factor that shapes their attitude on e-wallets. The coronavirus outbreak pressured the global society to protect their health by minimizing physical interaction in their daily activities, including financial transactions. Due to strict government restrictions, customers became more cautious of the danger of virus transmission through physical contact. Customers had to opt for cashless transaction methods, such as by using the e-wallet. Years of using mobile payment facilitated by e-wallet had built a habit among customers to continue using it after the pandemic ended. Customers who find the e-wallet helpful in protecting their health will show a favorable attitude related to the e-wallet.

Security positively affects customers' usage intention towards e-wallets. The result supports the findings of Singh and Kalra (2021) and Chawla and Joshi (2019). Concerns over the security of electronic payment is an important consideration in consumers' adoption of e-wallet. Designing an e-wallet with a safe and secure system is important to build consumers' trust particularly to protect them from cyber-crime. Customers that trust that their transactions are guaranteed to be safe are more likely to have higher intention to utilize e-wallets. Furthermore, security is also proven to positively affect customers' attitude towards the usage of e-wallet.

Similarly, customers who perceive e-wallet to benefit them to process their transactions more efficiently and effectively show higher usage intention of e-wallets. This finding supports the results concluded by Taufan and Yuwono (2019) and Shaw (2014). E-wallet helps customers to process their transactions faster and easier. E-wallet also aids customers to manage their finances better by providing historical records of their transactions. These practical benefits are proven to increase customers' usage intention significantly. Conversely, customers who find that an e-wallet is easy to use do not always have higher usage intention of e-wallets.

Customers who treat e-wallets with a favorable attitude will show higher usage intention towards e-wallets. Therefore, the results of prior studies done by Ming and Jais (2022) and Persada et al. (2021) are confirmed. Attitude is an individual's emotional response towards certain prompts. This research finds that attitude towards e-wallet is positively predicted by e-wallet's perceived usefulness and health. E-wallet companies are encouraged to identify the aspects that determine customers' attitude in order to increase consumers' usage intention of digital wallets.

The findings conclude that consumers who have a high compatibility with e-wallet have a positive evaluation of e-wallets' usefulness. Moreover, the customers also consider e-wallets' usage to be easy. The high compatibility supports their willingness to adopt the usage of e-wallet faster than those who do not feel any compatibility with e-wallet.

E-wallet companies should design their e-wallets by considering consumers' existing values, previous experience, and needs to create a highly compatible payment system for the consumers.

This research finds that perceived compatibility is not indicated to show an indirect relationship with e-wallet usage intention, mediated by perceived ease of use. This result contradicts the findings of Leong et al. (2021). Perceived compatibility is shown to be indirectly linked to the consumer's usage intention of e-wallet, mediated by perceived usefulness. Security is also found to indirectly affect consumers' usage intention of e-wallets through attitude. Security and safety of e-wallets shape consumers' positive attitudes towards e-wallets. This positive attitude will consequently increase consumers' usage intention of e-wallets.

Customers with concerns over their health show favorable attitudes toward the usage of e-wallets. This favorable attitude is also proven to be positively linked to the higher e-wallet usage intention. These customers are more likely to prefer a hygienic payment method through cashless transactions. Cashless transactions help health-conscious customers to avoid being infected by viruses and promote social distancing. Indonesian consumers have a higher awareness of the need to maintain their hygiene and protect their health due to the COVID-19 pandemic. Consumers who consider that e-wallets help them protect their health show favorable attitudes toward the usage of e-wallets. This positive attitude would further drive the increase in the usage intention of e-wallets.

Future research on e-wallets should consider adding more variables, such as facilitating conditions, trust (Chawla & Joshi, 2019), personal innovativeness, and user mobility (Leong et al., 2021). Future research may also conduct longitudinal research to test if the research subjects show any differences in their responses towards the usage of digital wallets in a gradual manner. Future studies are also encouraged to add the number of samples to obtain a more accurate result. Researchers may also expand the research to include the consumers living in other islands in Indonesia.

CONCLUSION

This research aims to analyze the aspects determining consumers' attitude and intention to use e-wallets among the members of Gen X living in Java, Indonesia. This research also studies how health aspect affects customers' attitude and usage intention of e-wallets, which have never been investigated in the prior research. The result concludes that perceived usefulness is positively linked to consumers' attitude towards e-wallet. Security and health aspects are also proven to positively influence consumers' attitude towards e-wallet. Security is also found to positively affect consumers' attitude on e-wallets. This study further confirms that consumers' positive attitude towards e-wallet is linked to consumers' higher intention in using e-wallets.

The results prove that perceived compatibility is linked to both perceived ease of use and perceived usefulness. The research also finds that perceived ease of use is positively linked to customers' perception of the perceived usefulness of e-wallets. Consequently, consumers' perception of the usefulness of e-wallets is also shown to be positively linked to e-wallets usage intention. Mediated by perceived usefulness, compatibility is also confirmed to show an indirect influence on e-wallet's usage intention. Similarly, security is proven to show an indirect positive relationship with consumers' usage intention towards e-wallets through consumers' attitudes. Finally, this study finds that the health aspect is indirectly and positively linked to consumers' usage intention of e-wallets through attitude.

This research suggests several practical recommendations to government, e-wallet companies, merchants, and customers in general. The Indonesian government may consider encouraging the society to opt for using e-wallets by promoting a movement towards cashless transactions to protect their health. The government may consider introducing more regulations related to the security of e-wallet. E-wallet companies should develop more useful e-wallet features and prioritize the safety of their payment system. Merchants may also provide e-wallet as a safe, yet hygienic payment option for their customers. Finally, based on the multiple useful benefits that it offers, customers are encouraged to increase their frequency in using the e-wallet.

AUTHOR CONTRIBUTIONS

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