Determinants of intention to use e-wallet in Generation Z

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Abstract
Generation Z, as true digital natives or generations born and raised with the internet, is familiar with digital products. One digital product is an e-wallet used as an online payment method. This study aims to discover the factors that influence behavioural intention to use e-wallets in generation Z that use an e-wallet and live in Greater Jakarta. The theoretical basis of this study is the Technology Acceptance Model (TAM), where the variables involved are behavioural intention to use, perceived ease of use, and perceived usefulness, and two other factors, i.e., perceived security and social influence. A total of 245 respondents were collected by online survey and analysed with Structural Equation Modelling (SEM). This study finds that social influence affects perceived ease of use positively and significantly. Perceived ease of use influences perceived usefulness positively and significantly. Perceived ease of use and perceived usefulness positively influence behavioural intention to use. However, social influence does not influence perceived usefulness, and perceived security does not influence behavioural intention to use. This study's originality resides in its examination of reported ease of use and perceived usefulness as mediating variables of social influence on Generation Z's propensity to use e-wallets.

Keywords:
e-wallet; generation Z; perceived security; social influence; technology acceptance model.

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Introduction

Technology changes economic agents' behaviour. All technology is used to make their activities easier and faster. The digital revolution makes economic agents use online payments provided by financial technology (fintech) companies (Bank Indonesia, 2019). One of the innovations in the online payment system

presented by fintech companies is an electronic wallet (e-wallet). E-wallets are electronic services for storing data on payment instruments that can store money for payments using cards and/or electronic money (Bank Indonesia, 2016). Andrew & Tan (2020) affirm that an e-wallet is a technology-based application that allows users to pay for products, receive and transfer money, and recharge accounts using their mobile phones, effectively replacing a wallet.

The existence of e-wallets is rising. Based on data from Bank Indonesia (2021), the value of electronic money has increased from 2015 to 2019. A significant increase occurred in 2019, with the amount of money stored reaching 6.14 trillion rupiahs. The number of electronic money issuers for non-bank institutions had reached 39 units. The most widely used digital wallet application is OVO (6.5%), followed by Gopay (5.9%) (APJII, 2020). Another survey conducted by IPSOS (2019) shows that Gopay is the most widely used e-wallet application (55%), followed by OVO (28%) and Fund (11%).

As a digital product, e-wallets are used as they live and grow up with the Internet. Digitalisation means ever-present messages on the internet, social networks, and mobile systems and it is closely associated with Generation Z (Western Governors University, 2019). The age range of Generation Z is those born between 1995–2010 (Bencsik, et al., 2016). Generation Z, who grew up with the internet, can also be proven based on a survey conducted by APJII (2018) that a total of 49.52% of internet users are aged 19–34 years old. Even though this age group is not explicitly explained, Generation Z is those who are in the 12–27-year age range.

Technology security is related to the rise of cybercrime. Cybercrime makes generation Z more aware of technology and more vigilant. There are 60% of Generation Z who concerned about their data being used by others (GlobalWebIndex, 2019). Phishing is a cybercrime that leads to data leakage, which will later be used in other systems (F5 Labs, 2017). The National Cyber and Crypto Agency (2021) mentions that other crimes caused by phishing are identity theft and extortion until the victim becomes a suspect in a crime because of the leakage of identity ownership. Within 5 years to March 21, 2022, the Indonesia Anti-Phishing Data Exchange has collected 32,296 reports of phishing on the .id domain (IDADX, 2022). On the other hand, within 5 years, data recorded by the Internet Crime Complaint Center (2021) found that there were 731,739 reports of phishing that occurred in America. F5 Labs (2017) mentions that the second biggest cause of data leakage is phishing, with a percentage of 19%.

Previous studies have examined e-wallets, such as Halim et al. (2020) and Teo et al. (2020). Halim et al. (2020) researched the use of e-wallets in generation Z: perceived ease of use, perceived usefulness, facility condition, and social influence. Teo et al. (2020) researched e-wallet users in Malaysia with perceived ease of use, perceived usefulness, perceived security, and social influence. The novelty of this study examines perceived ease of use and perceived usefulness as

mediating variable of social influence on Generation Z's intention to use e-wallets. This study aims to determine the factors influencing Generation Z's intention to use e-wallets using TAM theory.

Literature review
Behavioural intention to use

Behavioural intention to use is in line with the intention individual in using something. Behavioural intention that is shown in a person's desire to carry out certain activities and can be measured by a person's readiness to try something new or the effort he expends to do it (Tu & Hu, 2018). Behavioural intention determines the actual use of the system. Then, the user's attitude will also affect the intention behaviour (Lee et al., 2017). It is confirmed by Phan et al. (2020), i.e., the higher a person's intention, the higher his actual behaviour, and vice versa. Thus, the behavioural intention to use shows a person's intention to use something to support their activities.

Technology acceptance model (TAM)

The theory of acceptance of technology develops from time to time—one of the accepted theories of technology well-known is TAM. It is based on the technology acceptance theory explaining human behaviour toward technology. In influencing the use of technology, there are two crucial determinants. First, people are more likely to use or not use the application if they believe it will improve their work performance, which can be called the perceived usefulness factor. Second, even if these potential users believe that the application used is practical, at the same time, they may believe that the system is too difficult to use. It will be an obstacle for someone to accept technology. Based on that, technology acceptance is influenced by perceived usefulness and perceived ease of use. Thus, TAM theory uses the elements of usefulness and convenience in analysing whether users can accept a system (Davis, 1989).

Perceived ease of use

Prospect theory is an alternative method of explaining individuals' choices under risk conditions. It was designed, in essence, as a substitute for expected utility theory. The expected utility theory model did not fully describe how individuals make decisions in risky situations. Therefore, there were instances in which a decision-maker's choice could not be predicted (Kahneman & Tversky, 1979; Edwards, 1996).

This theory focuses on subjective decisions affected by the investor's value system. Prospect theory explains that someone under risk and uncertainty does not always act rationally. Psychological and behavioural factors will affect the level of decision-making rationally (Pradikasari & Isbanah, 2018). Investment decisions made by investors are not only based on rational considerations, but also facts. Prospect theory states that individual choices are influenced by a bias constantly

motivated by psychological factors in uncertain circumstances. This prospect theory explains several states of mind that influence individual decision-making, including regret aversion, loss aversion, and mental accounting. Value function, framing, psychological accounting, probability, and the certainty effect are among the tenets of prospect theory (Usman, 2019).

Perceived usefulness

Perceived usefulness is one of the factors in TAM. It is considered beneficial if a system can help its users accomplish their desired goals. Davis (1989) defines perceived usefulness as how far individuals believe using specific methods can improve their performance. Hankun et al. (2016) mention that perceived usefulness is the user's perception of whether the system will significantly increase their work productivity or quality of life. The greater the customer's impression that using services will help him buy credit, save money, and make several online transactions, the more likely the customer is to use the service system (Lwoga & Lwoga, 2017). Thus, perceived usefulness can be referred to as a variable whose benefits can be felt by the user system the fulfil their need.

Perceived security

Perceived security can be defined as a sense of security provided by the system in protecting the personal data of its users and transmitting personal information, such as credit card data and cash activity (Arpaci et al., 2015). A person will feel an application is less secure when he feels the risks are higher than the benefits (Balapour et al., 2020). There are factors that influence a person's behaviour towards security, such as social triggers, time and effort required for adopting practice, and storing the critical data (Alsaleh et al., 2017). Therefore, perceived security is related to personal information shared by the system.

Social influence

Social influence refers to suggestions or feedback from others to consumers who still use technology and need more knowledge, foundation, and self-confidence (Phan et al., 2020). Social influence is an essential element that investigates how many individuals are affected by social groups close to them, watching them use an application (Min et al., 2019). According to Madan & Yadav (2016), the major influence on a person's behaviour is family, relatives, colleagues, friends, peer groups, celebrities, and virtual communities in social networking media. In addition, the influence of celebrities or influencers is quite strong in influencing consumers. Through influencers, companies can build brand trust and credibility (Kar, 2020).

Relationship of social influence and perceived ease of use

The findings of Chen & Aklikokou (2020) about e-government services indicate that if influential individuals in their society are interested in the system, people will also find them simple to use. It is also in line with previous studies that

social influence positively affects perceived ease of use (Chandra & Hartono, 2018; Maduku, 2017; Min et al., 2019; Sathye et al., 2018; Verma & Sinha, 2018). Thus, this study formulates the following hypothesis.

H1:   Social influence has a positive effect on perceived ease of use.

Relationship of social influence and perceived usefulness

Amsal et al. (2021) research on e-learning shows that peer influence will increase individuals' perceptions of the system's benefits and vice versa. Previous research has shown that social influence positively influences perceived usefulness (Lwoga & Lwoga, 2017; Min et al., 2019; Nikou & Economides, 2017; Sathye et al., 2018; Wu & Chen, 2017). Thus, this study formulates the following hypothesis.

H2:   Social influence has a positive effect on perceived usefulness.

Relationship of perceived ease of use and perceived usefulness

Ease of use is important for users using a system. Several previous studies have shown that perceived ease of use influences perceived usefulness (Chandra & Hartono, 2018; Daragmeh et. al., 2021; Schmitz et al., 2022; Tsai et al., 2021; Wu & Chen, 2017). The easier a system is to use, the more people will think it is functional (Lai, 2017). Thus, this study formulates the following hypothesis.

H3:   Perceived ease of use has a positive effect on perceived usefulness.

Relationship of perceived ease of use and behavioural intention to use

Ease of use is important for users using a system. People will think that a system is functional when it is easy to use (Lai, 2017). Previous studies have shown that perceived ease of use influences perceived usefulness (Chandra & Hartono, 2018; Daragmeh et al., 2021; Schmitz et al., 2022; Tsai et al., 2021; Wu & Chen, 2017). Thus, this study formulates the following hypothesis.

H4:   Perceived ease of use has a positive effect on behavioural intention to use.

Relationship of perceived usefulness and behavioural intention to use

When customers feel that using the m-payment service benefit them in buying credit, saving money, and making several online transactions, they will be more likely to use the system (Lwoga & Lwoga, 2017). Previous studies support that perceived usefulness affects behaviour intention to use (Almaiah, 2018; Nikou & Economides, 2017; Patel & Patel, 2018; To & Trinh, 2021; Vărzaru et al., 2021). Thus, this study formulates the following hypothesis.

H5:   Perceived usefulness has a positive effect on behavioural intention to use.

Relationship of perceived security and behavioural intention to use

Security is vital in using an e-wallet because it is related to customer information data. Several previous studies stated that perceived security takes effect behaviour intention to use positively (Almaiah, 2018; Choi et al., 2021; Patel &
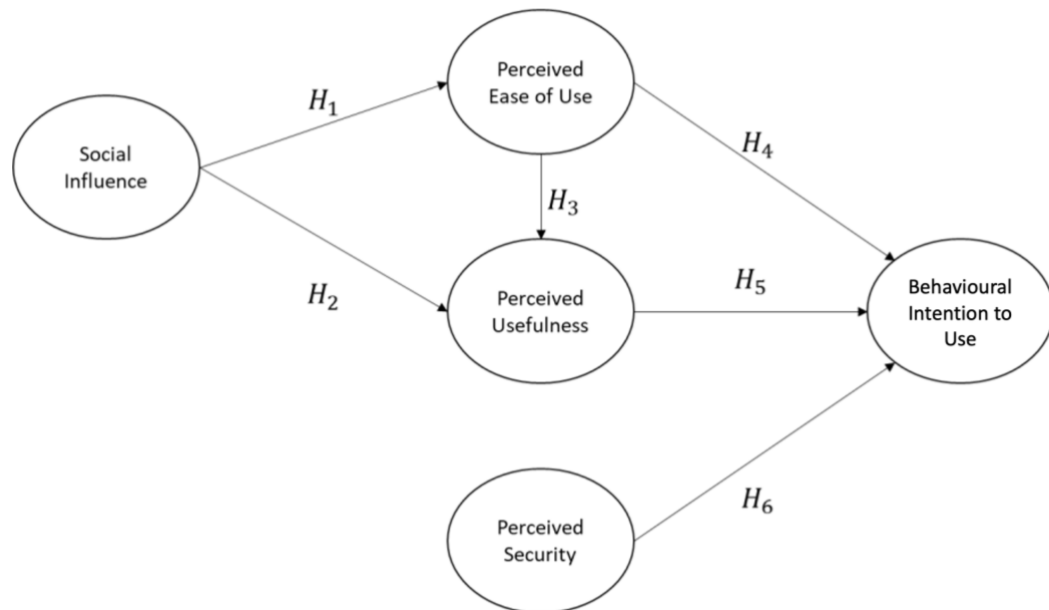
Patel, 2018; Simorangkir & Afgani, 2021; Zhao & Bacao, 2021). Thus, this study formulates the following hypothesis.

H6:   Perceived security has a positive effect on behavioural intention to use.

Hence, the relationship of all variables is presented in Figure 1.

Figure 1
Research Framework

Research method

This study uses quantitative methods with data collected using online questionnaires. The study sample is Generation Z (aged 18 –27 years old), e-wallet users, and live in Greater Jakarta. The sampling technique is convenience sampling. The indicators examined in previous research were developed as the research instrument. The measurement scale of the research instrument is a 5-points Likert scale with strongly disagree, disagree, neutral, agree, and strongly agree. The minimum number of samples required for Structural Equation Model (SEM) analysis is 200, which fulfils the basic criteria (Thakkar, 2020). Data analysis was performed using SEM.

Data analysis and results
Respondent profile

The research locations were in Greater Jakarta (Jakarta, Bogor, Depok, Tangerang, and Bekasi). The total number of samples are 245 respondents (79.2% female and 20.8% male). Most respondents are in the age range of 21 to 23 years old (57.6%) and 18–20 years old (20.8%). Most of the respondents were domiciled

in Jakarta (48.2%). Most of the Generation Z's last education in this study is Senior High School (61.6%). The details are available in Table 1.

Figure 2 shows e-wallet providers that used by respondents. Shopeepay, Gopay, and OVO are the top three e-wallets that respondents use. Shopeepay was utilized by 194 or 26,1% of the respondents, and 187 respondents reported using Gopay. Moreover, OVO was used by 154 respondents.

Table 1

Profile of Respondents Based on Demographic Characteristics

Demographic characteristics		Frequency	Percentage
Gender	Women	194	79.2%
	Man	51	20.8%
Age	18-20 years old	51	20.8%
	21-23 years old	141	57.6%
	24-25 years old	27	11.0%
	26-27 years old	26	10.6%
Domicile	Jakarta	118	48.2%
	Bogor	20	8.2%
	Depok	45	18.4%
	Tangerang	24	9.8%
	Bekasi	38	15.5%
Marital status	Not married yet	220	89.8%
	Married	18	7.3%
	Divorced/separated	4	1.6%
	Spouse died	3	1.2%
Last education	<High school	5	2.0%
	High school	151	61.6%
	Diploma	13	5.3%
	Bachelor	70	28.6%
	Masters/doctorate	6	2.4%

Figure 2

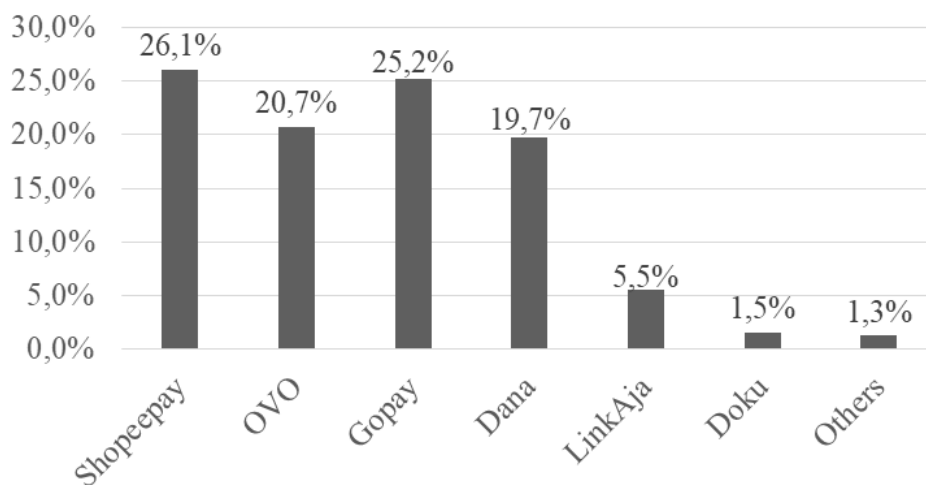*E-Wallet Providers That Used by Respondents*

Table 2 shows cross tabulation shows an intention to use e-wallets in daily life by respondent's characteristics. Respondents whose last education is high school and bachelor agree to use e-wallets in daily life. Meanwhile, diplomas and masters/doctorates answered neutral. Regarding gender, most of a woman answered agree to use e-wallets in daily life. However, neutral or less is the most preferred answer by male respondents.

Table 2

Cross Tabulation of Intention to Use E-Wallet Based on Characteristics

Characteristic	Neutral or less	Agree	Strongly agree
<High school	1%	0%	4%
High school	39%	74%	38%
Diploma	8%	4%	1%
Bachelor	17%	36%	17%
Masters/doctorate	4%	1%	1%
18–20	18%	21%	12%
21–23	37%	70%	34%
24–25	8%	13%	6%
26–27	6%	11%	9%
Woman	48%	98%	48%
Man	21%	17%	13%

Validity and reliability test

The validity test uses Exploratory Factor Analysis (EFA), which the factor loading of each accepted is at least 0.40 (Hair et al., 2018). The reliability test is measured using Cronbach's Alpha value, and a minimum score of 0.70 is required. The value of Cronbach's alpha for all variables is more than 0.70 (behavioural intention: 0.75; perceived ease of use: 0.89; perceived usefulness: 0.78; perceived security: 0.85; social influence: 0.76). Thus, all variables are reliable that can represent all indicators. The details can be seen in Appendix 1.

Model feasibility test

The path diagram model throughout this research has a level probability value or P-value of 0.337. The path diagram was measured by goodness-of-fit with an X2 Chi-Square value of 38.892, RMSEA value of 0,018, CMIN/DF value of 1.083, GFI value of 0.937, AGFI value is 0.950, and CFI value of 0.970. So, the model can describe the actual situation because the calculated value exceeds the cut-off value.

Hypothesis test

Statistical hypothesis tests to determine the influence of independent variables on dependent variables. The regression weight table is determined by the hypothesis results using probability level values or P and C.R. If the P value is less than 0.05 and the C.R. is more than 1.96, the hypothesis is accepted. In contrast, it is rejected if the hypothesis does not match those criteria. This study found four

hypotheses to be accepted and two to be rejected. The study results support H1 that social influence has a positive and significant effect on perceived ease of use (C.R.=2.348, P=0.019). However, H2 is rejected in this study (C.R.=1.729, P=0.084). Furthermore, perceived ease of use affects perceived usefulness positively and significantly (C.R.=3.014, P=0.003) or H3 is accepted.

Furthermore, the intention to use an e-wallet is influenced by perceived ease of use (C.R.=1.989, P=0.047) or H4 is accepted. The effect of perceived usefulness on behavioural intention to use or H5 is supported (C.R.=3.101, P=0.002). In contrast, perceived security does not affect the intention to use an e-wallet (C.R.= 1.010, P =0.313) or H6 is rejected. Statistical Hypothesis Test Results shows in Table 3. Hence, the path diagram model shows in Figure 3.
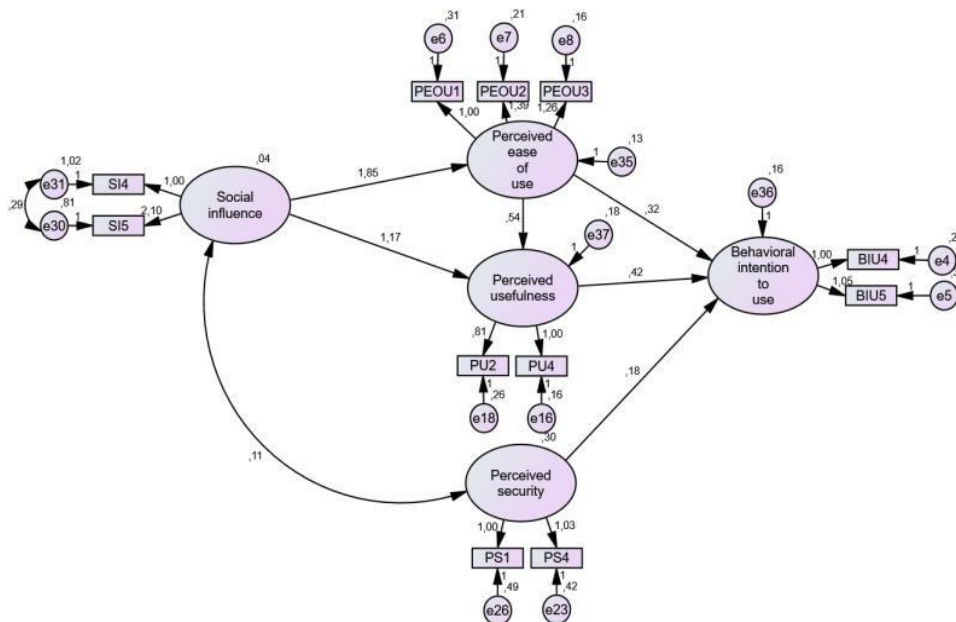
Figure 3

The Path Diagram Model

Table 3

Statistical Hypothesis Test Results

Hypothesis	Independent variable	Dependent variable	CR	P	Results
H1	Social influence	Perceived ease of use	2,348	0.019	Accepted
H2	Social influence	Perceived usefulness	1,729	0.084	Rejected
H3	Perceived ease of use	Perceived usefulness	3,014	0.003	Accepted
H4	Perceived ease of use	Behavioural intention to use	1,989	0.047	Accepted
H5	Perceived usefulness	Behavioural intention to use	3.101	0.002	Accepted
H6	Perceived security	Behavioural intention to use	1.010	0.313	Rejected

Discussion

This study develops literature on the acceptance of e-wallets with TAM theory, where convenience and benefits influence the intention to use the e-wallet significantly and positively (H3, H4, and H5 are accepted). However, the perception of security does not affect the intention to use an e-wallet (H6 is rejected). The result shows that the advantages of using an e-wallet may be determined by how easy people use it, which is affected by the social environment (H1 is accepted). This study also failed to prove that social environment influences perceived usefulness (H2 is rejected).

Social context has an impact on the ease that a person feels using an e-wallet. These results align with Chandra & Hartono (2018) explained the social influence that can provide information about ease of use. People can learn how to use e-wallet technology easily from their reference group. People tend to seek information about technological innovations from others in the identical generation who also have same preferences in interests and lifestyles. This study shows how friends, colleagues, media, and even an advertisement have influenced digital wallet users' perceived ease of use. The results of this study are supported by previous studies (Maduku, 2017; Min et al., 2019; Sathye et al., 2018; Verma & Sinha, 2018).

Furthermore, perceived ease of use affects perceived usefulness positively and significantly. When users believe their e-wallet usage is simple, they will discover that the e-wallet can benefit them. As a result, it is assumed that technology that looks to be simple and convenient supports its use rather than a system that appears to be complex (Raza et al., 2017). It is supported by Chandra & Hartono (2018) that a system's perceived usefulness is impacted by how users easily engage with it. The convenience will influence the service's usefulness (Meyliana et al., 2019). It is in line with previous studies (Daragmeh et al., 2021; Liébana et al., 2021; Raza et al., 2017; Wu & Chen, 2017).

On the other hand, the intention to use an e-wallet is influenced by perceived ease of use and perceived usefulness. It proves the theory of TAM which is in line with the study before (Almaiah, 2018; Nikou & Economides, 2017; Patel & Patel, 2018; To & Trinh, 2021). The results show that users could feel the convenience and benefits when using e-wallets. They are more likely to use an e-wallet. A person's effort in using an e-wallet will significantly impact the service's usage (To & Trinh, 2021). It implies that the ease with which users use e-wallets affects not just their usage habits but also their perceptions of trust, with these feelings driving behaviour to reuse such services (Halim et al., 2020). Its users' benefits influence the intention to use an e-wallet. Patel & Patel (2018) found out that users will use a service if the user feels the utility of the service. According to Daragmeh et al. (2021), mobile payments are a good option since they shorten the time, money, and effort necessary.

Moreover, perceived security did not affect the intention to use an e-wallet. Using an e-wallet does not reasonably require much thought regarding security.

Other studies that are different from the results of this study, such as Almaiah (2018), Choi et al. (2021), Simorangkir & Afghani (2021), and Zhao & Bacao (2021). Patel & Patel (2018) stated that users would not use the service without security protection.

The study results are expected to contribute to business actors, e-wallet service providers, and Bank Indonesia. Business actors can see e-wallets in terms of convenience, which benefits them in making payments using the e-wallet. E-wallet service providers can develop e-wallet services so users can feel the convenience and benefits. Meanwhile, e-wallet service provider can optimise its review rating features since social influence determines e-wallet users perceived of use. Government also needs to periodically review e-wallet services' regulations through Financial Authority Service institution and Bank Indonesia.

Conclusion

The findings indicate that perceived ease of use and usefulness impact the intention to use an e-wallet. Additionally, perceived ease of use significantly affects perceived usefulness. When an individual finds an e-wallet to be simple to use, it might impact how useful they perceive it to be. Furthermore, social influence impacts perceived ease of use but does not affect perceived usefulness. The social environment helps people to use e-wallets easily. This study also demonstrates that a person's perception of security is unrelated to their intention to use an e-wallet.

This study has some limitations in analysing the intention to use e-wallets. First, the subject of this study was only centred on Generation Z, so it could not represent the overall intention to use e-wallets. Although internet crime is rising, this study cannot verify that security impacts a person's decision to use an e-wallet. Lastly, the limitation of the research location is only in the Greater Jakarta area. Hence, this research cannot be used as a reference for other regions in analysing what factors influence Generation Z in using an e-wallet. Further research can use Unified Theory of Acceptance and Use of Technology (UTAUT) to analyse intention to use e-wallets in generation Z. It also calls comparative research on the intention to use the e-wallet between generations.

Author contribution

Safitri Dwi Rahmadhani: Conceptualization, Validation, Writing – original draft. **Agung Darmawan Buchdadi:** Writing – review & editing. **Muhammad Fawaiq:** Methodology, Writing - review & editing. **Budi Agung Prasetya:** Writing - review & editing

Declaration of interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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References

Almaiah, M. A. (2018). Acceptance and usage of a mobile information system services in University of Jordan. *Education and Information Technologies*, *23*(5), 1873–1895. https://doi.org/10.1007/s10639-018-9694-6.

Alsaleh, M., Alomar, N., & Alarifi, A. (2017). Smartphone users: understanding how security mechanisms are perceived and new persuasive methods. *PLOS ONE*, *12*(3), 1–35. https://doi.org/10.1371/journal.pone.0173284.

Amsal, A. A., Putri, S. L., Rahadi, F., & Fitri, M. E. Y. (2021). Perceived satisfaction and perceived usefulness of e- learning: The role of interactive learning and social influence. *Proceedings of the 3rd International Conference on Educational Development and Quality Assurance (ICED-QA 2020),* 535–541. https://doi.org/10.2991/assehr.k.210202.092.

Andrew, J. V., Ambad, S. N. A., & Tan, K. E. (2020). A model of factors influencing consumers intentionto use e-wallet system in Malaysia: A systematic review. *Malaysian Journal of Business and Economics (MJBE)*, 53–53. https://doi.org/10.51200/mjbe.v0i0.2172.

Arpaci, I., Yardimci Cetin, Y. Y., & Turetken, O. (2015). Impact of perceived security on organizational adoption of smartphones. *Cyberpsychology, Behavior, and Social Networking*, *18*(10), 602–608. https://doi.org/10.1089/cyber.2015.0243.

Aslam, W., Ham, M., & Arif, I. (2017). Consumer behavioral intentions towards mobilepayment services: An empirical analysis in Pakistan. *Market-Tržište*, *29*(2), 161–176. https://doi.org/10.22598/mt/2017.29.2.161.

APJII. (2018). Potret Zaman Now Pengguna dan Perilaku Internet Indonesia!. Retrived June 14, 2022, from https://apjii.or.id/downfile/file/BULETINAPJIIEDISI23April2018.pdf.

APJII. (2020). Laporan survei internet APJII2019-2020 (Q2). Retrieved June 18, 2022, from https://apjii.or.id/content/read/39/521/Laporan-Survei-Internet-APJII-2019-2020-Q2.

National Cyber and Crypto Agency. (2021). Laporan Tahunan Monitoring Keamanan Siber Tahun 2021. Retrieved May 25, 2022, from https://cloud.bssn.go.id/s/Lyw8E4LxwNiJoNw.

Balapour, A., Nikkhah, H. R., & Sabherwal, R. (2020). Mobile application security: Role of perceived privacy as the predictor of security perceptions. *International Journal of Information Management, 52*. https://doi.org/10.1016/j.ijinfomgt.2019.102063.

Bank Indonesia. (2016). Peraturan Bank Indonesia Nomor 18/40/PBI/2016 tentang Penyelenggaraan Pemrosesan Transaksi Pembayaran. Retrieved May 15, 2022, from https://www.bi.go.id/id/publikasi/peraturan/Pages/pbi_184016.aspx.

Bank Indonesia. (2019). Publikasi Laporan Perekonomian Indonesia. Retrieved May 15, 2022, from https://www.bi.go.id/id/publikasi/laporan/Pages/LPI_2019.aspx.

Bank Indonesia. (2021). The Red Book Statistics.Retrieved May 15, 2022, from https://www.bi.go.id/id/statistik/ekonomi-keuangan/red-book-statistics/Pages/the-red-book-statistics-2020.aspx.

Barkhordari, M., Nourollah, Z., Mashayekhi, H., Mashayekhi, Y., & Ahangar, M. S. (2017). Factors influencing adoption of e-payment systems: An empirical study on Iranian customers. *Information Systems and E-Business Management*, *15*(1), 89–116. https://doi.org/10.1007/s10257-016-0311-1.

Bencsik, A., Juhász, T., & Horváth-Csikós, G. (2016). Y and Z generations at workplaces. *Journal of Competitiveness*, *6*(3), 90–106. https://doi.org/10.7441/joc.2016.03.06.

Chandra, Y. U., & Hartono, S. (2018). Analysis factors of technology acceptance of cloud storage: A case of higher education students use Google Drive. *International Conference on Information Technology Systems and Innovation)*, Bandung: 22–26 October, 2018. Page 188–192. https://doi.org/10.1109/ICITSI.2018.8696095.

Chen, L., & Aklikokou, A. K. (2020). Determinants of e-government adoption: Testingthe mediating effects of perceived usefulness and perceived ease of use. *International Journal of Public Administration*, *43*(10), 850–865. https://doi.org/10.1080/01900692.2019.1660989.

Choi, M. J., Lee, S.-J., Lee, S. J., Rho, M. J., Kim, D.-J., & Choi, I. Y. (2021). Behavioralintention to use a smartphone usage management application between a non- problematic smartphone use group and a problematic use group. *Frontiers in Psychiatry*, *12*, 571795. https://doi.org/10.3389/fpsyt.2021.571795.

Daragmeh, A., Lentner, C., & Sági, J. (2021). Fintech payments in the era of COVID-19:Factors influencing behavioral intentions of "Generation X" in Hungary to use mobile payment. *Journal of Behavioral and Experimental Finance*, *32*. https://doi.org/10.1016/j.jbef.2021.100574.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, *13*(3), 319–325. https://doi.org/10.2307/249008.

F5 Labs. (2017). Lessons Learned from a Decade of Data Breaches. Retrieved June, 5, 2022, from https://www.f5.com/labs/articles/threat-intelligence/lessons-learned-from-a-decade-of-data-breaches-29035.

GlobalWebIndex. (2019). The Youth of the Nations: Global Trends Among Gen Z. Retrieved June 2, 2022, from https://www.gwi.com/reports/global-trends-among-gen-z.

Hair, J.F., Celsi, M. W., Money, A. H., Samouel, P., & Page, M. J. (2015). *Essentials of business research methods*. Taylor & Francis Group.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2018). *Multivariate data analysis* (Eight). Cengage.

Halim, F., Efendi, E., Butarbutar, M., Malau, A. R., & Sudirman, A. (2020). Constituents driving interest in using e-wallets in generation Z. *Proceeding on International Conference of Science Management Art Research Technology*, Bandung. 101–116. https://doi.org/10.31098/ic-smart.v1i1.32.

Hankun, H., Yafang, L., Xuemei, H., & Jing, F. (2016). A comparative study of China and US users' acceptance of online payment. *2016 13th International Conferenceon Service Systems and Service Management*, China. 101–116. https://doi.org/10.1109/ICSSSM.2016.7538582.

IDADX. (2022). Indonesia anti-phishing data exchange Periode Q1 2022. Retrieved April 3, 2022, from https://idadx.id/files/Q1_2022.pdf.

Internet Crime Complain Center. (2021). Internet Crime Report. Federal Bureau of Investigation. Retrieved June 7, 2022, from https://www.ic3.gov/Media/PDF/AnnualReport/2021_IC3Report.pdf.

IPSOS. (2019). The Evolution of the Digital Wallet: Driving the Next Wave of Growth. Retrieved April 17, 2022, from https://www.ipsos.com/sites/default/files/ct/news/documents/2020-02/ipsos_media_conference_-_e-wallet-_en_0.pdf.

Kar, A. K. (2020). What affects usage satisfaction in mobile payments? Modelling user generated content to develop the "Digital service usage satisfaction model." *Information Systems Frontiers*, *23*, 1341–1261. https://doi.org/10.1007/s10796-020-10045-0.

Lai, P.C. (2017). The Literature Review of Technology Adoption Models and Theories for The Novelty Technology. *Journal of Information Systems and Technology Management, 14*(1), 21–38. https://doi.org/10.4301/S1807-17752017000100002.

Lee, E.-Y., Lee, S.-B., & Jeon, Y. J. J. (2017). Factors influencing the behavioral intentionto use food delivery apps. *Social Behavior and Personality: An International Journal*, *45*(9), 1461–1473. https://doi.org/10.2224/sbp.6185.

Liébana-Cabanillas, F., Molinillo, S., & Japutra, A. (2021). Exploring the determinants of intention to use p2p mobile payment in Spain. *Information Systems Management*, *38*(2), 165–180. https://doi.org/10.1080/10580530.2020.1818897.

Lwoga, E. T., & Lwoga, N. B. (2017). User acceptance of mobile payment: The effects of user-centric security, system characteristics and gender. *The Electronic Journalof Information Systems in Developing Countries*, *81*(1), 1–24. https://doi.org/10.1002/j.1681-4835.2017.tb00595.x.

Madan, K., & Yadav, R. (2016). Behavioural intention to adopt mobile wallet: A developing country perspective. *Journal of Indian Business Research*, *8*(3), 227–244. https://doi.org/10.1108/JIBR-10-2015-0112,

Maduku, D. K. (2017). Understanding e-book continuance intention: Empirical evidence from e-book users in a developing country. *Cyberpsychology, Behavior, and Social Networking*, *20*(1), 30–36. https://doi.org/10.1089/cyber.2016.0287.

Meyliana, M., Fernando, E., & Surjandy, S. (2019). The influence of perceived risk andtrust in adoption of fintech services in Indonesia. *Communication and Information Technology Journal*, *13*(1), 31–37. https://doi.org/10.21512/commit.v13i1.5708.

Min, S., So, K. K. F., & Jeong, M. (2019). Consumer adoption of the Uber mobile application: Insights from diffusion of innovation theory and technology acceptance model. *Journal of Travel & Tourism Marketing*, *36*(7), 770–783. https://doi.org/10.1080/10548408.2018.1507866.

Nikou, S. A., & Economides, A. A. (2017). Mobile-based assessment: Investigating the factors that influence behavioral intention to use. *Computers & Education*, *109*, 56–73. https://doi.org/10.1016/j.compedu.2017.02.005.

Patel, K. J., & Patel, H. J. (2018). Adoption of internet banking services in Gujarat: An extension of TAM with perceived security and social influence. *International Journal of Bank Marketing*, *36*(1), 147–169. https://doi.org/10.1108/IJBM-08-2016-0104.

Phan, T. N., Ho, T. V., & Le-Hoang, P. V. (2020). Factors affecting the behavioral intention and behavior of using e-wallets of youth in Vietnam. *The Journal of Asian Finance, Economics and Business*, *7*(10), 295–302. https://doi.org/10.13106/jafeb.2020.vol7.n10.295.

Raza, S. A., Umer, A., & Shah, N. (2017). New determinants of ease of use and perceivedusefulness for mobile banking adoption. *International Journal of Electronic Customer Relationship Management*, *11*(1), 44–65. https://doi.org/10.1504/IJECRM.2017.086751.

Sathye, S., Prasad, B., Sharma, D., Sharma, P., & Sathye, M. (2018). Factors influencing the intention to use of mobile value-added services by women-owned microenterprises in Fiji. *The Electronic Journal of Information Systems in Developing Countries*, *84*(2), 1–10. https://doi.org/10.1002/isd2.12016.

Schmitz, A., Díaz-Martín, A. M., & Yagüe Guillén, M. J. (2022). Modifying UTAUT2 for a cross-country comparison of telemedicine adoption. *Computers in Human Behavior*, *130,* 1–11. https://doi.org/10.1016/j.chb.2022.107183.

Simorangkir, Z. Z., & Afgani, K. F. (2021). The analysis on factors influencing the use of mobile payment system among generation Z in Bekasi city. *Advanced International Journal of Business, Entrepreneurship and SMEs*, *3*(9), 334–348. https://doi.org/10.35631/AIJBES.39022.

Sivathanu, B. (2019). Adoption of digital payment systems in the era of demonetization in India: An empirical study. *Journal of Science and Technology Policy Management*, *10*(1), 143–171. https://doi.org/10.1108/JSTPM-07-2017-0033.

Teo, S. C., Law, P. L., & Koo, A. C. (2020). Factors affecting adoption of e-wallets among youths in Malaysia. *Journal of Information System and Technology Management*, *5*(19), 39–50. https://doi.org/10.35631/JISTM.519004.

Thakkar, J. J. (2020). *Structural equation modelling: application for research and practice (with AMOS and R)*. Singapore: Springer Singapore. https://doi.org/10.1007/978-981-15-3793-6.

To, A. T., & Trinh, T. H. M. (2021). Understanding behavioral intention to use mobile wallets in Vietnam: Extending the tam model with trust and enjoyment. *Cogent Business & Management*, *8*(1), 1–14. https://doi.org/10.1080/23311975.2021.1891661.

Tsai, W.-H., Wu, Y.-S., Cheng, C.-S., Kuo, M.-H., Chang, Y.-T., Hu, F.-K., Chu, C. M. (2021). A technology acceptance model for deploying masks to combat the COVID-19 Pandemic in Taiwan (My Health Bank): Web-based cross-sectional survey study. *Journal of Medical Internet Research*, *23*(4), 1–19. https://doi.org/10.2196/27069.

Tu, J.-C., & Hu, C.-L. (2018). A Study on the Factors Affecting Consumers' Willingness to Accept Clothing Rentals. *Sustainability*, *10*(11), 1–30. https://doi.org/10.3390/su10114139.

Vărzaru, A. A., Bocean, C. G., Rotea, C. C., & Budică-Iacob, A.-F. (2021). Assessing antecedents of behavioral intention to use mobile technologies in e-commerce. *Electronics*, *10*(18), 2231. https://doi.org/10.3390/electronics10182231.

Verma, P., & Sinha, N. (2018). Integrating perceived economic wellbeing to technology acceptance model: The case of mobile based agricultural extension service. *Technological Forecasting and Social Change*, *126*, 207–216. https://doi.org/10.1016/j.techfore.2017.08.013.

Western Governors University. (2019). Who is gen Z and how will they impact the workplace?. Retrieved April 28, 2022, from https://www.wgu.edu/blog/who-is-gen-z-how-they-impact-workplace1906.html.

Wu, B., & Chen, X. (2017). Continuance intention to use MOOCs: Integrating the technology acceptance model (TAM) and task technology fit (TTF) model. *Computers in Human Behavior*, *67*, 221–232. https://doi.org/10.1016/j.chb.2016.10.028.

Zhao, Y., & Bacao, F. (2021). How does the pandemic facilitate mobile payment? An investigation on users' perspective under the Covid-19 pandemic. *International Journal of Environmental Research and Public Health*, *18*(3), 1–22. https://doi.org/10.3390/ijerph18031016.

Appendix 1

Validity and Reliability Test Results

Variable	Indicators	Factor loading	Cronbach's alpha
Behavioral intention to use (Daragmeh et al., 2021; Sivathanu, 2019; To & Trinh, 2021)	BIU1: I'm curious about e-wallets.	0.66	0.75
	BIU2: I intend to use an e-wallet if I have access to it.	0.55	
	BIU3: I will always try to use an e-wallet in my daily life.	0.75	
	BIU4: I intend to use the e-wallet to make purchasesfor a few months forward.	0.76	
	BIU5: I will recommend the e-wallet to my friends.	0.78	
Perceived ease of use (Aslam et al., 2017)	PEOU1: It is very easy to become skilled at using an e-wallet.	0.79	0.89
	PEOU2: Interaction with an e-wallet is clear and easy understandable.	0.87	
	PEOU3: It's very easy to do the required steps in using an e-wallet.	0.82	
	PEOU4: Very easy to interact with e-wallets.	0.84	
	PEOU5: I easily learned how to use the e-wallet.	0.78	
	PEOU6: The appearance of the e-wallet application is user-friendly and easy to understand.	0.72	
Perceived security (Almaiah, 2018; Barkhordari et al., 2017)	PS1: I can use the e-wallet if I believe that the personalinformation in the e-wallet is secure.	0.77	0.85
	PS2: I can use the e-wallet if no one can see.	0.78	
	PS3: myinformation or data stored in the e-wallet without myconsent.	0.78	
	PS4: I can use the e-wallet if my information or data inthe e-wallet will not be manipulated by unauthorized parties authorized.	0.73	
	PS5: I consider e-wallet safe.	0.70	

	PS6: I think the information related to the user and hispayment history is safe on e-wallet.	0.81	
	PS7: My pre-registered information in the e-wallet isused to protect transactions.	0.75	
Social influence (Sivathanu, 2019)	SI1: My friends and colleagues influence my intentionto use an e-wallet.	0.74	0.76
	SI2: Media and advertising influence my intention touse the e-wallet.	0.62	
	SI3: I use an e-wallet because people around me use it too.	0.79	
	SI4: I found the e-wallet trendy.	0.70	
	SI5: I get a professional image in society because ofusing the e-wallet.	0.71	