Binus Business Review, 13(3), November 2022, 315−323
DOI: 10.21512/bbr.v13i3.8561
P-ISSN: 2087-1228
E-ISSN: 2476-9053

The Factors of Millennials' Continuance Intention to Use Digital Wallets in Indonesia

Yasintha Soelasih[1]*; Sumani[2]

[1,2]Faculty of Economics and Business, Atma Jaya Catholic University of Indonesia
Jln. Jend. Sudirman No. 51, Jakarta Selatan 12930, Indonesia
[1]yasintha.soelasih@atmajaya.ac.id; [2]sumani@atmajaya.ac.id

Received: 25th May 2022/ **Revised:** 19th August 2022/ **Accepted:** 19th August 2022

How to Cite: Soelasih, Y., & Sumani. (2022). The Factors of Millennials' Continuance Intention to Use Digital Wallets in Indonesia. *Binus Business Review, 13*(3), 315−323. https://doi.org/10.21512/bbr.v13i3.8561

ABSTRACT

The growth of digital wallets increases the convenience of consumers in making transactions. The convenience that consumers feel in using digital wallets further increases their consumption. Companies influence the age group, such as millennials, with high potential in using digital wallets. The research emphasized the consumer behavior of millennials in using digital wallets. The study aimed to examine the variables that affected digital wallet users in terms of perceived usefulness, perceived risk, customer attitude, customer satisfaction, and continuance intention to use. The questionnaire was distributed using the G-form using the determination of respondents by purposive sampling. The number of respondents was 276. The measurement of reliability and validity used loadings values, Cronbach's alpha, Composite Reliability (CR), Average Variance Extracted (AVE), and discriminant validity. In measuring the fit model, the Standardized Root Mean Square Residual (SRMR) value was used. Then, the research used Partial Least Square-Structural Equation Model (PLS-SEM) to test the hypothesis. The results show that perceived usefulness affects customer attitudes toward using digital wallets. Meanwhile, perceived risk has no effect on customer attitudes. Customer attitude impacts customer satisfaction and continuance intention to use digital wallet users directly and indirectly. Moreover, millennials strengthen the influence of customer attitude on continuance intention to use. The effect is negative, meaning that if the age of the millennials increases, it will cause a decreased attitude change towards continuance intention to use digital wallets.

Keywords: millennials, continuance intention, digital wallet

INTRODUCTION

The development of technology is swift, affecting changes in life. Changes occur in all aspects, such as transportation, shopping, payments, communication, and others, based on technology. So, companies adopt these developments to retain consumers. The consumers' buying process is not only offline but also online now. In addition to ease of purchase, the company develops payment systems that take advantage of technological changes.

Digital payments in Indonesia have begun since 1999 with e-banking and m-banking (Tarantang, Awwaliyah, Astuti, & Munawaroh, 2019). Currently, payments can be made through e-banking and m-banking and can also use electronic money. Following Bank Indonesia Regulation No. 11/12/PBI/2009 concerning the electronic money, there has been a change. The value of money is stored electronically in a medium, such as a server or chip. Examples of chip-based electronic money are E-Money Mandiri, Flazz BCA, Tap Cash BNI, and Brizzi BRI. Meanwhile, server-based electronic money is developing, such as GoPay and OVO.

When smartphones become part of daily needs, they will cause changes in consumer behavior (Muhtasim, Tan, Hassan, Pavel, & Susmit, 2022; Rathore, 2016). One of the changes in the payment system is made by consumers. Ease of payment increases consumption for consumers. However, the trust factor needs to be considered because it will encourage consumers to use digital wallets (Chawla

*Corresponding Author

& Joshi, 2019; Gao & Waechter, 2017). According to Chawla and Joshi (2019), perceived usefulness influences intention and attitude. Meanwhile, perceived security causes people to use digital wallets (Tahar, Riyadh, Sofyani, & Purnomo, 2020). Since security in using digital wallets will pose a low risk, it causes a change in consumer behavior from conventional to new technology (Dwivedi, Rana, Jeyaraj, Clement, & Williams, 2019). Research previously conducted by Davis in 1989 has also shown the adoption of technology by consumers (Acelian & Basri, 2021; Jonathan & Soelasih, 2022).

It can be said that the development of technology encourages the development of digital wallets. Both chip-based and server-based digital wallets are increasing nowadays, and it shows that the level of competition is getting higher. Hence, companies need to understand consumers' needs and wants in digital wallets, as using them makes it easier for consumers to make financial transactions. It is essential for companies to demonstrate the benefits of digital wallets. In addition, the risk is a concern for consumers. High-risk factors will cause consumers to use digital wallets less. Therefore, it is necessary to know demographic variables, one of which is the generation, to see their behavior in adopting digital wallets. According to Chawla and Joshi (2019), demographic variables are essential to see the attitudes of digital wallet users. However, the demographic variables are not tested as a moderator. Then, based on Gao and Waechter (2017), demographic variables, such as age, gender, income, and education, can be control variables. However, this previous research has not emphasized one generation, so the suggestion is to develop more profound research with the same construct.

The adoption of technology occurs more quickly among young people. Adoption also occurs in the mode of payment. Therefore, the research focuses on millennials. Because they are more often using technology to purchase and seek information, they will be more interested in using a digital wallet. When they use a digital wallet, it will affect their consumption patterns and cause a behavior change.

The change in payments has led to many studies on the use of digital payments. For example, Yadav and Arora (2018) examined the solution factors, risks, and problems with satisfaction in using digital payments. Then, Subaramaniam, Kolandaisamy, Jalil, and Kolandaisamy (2020) looked at the generation of e-wallet users and proved that 18 to 25 years old used e-wallets more. Meanwhile the weakness of e-wallets was the security risk. Next, Arvidsson (2014) studied consumer attitudes towards mobile banking services by examining the relative advantage, high trust, low perceived security risks, higher age, and lower-income variables with a favorable view of mobile banking services. Arora and Lochab (2018) looked at the effect of education on the risk of using mobile banking. Then, Singh, Srivastava, and Sinha (2017) examined the awareness of technology adoption to change the perception of increasing the use of mobile wallets in India. Rathore (2016) studied digital wallet adoption regarding age, gender, and occupation.

The research looks at whether digital wallets change consumer behavior, especially among millennials. The research purpose is to examine the perceived usefulness, perceived risk, customer attitude, customer satisfaction, and continuance intention to use digital wallets with millennials as moderation. So, the research results can be helpful in the business world in developing a digital wallet that is suitable for millennials. The difference between this study and previous research emphasizes millennials' consumer behavior. Although many previous studies have been based on Technology Acceptance Model (TAM) theory, the research differs from previous research. The novelty in the research only tests one TAM variable, namely perceived usefulness. It is combined with perceived risk to analyze customer attitudes. The customer attitude will form continuance intention to use through customer satisfaction and millennials as moderation on customer attitude and continuance intention use.

TAM is a developmental model of the Theory Reasoned Action (TRA) by Davis, Bagozzi, and Warshaw. TAM uses perceived usefulness and perceived ease of use (Ahmad, 2018). Based on research by Davis, Bagozzi, and Warshaw, both variables have been able to reflect a person's attitude toward the use of technology (Yaprak, Kılıç, & Okumuş, 2021). Perceived usefulness indicates the belief that using specific systems will improve performance (Ahmad, 2018). In the world of technology, usefulness means that people who use a particular technology will get the results they want (Hu, Ding, Li, Chen, & Yang, 2019). Perceived usefulness is the factor that most influences users' intention to use mobile payments (Singh, Sinha, & Liébana-Cabanillas, 2020; Alalwan, Dwivedi, & Rana, 2017; Chawla & Joshi, 2019). The results differ from Slade, Dwivedi, Piercy, and Williams (2015), showing the insignificant effect of perceived usefulness in using digital wallets. The hypothesis is as follows.

H1: Perceived usefulness influences customer attitude in a digital wallet

According to Apanasevic, Markendahl, and Arvidsson (2016), the security risk is the biggest obstacle in adopting digital payment technology and negatively affects consumers' intention to use the technology. Previous research has also proven that perceived risk significantly affects the intention and satisfaction of digital payment users. The perceived risk reduces user desire and adoption of technology-based services due to data security threats from digital wallets (Tahar et al., 2020). However, perceived risk has a positive influence on digital wallets (Wang, Wang, & Lin, 2018). It may be because digital wallet users are increasingly aware of the potential risks and are familiar with digital wallet technology. Hence, the

following hypothesis is proposed.

H2: Perceived risk influences customer attitude in the digital wallet

Next, there is a positive and significant relationship between user attitudes and intentions to use digital wallets (Ramos de Luna, Liébana-Cabanillas, Sánchez-Fernández, & Muñoz-Leiva, 2019; Jonathan & Soelasih, 2022). Several previous studies also find a direct and indirect relationship between attitudes and satisfaction and intention to use digital wallet technology (Singh et al., 2017; Tajvidi, Wang, Hajli, & Love, 2021). Similarly, previous research has shown an indirect relationship between user satisfaction and the intention to use technology. Users' trust and perception will affect the satisfaction and continuation of technology use (continuance intention) (Xu & Du, 2018). Customer satisfaction is positively influenced by the benefits and convenience of using technology (Casidy & Wymer, 2016). The more perceived benefits will increase the positive attitude to increase user satisfaction with the technology (Baabdullah, Alalwan, Rana, Kizgin, & Patil, 2019; Duarte, Silva, & Ferreira, 2018; Karjaluoto, Shaikh, Saarijärvi, & Saraniemi, 2019; Sharma & Sharma, 2019). The following hypotheses are formulated.

H3: Customer attitude in the digital wallet has an influence on customer satisfaction
H4: Customer attitude in digital wallet influences continuance intention to use

Changes in payment instruments from conventional to digital and rapid changes in technology make it easy for consumers to make transactions. It encourages consumers to be more consumptive. So, millennials' buying behavior is changing significantly. The millennials aged 18-35 years are happier to use digital wallets compared to those aged 36-50 years (Arora, 2018). The use of digital wallets for millennials can be seen from the effect of perceived ease of use, perceived usefulness, and attitude towards using on behavioral intentions to use. All variables influence behavior intention to use for Generation Y (millennials) (Nigam & Kumari, 2018).

Consumers increasingly use online purchases. If online purchases made by consumers are increasingly satisfied, it will increase repurchase intention (Suhaily & Soelasih, 2017). The repurchase intention, especially shopping for products, increases online purchases when consumers are satisfied with e-service quality, experiential marketing, and price perception (Suhaily & Soelasih, 2018). So, several hypotheses can be formulated as follows.

H5: Customer satisfaction influences continuance intention to use digital wallets
H6: Millennials moderate customer attitude on continuance intention to use digital wallets
H7: Customer attitude influences continuance intention to use digital wallets through customer satisfaction.

METHODS

The research is based on quantitative methods. Therefore, a hypothesis test is conducted. The research model is shown in Figure 1.

The research object focuses on the millennial generation using the framework in Figure 1. Millennials are born between 1980 to 1995 (Cilliers, 2017). Millennials are an observed variable, so it does not need indicators. The scale in the millennial variable is a ratio scale that is included in the metric data because it can be processed directly as a moderating variable in SmartPLS-SEM.

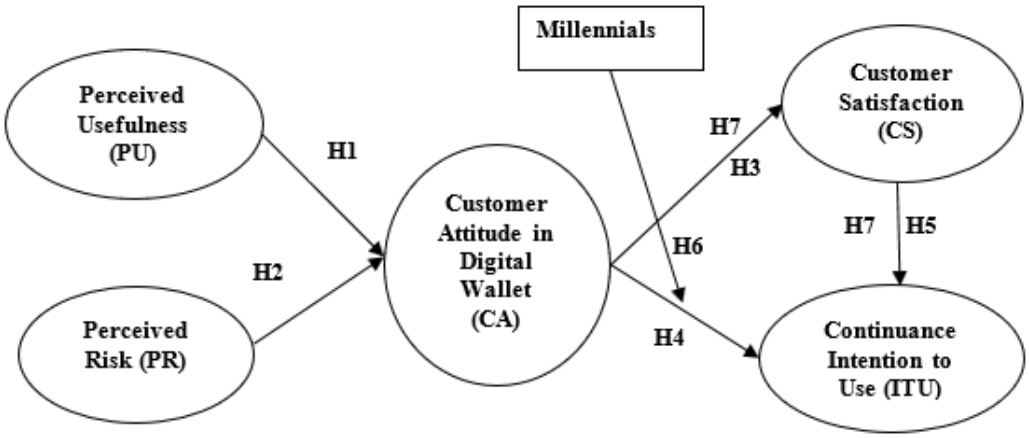

Figure 1 Research Model

Other variables are latent variables, such as perceived usefulness, perceived risk, customer attitude toward a digital wallet, customer satisfaction, and continuance intention to use. The research uses a reflective method in SmartPLS because the latent variable requires indicators to form the variable. It measures indicators of latent variables. The method is called reflective or manifest because it is the embodiment or reflection of the construct. In SmartPLS-SEM, constructs can be reflective or formative (Hair Jr, Matthews, Matthews, & Sarstedt, 2017). Table 1 shows the measurement item variables.

The indicators used by each variable refer to previous research. The perceived usefulness refers to the research of Hu et al. (2019). For perceived risk, it is from the research of Arvidsson (2014) and Hu et al. (2019). Meanwhile, the customer attitude toward using a digital wallet, customer satisfaction, and continuance intention to use refer to the research of Singh et al. (2017) and Hu et al. (2019).

Data retrieval uses G-form by distributing the questionnaire via Instagram, Facebook, Line, and WhatsApp links. The sampling technique is purposive sampling, which is included in the non-probability. The number of samples taken is as many as 276 respondents. The measurement scale uses an even scale of six, so there is no neutral answer (Soelasih & Sumani, 2020).

The research uses validity and reliability tests to analyze instruments and variables. According to Hair, Risher, Sarstedt, and Ringle (2019), validity is tested through four stages: the reflective validity model with the value of loadings per item, internal reliability consistency with Cronbach's alpha and Composite Reliability (CR), measuring convergent validity with Average Variance Extracted (AVE), discriminant validity for the model structure. Meanwhile, the hypothesis test uses Structural Equation Modeling (SEM) with SmartPLS.

RESULTS AND DISCUSSIONS

The questionnaire result shows that women use digital wallets by 57,6% more than men (42,4%). Most digital wallet users are between 22 to 29 years, as much as 91,8%. Meanwhile, the age range of 30 to 42 years is 8,2%. The data show that the respondents are millennials. Next, the education level of most respondents is a diploma, with 88%. Most of them have monthly expenses of Rp1.000.000,00 with 13,8%. The result is followed by Rp2.000.000,00 with 12,7% and Rp3.000.000,00 with 11,6%.

Before testing the model, the instrument test is carried out. The instruments are tested using the loading value, Cronbach's alpha, CR, and AVE to see the value of construct validity and reliability. The results can be seen in Table 2. It shows that the loading, Cronbach's alpha, CR, and AVE values are above 0,5. All indicators can form variables, so they are said to be valid and reliable. However, only one instrument is omitted in PR3 because it has a loading value below 0,7. According to Hair et al. (2019), a loadings value above 0,7 is recommended because the construct can explain more than 50% of the indicator variance to accept the reliability of the item value. Moreover, Cronbach's alpha values above 0,7, CR values above 0,6, and AVE values above 0,5 show that the variables are reliably studied.

Table 1 Measurement Items

Variables		Indicators
Perceived usefulness	PU1	I think using a digital wallet helps me with payments.
	PU2	I think using a digital wallet increases efficiency in my payment process.
	PU3	I think using a digital wallet can make life more convenient.
Perceived risk	PR1	I believe in the possibility of personal data insecurity in digital payments.
	PR2	I believe there may be access to personal data by others.
	PR4	I feel insecure when sending personal data via digital payments.
Customer attitude in the digital wallet	CA1	A digital wallet is an excellent application.
	CA2	Payment using a digital wallet is better.
	CA3	I think digital wallet services are reliable.
	CA4	I think switching from a physical to a digital wallet is a good idea.
Customer satisfaction	CS1	I am satisfied with the features provided by the digital wallet.
	CS2	I am satisfied as my digital wallet meets my needs.
	CS3	I am satisfied with the use of a digital wallet.
Continuance intention to use	ITU 1	Without thinking, I will reuse the digital wallet in every transaction.
	ITU 2	If I have used a digital wallet, I am willing to continue using a digital wallet.
	ITU 3	I plan to use a digital wallet often.

In Table 3, the Fornell-Larcker discriminant validity test is valid. The value between the same variables has the most significant value. For the measurement model, the estimated model is used (Henseler, Ringle, & Sarstedt, 2015). Standardized Root Mean Square Residual (SRMR) values, they are below 0,08. Meanwhile, NFI values are above 0,90. The results show a good fit model (Henseler et al., 2015). The measurement model results show the SRMR value of 0,071, so the model fits.

Hypothesis testing is carried out using SmartPLS-SEM. The results of the hypothesis test are shown in Table 4. The result of the H1 regarding the influence of perceived usefulness on customer attitude toward digital wallets is 0,712. It means that every perceived usefulness consumers feel will increase the customer attitude toward digital wallets. The customer attitude that is formed further increases the use of digital wallets. The result supports the research of Alalwan et al. (2017).

Table 2 The Results of Loading Value, Cronbach's alpha, CR, and AVE

Indicator/Variable	Loading Value	Cronbach's Alpha	CR	AVE
PU	-	0,860	0,914	0,781
PU1	0,873			
PU2	0,892			
PU3	0,885			
PR	-	0,853	0,859	0,675
PR1	0,760			
PR2	0,706			
PR4	0,973			
MILLENNIAL	-	1,000	1,000	1,000
AGE	1,000			
CA*MILLENNIAL	0,980	1,000	1,000	1,000
CA	-	0,884	0,920	0,743
CA1	0,843			
CA2	0,882			
CA3	0,875			
CA4	0,846			
CS	-	0,915	0,946	0,854
CS1	0,931			
CS2	0,921			
CS3	0,921			
ITU	-	0,909	0,943	0,846
ITU 1	0,917			
ITU 2	0,910			
ITU 3	0,932			

Note: Perceived Usefulness (PU), Perceived Risk (PR), Customer Attitude (CA), Customer Satisfaction (CS), and Continuance Intention to Use (ITU).

Table 3 Discriminant Validity Fornell-Larcker Criterion

Variable	CA	CA*MILLENNIAL	CS	ITU	MILLENNIAL	PR	PU
CA	0,862						
CA*MILLENNIAL	-0,027	1,000					
CS	0,840	-0,057	0,924				
ITU	0,787	-0,119	0,778	0,920			
MILLENNIAL	-0,104	-0,212	-0,129	-0,003	1,000		
PR	-0,083	-0,071	-0,066	-0,074	-0,025	0,821	
PU	0,714	-0,049	0,767	0,649	-0,058	-0,042	0,884

Note: Perceived Usefulness (PU), Perceived Risk (PR), Customer Attitude (CA), Customer Satisfaction (CS), and Continuance Intention to Use (ITU).

For the H2 test, the perceived risk does not affect the customer attitude toward digital wallets. Risk does not affect user attitudes as long as they feel the benefits. H2 is rejected. It is because millennials are faster in adopting technology. They do not feel there is a risk in using a digital wallet. Therefore, the perceived risk does not affect customer attitude. The result supports the research of Wang et al. (2018). However, the result is not in line with the research of Arvidsson (2014), Apanasevic et al. (2016), Yadav and Arora (2018), and Subaramaniam et al. (2020).

The result of the H3 shows that the customer attitude toward digital wallets affects consumer satisfaction. The magnitude of the influence of customer attitude on satisfaction is 0,840. It means that consumer attitude towards digital wallets forms satisfaction with the most outstanding value among the variables studied. So, it is necessary to strengthen the benefits of using digital wallets that will shape consumer attitude and affect satisfaction. The result supports the research of Baabdullah et al. (2019), Duarte et al. (2018), Karjaluoto et al. (2019), and Sharma and Sharma (2019). The more benefits are felt, the more positive the users' attitudes will be. Hence, it increases their satisfaction with the technology.

For the H4 test, customer attitude toward digital wallets influences continuance intention to use by 0,456. The result indicates that if consumer attitude toward using digital wallets is positive, it will increase the intention to use them. The result is in line with the research of Singh et al. (2017), Tajvidi et al. (2021), and Singh et al. (2020).

The result of the H5 test shows that consumer satisfaction affects continuance intention to use digital wallets. The magnitude of the influence of satisfaction on continuance intention to use is 0,402. It means that every increase in consumer satisfaction will increase continuance intention to use. The satisfaction that occurs in the use of digital wallets leads to reuse. High competition between digital wallet providers supported by promotions carried out by companies causes consumers to increase the use of the same digital wallet. The result supports the research of Casidy and Wymer (2016), Suhaily and Soelasih (2017), and Xu and Du (2018).

Meanwhile, the result of H6 shows that millennials strengthen the influence of customer attitude on continuance intention to use by -0,075. For millennials, when their age increases, the influence of attitude on continuance intention to use digital wallets decreases by 0,075. Millennials, who get older, increasingly pay attention to their consumption expenditures. Hence, for digital wallet companies, it is necessary to increase the benefits of digital wallets so that their use does not decrease even though they are getting older. The result supports the research conducted by Rathore (2016), Arora (2018), and Nigam and Kumari (2018).

In the H7 test, customer attitude influences continuance intention to use through customer satisfaction by 0,794. The result proves that the indirect effect of customer attitude on continuance intention to use through customer satisfaction is stronger than the direct influence of customer attitude on continuance intention to use. It shows that the company needs to consider and improve the satisfaction of digital wallet users. The result is in line with the research of Singh et al. (2017), Tajvidi et al. (2021), Ramos de Luna et al. (2019), and Singh et al. (2020). Overall, PLS outputs can be seen in Figure 2. Perceived risk does not affect customer attitude. The moderating effects of customer attitude and millennials show a negative value. The negative value means the decrease in customer attitude towards continuance intention to use on the age factor for millennials. Meanwhile, the perceived usefulness has a positive influence on customer attitude. Then, customer attitude leads to customer satisfaction and, ultimately, intention to use.

Table 4 Direct, Indirect, and Total Effect of the Variables

Hypothesis/path	Direct effect		Indirect effect		Total effect		Result
	β	t-value	β	t-value	β	t-value	
H1: PU → CA	0,712	21,361	-	-	-	-	Supported
H2: PR → CA	-0,052	1,141	-	-	-	-	Rejected
H3: CA → CS	0,840	37,526	-	-	-	-	Supported
H4: CA → ITU	0,456	6,601	-	-	-	-	Supported
H5: CS → ITU	0,402	5,588	-	-	-	-	Supported
H6: CA*MILLENNIAL→ITU	-0,075	2,649	-	-	-	-	Supported
H7: CA → CS → ITU	-	-	0,338	5,444	0,794	37,495	Supported

Note: Perceived Usefulness (PU), Perceived Risk (PR), Customer Attitude (CA), Customer Satisfaction (CS), and Continuance Intention to Use (ITU).

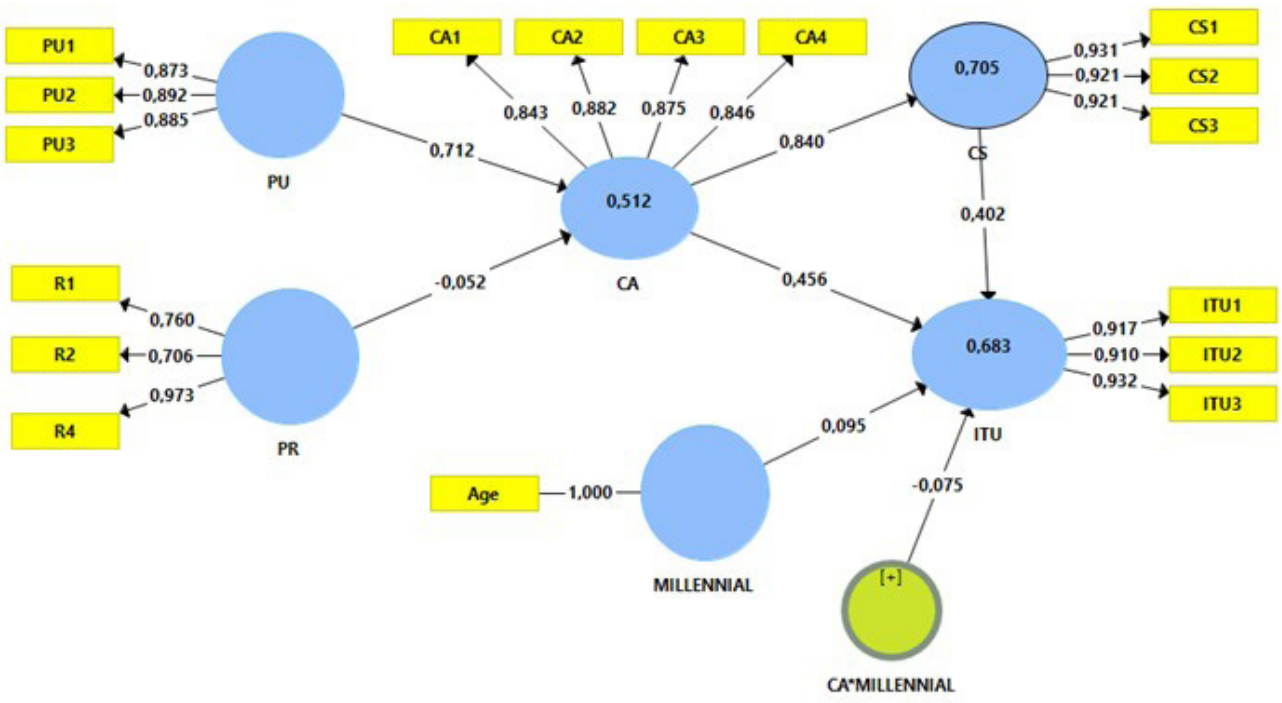

Figure 2 Outputs of PLS

CONCLUSIONS

Based on the research results, there are four conclusions. First, perceived usefulness affects customer attitude. Second, perceived risk has no effect on customer attitude. For millennials, the risk factor is not a consideration in using digital wallets. They are very fast in adopting technological changes, so they do not feel any risk in using digital wallets. Third, customer attitude influences customer satisfaction and continuance intention to use directly and indirectly. Fourth, millennials moderates the changes in customer attitudes towards continuance intention to use. As people get older, their attitudes decrease toward digital wallets.

Therefore, companies need to pay attention to millennials because they tend to decrease the use of digital wallets as they age. In maintaining this group, different programs or benefits can be carried out so that they continue to use digital wallets. It is also needed to retain millennial consumers. Relationship factors are needed to be built to retain existing customers. It is easy for consumers to switch digital wallet brands because there is much competition between digital wallet providers in Indonesia.

The research limitation is that the research only examines perceived usefulness and perceived risk in shaping customer attitude. In addition, the research focuses on millennials, so the research does not look at other age groups, such as Generation Z. Hence, future research can compare millennials and Generation Z in using digital wallets. Moreover, attitude-forming variables can be expanded, such as customer trust, brand image, and perceived ease of use. The factor of consumer loyalty can also be investigated because the research results indicate that the level of use decreases along with increasing age. Hence, the level of consumer loyalty is low.

ACKNOWLEDGEMENT

The research was supported by a grant from the Atma Jaya Catholic University of Indonesia in 2020. The authors are indebted to the Faculty of Economic and Business at the Atma Jaya Catholic University of Indonesia, which provides a grant to assist with the research reported.

REFERENCES

Acelian, R. M., & Basri, H. A. (2021). Analysis of sales promotion, perceived ease of use and security on consumer decisions to use DANA digital wallet. *International Journal of Innovative Science and Research Technology*, *6*(1), 1436–1441.

Ahmad, M. (2018). Review of the Technology Acceptance Model (TAM) in Internet banking and mobile banking. *International Journal of Information Communication Technology and Digital Convergence*, *3*(1), 23–41.

Alalwan, A. A., Dwivedi, Y. K., & Rana, N. P. (2017). Factors influencing adoption of mobile banking by Jordanian bank customers: Extending UTAUT2 with trust. *International Journal of Information Management*, *37*(3), 99–110. https://doi.org/10.1016/j.ijinfomgt.2017.01.002

Apanasevic, T., Markendahl, J., & Arvidsson, N. (2016). Stakeholders' expectations of mobile payment in retail: Lessons from Sweden. *International Journal of Bank Marketing*, *34*(1), 37–61. https://doi.org/10.1108/IJBM-06-2014-0064

Arora, M. (2018). Use of digital wallets- Cluster analysis for expectation and voice of the customers. *Vimarsh-An Endeavour to Share Knowledge, 9*(2), 16–24.

Arora, M., & Lochab, A. (2018). A study on post hoc analysis on education level in mobile banking. *Effulgence*, *16*(special issue), 1–8.

Arvidsson, N. (2014). Consumer attitudes on mobile payment services - Results from a proof of concept test. *International Journal of Bank Marketing*, *32*(2), 150–170. https://doi.org/10.1108/IJBM-05-2013-0048

Baabdullah, A. M., Alalwan, A. A., Rana, N. P., Kizgin, H., & Patil, P. (2019). Consumer use of mobile banking (m-banking) in Saudi Arabia: Towards an integrated model. *International Journal of Information Management*, *44*, 38–52.

Casidy, R., & Wymer, W. (2016). A risk worth taking: Perceived risk as moderator of satisfaction, loyalty, and willingness-to-pay premium price. *Journal of Retailing and Consumer Services*, *32*(September), 189–197. https://doi.org/10.1016/j.jretconser.2016.06.014

Chawla, D., & Joshi, H. (2019). Consumer attitude and intention to adopt mobile wallet in India – An empirical study. *International Journal of Bank Marketing*, *37*(7), 1590–1618. https://doi.org/10.1108/IJBM-09-2018-0256

Cilliers, E. J. (2017). The challenge of teaching Generation Z. *PEOPLE: International Journal of Social Sciences*, *3*(1), 188–198. https://doi.org/10.20319/pijss.2017.31.188198

Duarte, P., Silva, S. C. E., & Ferreira, M. B. (2018). How convenient is it? Delivering online shopping convenience to enhance customer satisfaction and encourage e-WOM. *Journal of Retailing and Consumer Services*, *44*(September), 161–169. https://doi.org/10.1016/j.jretconser.2018.06.007

Dwivedi, Y. K., Rana, N. P., Jeyaraj, A., Clement, M., & Williams, M. D. (2019). Re-examining the Unified Theory of Acceptance and Use of Technology (UTAUT): Towards a revised theoretical model. *Information Systems Frontiers*, *21*, 719–734. https://doi.org/10.1007/s10796-017-9774-y

Gao, L., & Waechter, K. A. (2017). Examining the role of initial trust in user adoption of mobile payment services: An empirical investigation. *Information Systems Frontiers*, *19*, 525–548. https://doi.org/10.1007/s10796-015-9611-0

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Hair Jr, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: Updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, *1*(2), 107–123. https://doi.org/10.1504/ijmda.2017.087624

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*, 115–135. https://doi.org/10.1007/s11747-014-0403-8

Hu, Z., Ding, S., Li, S., Chen, L., & Yang, S. (2019). Adoption intention of fintech services for bank users: An empirical examination with an extended technology acceptance model. *Symmetry*, *11*(3), 1–16. https://doi.org/10.3390/sym11030340

Jonathan, R., & Soelasih, Y. (2022). Pembentuk intention to use dompet digital melalui consumer attitude. *Jurnal Manajemen*, *19*(1), 39–52. https://doi.org/10.25170/jm.v19i1.2300

Karjaluoto, H., Shaikh, A. A., Saarijärvi, H., & Saraniemi, S. (2019). How perceived value drives the use of mobile financial services apps. *International Journal of Information Management*, *47*(August), 252–261. https://doi.org/10.1016/j.ijinfomgt.2018.08.014

Muhtasim, D. A., Tan, S. Y., Hassan, M. A., Pavel, M. I., & Susmit, S. (2022). Customer satisfaction with digital wallet services: An analysis of security factors. *International Journal of Advanced Computer Science and Applications (IJACSA)*, *13*(1), 195–206. https://doi.org/10.14569/IJACSA.2022.0130124

Nigam, A., & Kumari, S. (2018). Adoption of united payment interface application: An empirical investigation using TAM framework. *Apeejay Journal of Management & Technology*, *13*(1), 21–28.

Ramos de Luna, I., Liébana-Cabanillas, F., Sánchez-Fernández, J., & Muñoz-Leiva, F. (2019). Mobile payment is not all the same: The adoption of mobile payment systems depending on the technology applied. *Technological Forecasting and Social Change, 146*(September), 931–944. https://doi.org/10.1016/j.techfore.2018.09.018

Rathore, H. S. (2016). Adoption of digital wallet by consumers. *BVIMSR's Journal of Management Research*, *8*(1), 69–75.

Sharma, S. K., & Sharma, M. (2019). Examining the role of trust and quality dimensions in the actual usage of mobile banking services: An empirical investigation. *International Journal of Information Management*, *44*(February), 65–75. https://doi.org/10.1016/j.ijinfomgt.2018.09.013

Singh, N., Sinha, N., & Liébana-Cabanillas, F. J. (2020). Determining factors in the adoption and recommendation of mobile wallet services in India: Analysis of the effect of innovativeness, stress to use and social influence. *International Journal of Information Management*, *50*(February), 191–205. https://doi.org/10.1016/j.ijinfomgt.2019.05.022

Singh, N., Srivastava, S., & Sinha, N. (2017). Consumer preference and satisfaction of m-wallets: A study on North Indian consumers. *International Journal of Bank Marketing*, *35*(6), 944–965. https://doi.org/10.1108/IJBM-06-2016-0086

Slade, E. L., Dwivedi, Y. K., Piercy, N. C., & Williams, M.

D. (2015). Modeling consumers' adoption intentions of remote mobile payments in the United Kingdom: Extending UTAUT with innovativeness, risk, and trust. *Psychology & Marketing*, *32*(8), 860–873. https://doi.org/10.1002/mar.20823

Soelasih, Y., & Sumani. (2020). Strategies to maintain aviation consumers during the COVID-19 pandemic in Indonesia. *Academy of Strategic Management Journal*, *19*(Special Issue 1), 1–13.

Subaramaniam, K., Kolandaisamy, R., Jalil, A. B., & Kolandaisamy, I. (2020). The impact of e-wallets for current generation. *Journal of Advanced Research in Dynamical and Control Systems*, *12*(1 Special Issue), 751–759. https://doi.org/10.5373/JARDCS/V12SP1/20201126

Suhaily, L., & Soelasih, Y. (2017). What effects repurchase intention of online shopping? *International Business Research*, *10*(12), 113–122.

Suhaily, L., & Soelasih, Y. (2018). How e-service quality, experiential marketing, and price perception to make repurchase intention on on-line shopping? *The International Journal of Business Management and Technology*, *2*(3), 10–20.

Tahar, A., Riyadh, H. A., Sofyani, H., & Purnomo, W. E. (2020). Perceived ease of use, perceived usefulness, perceived security and intention to use e-filing: The role of technology readiness. *Journal of Asian Finance, Economics and Business*, *7*(9), 537–547. https://doi.org/10.13106/JAFEB.2020.VOL7.NO9.537

Tajvidi, M., Wang, Y., Hajli, N., & Love, P. E. D. (2021). Brand value co-creation in social commerce: The role of interactivity, social support, and relationship quality. *Computers in Human Behavior, 115*, 1–8. https://doi.org/10.1016/j.chb.2017.11.006

Tarantang, J., Awwaliyah, A., Astuti, M., & Munawaroh, M. (2019). Perkembangan sistem pembayaran digital pada era revolusi Industri 4.0 di Indonesia. *Jurnal Al-Qardh, 4*(1), 60–75. https://doi.org/10.23971/jaq.v4i1.1442

Wang, Y. Y., Wang, Y. S., & Lin, T. C. (2018). Developing and validating a technology upgrade model. *International Journal of Information Management*, *38*(1), 7–26. https://doi.org/10.1016/j.ijinfomgt.2017.07.003

Xu, F., & Du, J. T. (2018). Factors influencing users' satisfaction and loyalty to digital libraries in Chinese universities. *Computers in Human Behavior*, *83*(June), 64–72. https://doi.org/10.1016/j.chb.2018.01.029

Yadav, M. P., & Arora, M. (2018). A study on impact on customer satisfaction for e-wallet using path analysis model. *Proceedings of 4th International Conference on Computers and Management (ICCM),* 248–251.

Yaprak, Ü., Kılıç, F., & Okumuş, A. (2021). Is the COVID-19 pandemic strong enough to change the online order delivery methods? Changes in the relationship between attitude and behavior towards order delivery by drone. *Technological Forecasting and Social Change*, *169*(August), 1–16. https://doi.org/10.1016/j.techfore.2021.120829