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Extended technology acceptance model for Indonesian mobile wallet: Structural equation modeling approach

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Abstract

Industrial developments that occurred today are fast; we are living in an era of sophisticated technology. Indonesia ranked second (24.3%) among countries where the adoption of mobile payment apps is growing most fast. One of the most developed services is the mobile wallet. Observing this phenomenon, researchers decided to examine what factors influence mobile wallet adoption and whether the offers made by mobile wallet platforms affect the adoption of technology. This research employs an extended Technology Acceptance Model (TAM) to understand what influences the intention to adopt the mobile wallet. We investigated those variables-perceived usefulness, perceived ease of use, perceived risk, social influence, mobility and price sensitivity. Online questionnaires were distributed, and a sample of 221 respondents was collected for analysis through the structural equation model (SEM) approach with AMOS software. The findings from the study revealed that perceived ease of use, social influence, and mobility significantly impact society's behavioral intention to adopt mobile wallets. In contrast, perceived usefulness and perceived risk do not significantly impact society to adopt a mobile wallet. Perceived ease of use, social influence, and mobility have a positive relationship with adopting a mobile wallet. However, the price sensitivity variable was eliminated.

Keywords: Mobile wallet, TAM, SEM, Financial technology

1. Introduction

Industry 4.0 ushers in the digitalization era and denotes the decline for centralized systems. In the past, the manufacturing system was centralized, but now it becomes smarter, more adaptable and able to collaborate with other systems to solve problems [1]. Germany played a significant role in this shifting. In 2011, through the Hannover Fair, Germans introduced the Industry 4.0 as the fourth industrial revolution to the world. The industrial developments, along with many other discoveries, simultaneously change our daily lives. Moreover, the tremendous growth of financial transactions that occur in our everyday life knowns as financial technology marks our current era.

Financial technology or fintech innovations have seen an explosive growth worldwide, driven by continuous growth of investment. Mobile applications and low-cost cloud technologies make fintech products and services easily accessible globally than before [2]. People are now connected to the digitalized payment infrastructure rather than depending on cashes and brick-and-mortar banking institutions. Despite that, fintech's potential is exceptional especially in emerging countries where underdeveloped financial systems have often restricted its development. The powerful digital finance can help those countries accelerate considerable economic growth, supported by smart phone penetration in emerging countries.

Nurhayati-Wolff [3] ranked Indonesia seventh on the number of internet users in 2019. In 2016, Indonesia was leading the world in terms of mobile web browsing, followed by the Philippines. Indonesians spent on average 66 minutes on the internet and 69 minutes on mobile applications daily. In terms of digital purchasing, the Indonesian market presents an optimistic projection. E-commerce sales are projected to exceed 14.47 billion U.S dollars in 2021, an increase of 5.65 billion from 2016. The number of on-line shoppers in this country is estimated to nearly double between 2015 and 2021.

As an emerging middle-income country according to the World Bank, Indonesia has the potential for a substantial growth. Fintech can also be a way to support Indonesian Ministry of Industry who has designated "Making Indonesia 4.0" integral to implement economic strategies for ushering in the Industry 4.0 era. IDC Financial Insights discloses a list of Fintech companies in Indonesia that are supposed to grow faster than others based on a comprehensive analysis of the country's observed fintech. The payment and lending categories dominate the overall Indonesia fintech landscape in terms of maturity level [4, 5]. McNair [6] ranked Indonesia second at 24.3% among those countries where mobile payment apps adoption is growing fastest, only behind India ranked first at 26.4%. One of the most developed financial services is the mobile wallet. The mobile wallet is the recent form of mobile payment that allows users to share content, access services and establish payments. It is a very advanced versatile application of mobile payment, which substitutes

the functionality of a conventional wallet. Two giant players, Go-Pay and OVO, now control the financial market of Indonesia [7].

Guillaume de Gantes of McKinsey Indonesia remarked that currently Indonesians have begun to switch to digital services as their financial solutions. In other words, more and more Indonesians have relied on cashless digital transactions rather than physical money. Additionally, Gantes pointed out that recently the sales of smartphones in Indonesia increases much faster than the number of bank accounts opened. Currently, people on the island of Java heavily use both OVO and Go-Pay. Based on a current report, Go-Pay was the most popular payment technology in 2018 with OVO and TCash in the second and third place [8].

Another independent research institution, FT Confidential Research Mobile Payment, also pointed out that Go-Pay was the most widely used electronic cash in Indonesia, reaching out to three-quarters of all e-cash users [9]. Not far behind Go-Pay, at the end of 2018, OVO transaction volume was more than 1 billion per year at a growth of more than 400%-users have installed its mobile financial applications on 115 million devices. Harianto Gunawan, the director of OVO, said that OVO reached almost all Indonesia regions at 93% penetration within a year with 77% of its users outside the Jabodetabek (Jakarta, Bogor, Depok, Tangerang, and Bekasi) area.

Gantes explained that currently non-banking digital financial services operated only around 5% and far behind China with 60% coverage. The use of digital services will continue to grow because Indonesia is still shaping the financial landscape of collaboration between banks and fintech services. Based on McKinsey's research, banking services are currently shifting to digital technologies: notably up to 50% of customers have started to rely their financial transactions on digital services.

The emergence of financial technology in Indonesia can be identified by the growth of digital business and subsequently a host of e-commerce sites (e.g., Tokopedia, Bukalapak, Lazada, etc.) and online transportation (e.g., Gojek, Grab, and Uber). By catering to people's desire for business interactions, the applications have enticed people to contribute their time and money in the digital world persistently. However, the market of financial technology applications (fintech apps) is very competitive, and today's popular applications are quickly replaced by new ones tomorrow. Consequently, the influential factors of a fintech app need to be investigated to identify those building good experiences with users and attracting them to use those services.

This study's main purpose is to examine the effects of influential factors related to fintech service on the behavioral intention to use and investigate the empirical evidence about the users' acceptance level towards the mobile wallet. We modified the technology acceptance model (TAM) accordingly for this particular research. To distinguish from previous studies on technology acceptance models, this research makes contributions by investigating additional influential factors-mobility, social influence, perceived risk, and price sensitivity-which are significant to user's intention to adopt new technologies according to current literature on mobile services and digital commerce. Consequently, this research may provide more insights into this subject area as an exploratory study to develop an extended TAM framework for Indonesian market, which is among the largest in Southeast Asia. Based on the results of this investigation, we also provide suggestions for the adoptation of digital wallets.

The rest of the paper is structured as follows. The relevant literatures and hypotheses development are covered in Section 2. Section 3 describes the research method and data used in this study. The profile of respondents and the obtained results using Structural Equation Modeling (SEM) technique are discussed in section 4. The discussions of the results are covered in section 5. Last, section 6 provides the conclusion of this study.

2. Literature and hypotheses development

This section discussed the relevant literature of modified TAM and hypotheses proposed for this research.

2.1 Perceived usefulness (PU) and perceived ease of use (PEU)

TAM described perceived usefulness and perceived ease of use as strong predictors of attitude toward and intention to use information systems and services. Perceived usefulness (PU) is the extent to which a person believes that using a specific system would increase their job performance [10]. Several studies have used the TAM model to study the impact of perceived usefulness on user attitude and behavioral intention. TAM indicates that perceived ease of use directly influences perceived usefulness because a more comfortable system requires less effort to accomplish [11].

Perceived ease of use (PEU) is the extent to which a person believes that using a specific system would be free of effort [10]. Shin [12] implied that perceived usefulness and ease of use may influence attitude, affecting customers' use intention. Other studies showed that perceived usefulness and perceived ease of use were determined to be significant antecedents of the intention to use mobile payment [11]. Perceived usefulness and perceived ease of use are among the most widely studied variables in the adoption of technology. Those should be regarded as critical factors of adoption; that is, it is relatively easy for users to learn and use mobile payment/ wallet [13-15]. Therefore, the following hypotheses are proposed:

H_1: Perceived usefulness has significant and positive effects on the intention of adopting a mobile wallet.
H_2: Perceived ease of use has significant and positive effects on the perceived usefulness of mobile wallets.
H_3: Perceived ease of use has significant and positive effects on the intention of adopting a mobile wallet.

2.2 Perceived risk (PR)

Perceived risk is the hesitancy to face a product or service's negative results, which is essential for explaining satisfaction and intention to use technology. Some literatures described the relationship between perceived risk and the intention to use a technology such as those conducted by Kim et al. [13] and Thakur and Srivastava [16] in the fields of mobile commerce and mobile payment. Another study by Yuan et al. [17] discovered perceived risk as an antecedent to satisfaction and intention to use in mobile banking. All those studies strongly agree with the negative relationship between perceived risk and the intention to use technology.

While many literature works described the relationship between perceived risk and the intention to use technology, discussions of the relationship between perceived risk and price sensitivity were relatively limited. In situations where a high level of uncertainty exists, consumers may want to lessen the spending or losses, which may affect price sensitivity [18]. Natarajan et al. [18] found that perceived risk does not directly influence price sensitivity when it comes to mobile shopping applications. Nevertheless, the perceived risk-price sensitivity relationship may be different in terms of a mobile wallet. Hence, the following hypotheses are proposed:

H_4: Perceived risk has significant and negative effects on the intention of adopting a mobile wallet.
H_5: Perceived risk has significant and positive effects on price sensitivity in using a mobile wallet.

2.3 Social influence (SI)

Social influence is a direct determinant of the intention of use [10]. Social influence (SI) is defined as the extent others' opinions can influence the adoption of a given system [19]. Nysveen et al. [20] defined social influence as a person's perception toward people important to the individual think he or she should or should not perform the behavior. Researches showed that social influence could influence an individual's behaviors [10].

Zhou [21] found out that social influence has a positive effect on usage intention. Another research confirmed the significance of social influence on the intention to adopt mobile payment [17]. Hence, the following hypothesis is proposed:

H6: Social influence has significant and positive effects on the intention of adopting a mobile wallet.

2.4 Mobility (M)

Mobility is the most critical quality of mobile technology and a vital advantage over traditional approaches. The temporary dimension of mobility enables users to access communication, information, and services anytime and anywhere [13]. Usefulness and mobility are the advantages of technology. Usefulness takes the advantages of technology in general, while mobility takes advantages of portability technology offers.

Kim et al. [13] pointed out that mobility was a significant predictor of PU, but there is no direct relationship between those two. At the same time, Mallat et al. [22] found a relationship between context and mobility. Park and Kim [23] also found that perceived mobility is one of the critical antecedents of PU of 4G long term evolution (LTE) services. Liébana-Cabanillas et al. [14] pointed out that mobility do not significantly affect the behavioral intention of m-commerce. Therefore, the following two hypotheses are proposed:

H7: Mobility has significant and positive effects on the perceived usefulness of mobile wallets.

H8: Mobility has significant and positive effects on the intention of adopting a mobile wallet.

2.5 Price sensitivity (PS)

Only a few studies researched on the effects of intention to use technology based on price sensitivity, and it may not be appropriate for all technology acceptance studies [18]. Nonetheless, researchers did point out that the relationship between the intention of use and price sensitivity can be a promising research area. Highly price-sensitive consumers will look for a lower price compared to less price-sensitive consumers. Price sensitivity means the way buyers reacting to prices and price changes [24]. Park and Kim [23] showed the effect of price sensitivity on the continuation and buying intentions. Other researchers found that behavior intention to use mobile shopping apps negatively relates to price sensitivity [18]. Consequently, Price sensitivity may impact the intention of using a mobile wallet. Therefore, the following hypothesis is proposed:

H9: Price sensitivity has significant and negative effects on the intention of adopting a mobile wallet.

2.6 Behavioral intention to use (BI)

Behavioral intention to use denotes effective use of a future product or service [19]. Intention to use technology is a core concept in TAM and can define a large portion of the user's actual system usage [12]. In this research, behavioral intention is an endogenous variable (Figure 1).
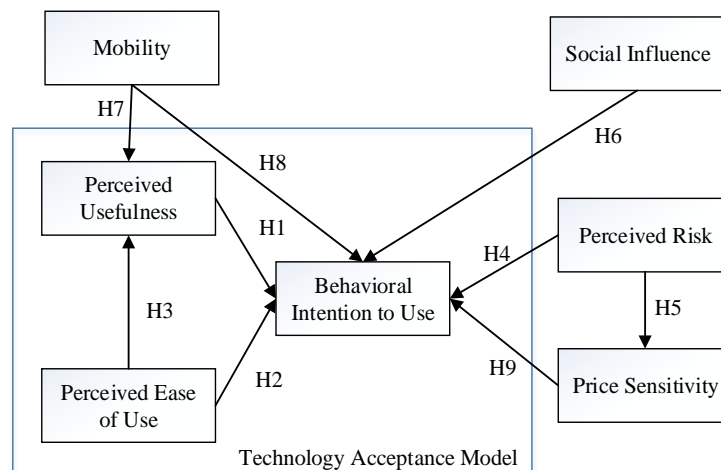

Figure 1 Extended technology acceptance model

3. Research methods

3.1 Research procedure

The research methodology comprised of six main steps: 1) Preparation: The statement of problems was determined first followed by the formulation of study objectives; 2) Literature and hypotheses development: Relevant previous literatures regarding hypotheses development were discussed in this section; 3) Research methods: The questionnaire was adopted from TAM model and previous case studies. The structure of the questionnaire and data collection processes are described in Section 3.2. Data collection: First, data were gathered through the questionnaire. Second, the data were recorded and screened after collecting; 4) Results: structural equation model was applied to determine the appropriate model and to test the proposed hypotheses; 5) Discussion: The analysis of data, the findings

of the study and discussion are outlined in this section; 6) Conclusion: The conclusion and suggestion are outlined in this section. Figure 2 illustrates the methodological procedure of this research.
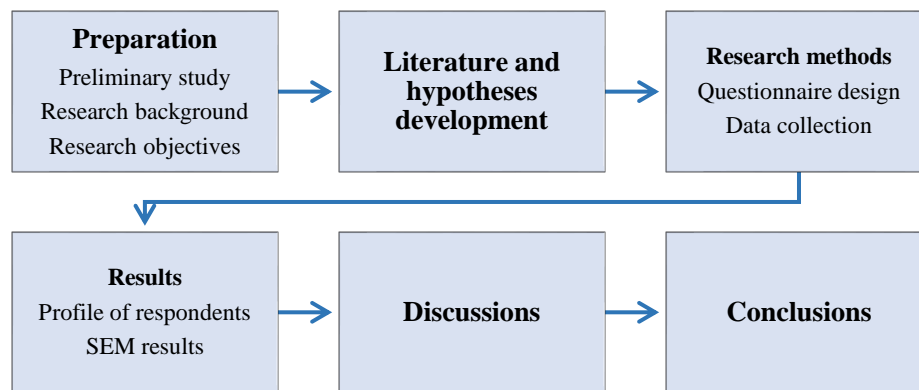

Figure 2 Research methodological procedure

3.2 Questionnaire design and data collection

In this research, the questionnaire items in this study were obtained from various previous researches and used for this research. The questionnaire is divided into two parts. The first part consists of questions about the demographic information of the respondents. The second part consists of measuring the theoretical constructs of the proposed research model, including perceived usefulness, perceived ease of use, and behavioral intention.

Constructs in this research (as shown in Table 1) were measured using a six-point Likert scale, which is used for closed-ended questions. The Likert scale comprises a series of statements at which the respondent selects the degree of agreement or disagreement by providing a numerical score [25]. Respondents had to choose a response regarding the series of statements from strongly disagree to strongly agree. This research population is individuals who have used the financial technology in the form of mobile wallets, especially Go-Pay or OVO during 2019 (at least once).

Questionnaires were distributed online between October and December 2019 through social medias and related online forums. After eliminating the same participant's multiple responses through a screening of e-mail and IP addresses, the final useful sample comprises 221 responses. Although only 221 respondents had responded, each respondent might have used one or more types of mobile wallet.

Table 1 Construct and indicators

Constructs	Code	Indicators/ Question items	Source
Perceived Usefulness (PU)	PU1	I believe the mobile wallet would be a useful service in my daily activities	[10]
	PU2	I believe using the mobile wallet would make me perform my financial transactions more quickly	[10]
	PU3	Using the mobile wallet would save time so I can do other daily activities	[19]
	PU4	The Mobile wallet would bring me greater convenience	[19]
Perceived Ease of Use (PEU)	PEU1	Learning to use the mobile wallet would be easy to me	[10]
	PEU2	I find the mobile wallet easy to use	[26]
	PEU3	The mobile wallet is easy to use in general	[26]
	PEU4	The mobile wallet is understandable and clear	[14]
Perceived Risk (PR)	PR1	I would not feel completely comfortable by providing my personal information through the mobile wallet system	[19]
	PR2	I am worried about the future use of the mobile wallet services because other people might be able to access my data	[19]
	PR3	The mobile wallet may not perform well and process payments incorrectly	[18]
	PR4	My decision to use the mobile wallet for transactions involves a higher risk	[18]
Social Influence (SI)	SI1	People who influence my behavior advise me that I should use the mobile wallet	[10]
	SI2	People who are important to me advise me that I should use the mobile wallet	[10]
	SI3	I use the mobile wallet because many friends used it	[10]
Mobility (M)	M1	The mobile wallet can be used anytime	[14]
	M2	The mobile wallet can be used anywhere	[14]
	M3	Using the mobile wallet is convenient because my mobile phone is always at hand	[14]
Price Sensitivity (PS)	PS1	I do not mind paying more to buy a product using the mobile wallet (without discounts or cashbacks)	[18]
	PS2	I do not mind spending a lot of money to buy a product using the mobile wallet	[18]
	PS3	In general, the price or cost of buying/ paying a product is important to me	[24]
Behavioral Intention (BI)	BI1	Now I pay for purchases with the mobile wallet	[13]
	BI2	I intend to use the mobile wallet in the future	[27]
	BI3	I expect using the mobile wallet in the future	[27]
	BI4	I will recommend the use of mobile wallet in the future	[27]

4. Results

4.1 Profile of respondents

Data were collected through the survey of 221 users, including 83 male (37.56%) and 138 female respondents (62.44%). Among the 221 respondents, 157 participants (71.04%) were under the age of 25, 37 (16.74%) were between 25 to 38 years old, and 27 people (12.21%) were between 39 to 58 years old. With regard to occupation, 120 participants (54.30%) were students, while 78 respondents were working professionals. Additionally, 11 (4.98%) were entrepreneurs, and 12 (5.43%) were not working. In terms of average expenditure per month, 65 respondents (29.40%) spent less than $100, 130 participants (58.82%) spent from $100 to $500, and 26 (11.76%) reported that they spent more than $500 per month. Furthermore, all 221 participants were Indonesian. In regard to the purpose of using mobile wallets, 117 respondents (52.94%) said that they used the mobile wallet to pay the online transportation service, 48 (21.71%) food and goods delivery service, 36 respondents offline transactions, and 20 respondents online transactions. 71 participants used the mobile wallet everyday, 91 (41.18%) 1-3 times a week, and the rest 3-6 times per week (as shown in Table 2).

Table 2 Profile of respondents (N=221)

		Frequency	Percentages
Gender	Male	83	37.56
	Female	138	62.44
Age	< 25	157	71.04
	25-38	37	16.74
	39-58	27	12.21
Occupation	Students	120	54.30
	Working professionals	78	35.29
	Entrepreneurs	11	4.98
	Not working	12	5.43
Average expenditure/month	< 100US$	65	29.40
	100-500US$	130	58.82
	> 500US$	26	11.76
Purpose of use	Online transportation	117	52.94
	Food/good delivery	48	21.71
	Offline transaction	36	16.29
	E-commerce	20	9.05
	Everyday	71	32.13
Frequency of use/	1-3 times	91	41.18
week	3-6 times	59	26.70

4.2 Result of the structural equation model

Following Anderson and Gerbing [28]'s suggestion, this study conducted a two-stage analysis based on structural equation modeling (SEM), including the measurement and structural model analysis.

Convergent validity and discriminant validity of the measurement model were assessed before conducting a goodness of fit test. Three criteria for convergent validity have been met. Most of factor loading for the observed variables are over 0.5 (Figure 3) and significant, the composite/construct reliability of the latent variables are higher than or near 0.7, and the average variance extracted (AVE) for the latent variables are higher than or near 0.5 (as shown in Table 3).

In order to meet the requirements for discriminant validity (as shown in Table 4), a chi-square difference test was conducted with the correlation coefficient for any two factors set as one. The results presented the significant increases in the chi-square values, proving that the fixed correlation coefficient as 1 was not correct (as shown in Table 5). The obtained results confirmed discriminant validity of this study, with a confidence level of 95%.

Result of the structural model (Figure 3) shows that the model fulfilled the goodness of fit criteria (CMIN/DF = 3.576, GFI = .90, RMSEA = .071, AGFI = .86, CFI = .92, IFI = .93, RMR = .06). R-square for endogenous variables was estimated to understand the predictive power of the structural model. The R-square for final extended TAM model is 0.81.

As seen in Table 5, most of the hypotheses are supported with positive effects. However, perceived usefulness does not influence the intention to adopt a mobile wallet-neither does perceived of risk. We eliminated the Price sensitivity variable because PS1 and PS2 are invalid, and PS3 has a Heywood Case problem.

Table 3 Construct reliability and variance extracted

Construct	Sum of standardized loading	Sum squared of standardized loading	Sum of measurement error	Construct reliability	Variance extracted
Social Influence (SI)	2.295	1.789	1.483	0.813	0.596
Mobility (M)	1.68	1.007	1.993	0.586	0.336
Perceived Risk (PR)	2.235	1.698	1.302	0.793	0.566
Perceived Ease of Use (PEU)	1.329	0.891	1.109	0.614	0.446
Perceived Usefulness (PU)	2.912	2.13	1.870	0.819	0.532
Behavioral Intention to Use (BI)	3.082	2.38	1.620	0.854	0.595
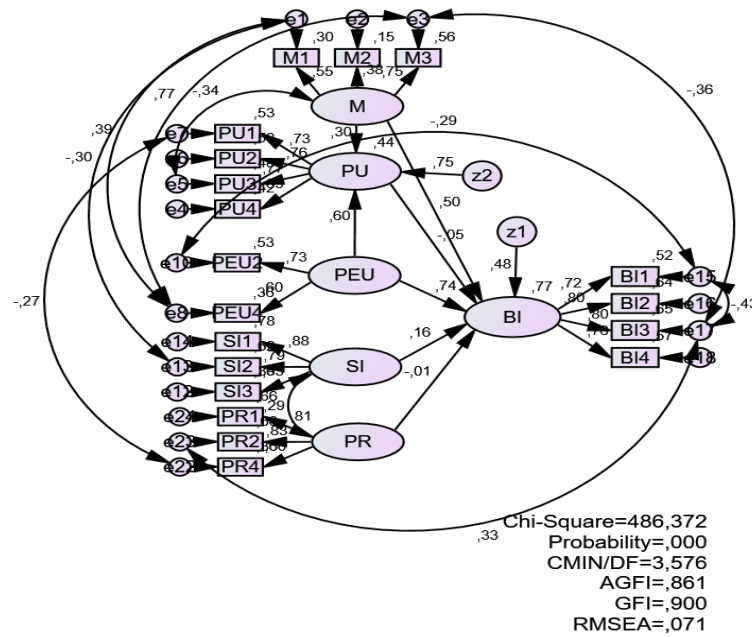
Figure 3 Final extended TAM model

Table 4 Discriminant validity

Dimension	χ^2	$\Delta\chi^2$
(PU, PEU)	317.1	43.3
(PU, PR)	320.4	56.5
(PU, SI)	310.5	40.4
(PU, M)	305.3	69.3
(PU, BI)	311.7	41.2
(PEU, PR)	322.6	84.6
(PEU, SI)	324.4	66.5
(PEU, M)	301.3	85.1
(PEU, BI)	298.2	40.8
(PR, SI)	321.8	74.3
(PR, M)	334.5	86.2
(PR, BI)	301.9	75.4
(SI, M)	305.2	50.9
(SI, BI)	302.1	73.4
(M, BI)	295.3	55.2

Table 5 Decisions of hypotheses

			Estimate	S.E.	C.R.	p	Standardized regression weights	Decision	Effect
PU	<---	M	.368	.110	3.349	***	.297	Supported	Positive
PU	<---	PEU	.619	.094	6.585	***	.596	Supported	Positive
BI	<---	M	.844	.252	3.352	***	.495	Supported	Positive
BI	<---	PU	-.068	.181	-.378	.705	-.050	Not Supported	-
BI	<---	PEU	1.059	.209	5.074	***	.742	Supported	Positive
BI	<---	SI	.135	.043	3.126	.002	.165	Supported	Positive
BI	<---	PR	-.010	.052	-.199	.843	-.010	Not Supported	-

5. Discussions and implications

Based on results from this study, Perceived ease of use, social influence and mobility positively affect the society's behavioral intention to adopt the mobile wallet. In contrast, Perceived usefulness and perceived risk did not significantly influence the community to adopt the mobile wallet. Besides, Perceived usefulness has a positive and significant relationship with perceived ease of use. At the same time, Mobility also has a positive and significant relationship with perceived usefulness.

The result repudiated Hypothesis 1 that perceived usefulness did not influence the intention of adopting a mobile wallet. The finding contradicted with the researches done by Venkatesh et al. [10], Shin [12] and Kim et al. [13], which described perceived usefulness as a strong predictor (significant antecedents) of the intention of adopting mobile wallet. This finding might have suggested that users did not think that using a mobile wallet might help and benefit them in their daily activities; nonetheless, they do not mind using it, either.

Based on the demographic data, this research and Kim et al. [13] have the largest different percentages of age, and it has a different percentage in occupation and gender. In Kim et al. [13], the respondents were predominantly males who work for private companies.

Similarly, in Shin [12], the respondents were predominantly males. In comparison, another research reported that perceived usefulness had no significant effect on users' intention to shop online. It is worth noting that the users' intention to adopt the mobile wallet had nothing to do with whether the mobile wallet was useful to them or not; the main reasons were user-friendliness and influence from peers. This finding was also supported by those factors that influence the intention to adopt the mobile wallet: perceived ease of use, mobility, and social influence. Users would continue using the mobile wallet even if app developers upgrade the functionalities of the mobile wallet.

The research results supported Hypothesis 2 that perceived ease of use influences perceived usefulness, in accordance with the research conducted by Muñoz-Leiva et al. [26]. The finding signifies that as mobile wallet interface becomes more user-friendly, their perceive usefulness will increase. Friendly user interface will make the mobile wallet easier for people to use.

The findings from this research supported Hypothesis 3 that perceived ease of use positively influenced the intention of adopting a mobile wallet. The finding is in accordance with the researches done by Venkatesh et al. [10], Kim et al. [13], Shin [12], which showed perceived ease of use was a strong predictor (significant antecedents) of the intention of adopting mobile wallet. It may suggest that the users will continue to use a mobile wallet; the mobile wallet platforms have to provide their value to the users.

The findings refuted Hypothesis 4 that perceived risk did not influence the intention of adopting a mobile wallet, in contradiction with prior researches conducted by Kim et al. [13], Thakur and Srivastava [16] and Yuan et al. [17], whose works pointed out the negative relationship between Perceived Risk and Behavioral Intention to use technology. At the same time, Muñoz-Leiva et al. [26] found that perceived risk did not significantly influence users' intention to use mobile banking apps. The plausible explanation for the research by Yuan et al. [17] was that at that time of reporting mobile banking in China was still at its early stage that users were not confident with the cybersecurity. They also reported that the effect of perceived risk is more salient for men. In this study, the users of mobile wallets were predominately women. Moreover, Bank of Indonesia has implemented the standardization of the QR code scanning as a payment method. All mobile wallet platforms have QR codes as a payment method. Go-Pay applies OTP (One Time Password), PIN, and maximum transaction policies to verified users. OVO also promised its on-line system's dependability even if users lose their phones-they will well maintain users' on-line account balances. OVO also implemented a layered security system [29]. Since the mobile wallet platforms had already established trust relationship with the general public even if the digital financial service providers upgrade their on-line security, users would continue to use the technology regardless.

The finding confirmed Hypothesis 6 that social influence did affect behavioral intention, in accordance with the research done by Abrahao et al. [19], Zhou [21] and Oliveira et al. [30]. The result may suggest that the recommendation from those who were influential might drive a mobile wallet's adoption.

Our investigation supports hypothesis 7 that Mobility influenced perceived usefulness, supported by Kim et al. [13] and Park and Kim [23].

Our discovery agreed with Hypothesis 8 that mobility positively influenced behavioral intention but contradicted with the study by Liebana-Cabanillas et al.'s study [14], which pointed out that Mobility did not significantly affect Behavioral Intention. This observation can be explained as follows: as the mobile wallet can easily be used anytime and anywhere, the intention of using a mobile wallet increases.

The findings in this study would have significant implications for developing mobile wallet services. Based on the study results, adopting the mobile wallet will increase if the service providers enhance perceived ease of use, social influence, and mobility. Consequently, it is paramount to develop a user-friendly interface for the mobile wallet. Based on the Daily Social [31], most respondents use fintech (mobile wallet) services because of their ease and efficiency; 74.90% attributed to the reason of mobile wallet is easy to use while 71.03% attributed to its simplicity.

While perceived ease of use influences users' intention toward mobile wallet, perceived usefulness influences perceived ease of use positively. In other words, if the mobile wallet becomes more useful to the general public, users will perceive higher degree of ease of use, and more people may want to adopt a mobile wallet. This kind of perception can be created by adding more useful features of the mobile wallet and making it more user-friendly. For example, people may have many ways to conduct business transactions, such as directly entering their phone numbers, scanning QR codes or one-dimensional barcodes.

Daud [32] pointed out that the state-owned digital wallet application, LinkAja, had been officially launched. LinkAja's CEO, Danu Wicaksana, said that using the electronic money as a payment method would help increase financial inclusion. He noted that this application would be used to pay for KRL-the commuter rail in Greater Jakarta, Indonesia-using the QR code system. Currently, LinkAja had already been used at the Soekarno Hatta Airport Train Transportation. In the future, this application can also be used for the payment of mass rapid transit (MRT), bus rapid transit (BRT) and toll roads. The RFID tag will be affixed to a car's headlights that driver does not need to stop at tollgates.

Based on Daily Social [31], as far as fintech was concerned, the internet had become an intermediary medium, and users of internet-based services would benefit from it. Around 50% of users said the current connectivity was sufficient regarding the internet distribution, while 41.7% did not agree. One suggestion to the service providers of mobile wallet platforms is to be vigilant of the internet connectivity to ensure users' internet connectivity in order to use their financial services.
Moreover, to increase social influence, mobile wallet platforms may provide discount rewards or other incentives for the service referral because the results did show that social influence positively impacted the intention of adopting the mobile wallet. Service providers of Mobile wallet platforms may focus their marketing strategies on the word-of-mouth marketing. Most of the users or customers trusted referrals from people close to them. One recommendation is to facilitate a commentary column, customer testimonies, or reviews, feedback, or posting on the social media.

The word-of-mouth marketing is a useful tool for generation Z (millennial) in Indonesia. They are the frequent users of mobile devices and actively connected through the social media. They participate proactively on the social media, share their opinions and make decisions based on comments from those sites. For generation Z, acceptance by their peers was very important because they need to feel that they have something in common [33]. It will be useful if the service providers' marketing strategy geared toward the generation Z to promote the mobile wallet. According to the results of this study that most mobile wallet users were generation Z or currently students.

Next, in terms of Mobility, Sugianto [29] and Pertiwi [34] recommended that providers of mobile wallet platforms might expand to small and medium enterprises (SMEs). Those providers like Go-Pay and OVO also claimed that 70% of Indonesia's shopping centers and almost 80% of modern food outlets adopted their digital financial services. Conveniently, all users can perform financial transactions at any time where the internet is available. Not surprisingly, the intention of adopting a mobile wallet is rising.

6. Conclusions

This study analyzes the technology acceptance factors regarding mobile wallet users' behavioral intention in the Jabodetabek area. A questionnaire survey was conducted to gather research data to fulfill the research's objectives. While analyzing the collected data, a structural equation model was constructed. From this research, we can draw the conclusion that young people predominantly use the mobile wallet. The result also shows the upward trend of mobile wallet user in the younger generation, especially the generation Z. The mobile wallet users are typically females and mostly used the service in the Jabodetabek. Go-Pay and OVO have a close competition for reaching out to users and become the most prominent players in this field.

Perceived ease of use, social influence and mobility significantly impact the society's behavioral intention to adopt mobile wallets. In contrast, perceived usefulness and perceived risk did not significantly affect the community to adopt the mobile wallet. Perceived ease of use, social influence, and mobility did have a positive relationship with intention to adopt the mobile wallet. Perceived Usefulness has a significantly positive effect on Perceived Ease of Use. At the same time, mobility is significantly positive with perceived usefulness. We eliminated the Price Sensitivity variable because PS1 and PS2 were not valid, and PS3 had a Heywood Case. Although the methods used to complete this study were maintained as accurately as was possible in the restriction of time, material and human resources, there were still several limitations and future work should be conducted to this study. For future researches, we suggest the expansion of research scope to cover larger Indonesian area and increase the sophisticated levels of survey questions. For more in-depth analysis, future researchers may perform the comparative study among the existing service providers of mobile wallet because so many service providers of mobile wallet platforms had sprung up in Indonesia. It will be interesting to see what factors differentiate social acceptance toward the adoption of a specific mobile wallet platform. To conclude, the findings from this study are beneficial for fintech companies and their stakeholders who intend to reach out to potential users based on an appropriate TAM model.

7. References

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