Understanding Mobile Payment Continuance in Indonesia: A Brand Equity Perspective Continuance Model

Raden Roro Fosa Sarassina* Economics and Business Department, Vocational School, University of Gadjah Mada Daerah Istimewa Yogyakarta 55281, Indonesia Email: fosa.sarassina@ugm.ac.id

Abstract-As the Indonesian government promotes cashless transactions, more and more efforts are put to make people adopt and keep using electronic money, including mobile payment (m-payment). The research focuses on investigating factors that influence people's intention to keep using m-payment using two robust theories in the continuance intention: Technology of Acceptance Model (TAM) and Expectation Confirmation Model (ECM). Despite the robustness, the two models do not consider the user's judgement of the issuer's brand influence, which is reflected through its brand equity. Then, to fill this gap, A Continuance Model-Brand Equity Perspective (CMBEP) is proposed. The research applies a quantitative approach to validate the model. The data are collected using an online questionnaire to m-payment users. Then, Structural Equation Modelling (SEM) with SmartPLS software test the four hypotheses. Based on the analysis of 420 respondents, it is found that all the hypothesis is supported, and the model is validated. It shows the strongest to weakest relationships: perceived usefulness to satisfaction, perceived ease of use to satisfaction, satisfaction to continuance intention, and brand equity to continuance intention. The findings shed light on m-payment issuers for not only focusing on creating satisfaction for their users but also building a brand with strong equity.

Index Terms—M-Payment, Continuance Intention, User Satisfaction, Perceived Usefulness, Perceived Ease of Use, Brand Equity

I. INTRODUCTION

THE government is eager to make Indonesians go cashless to prevent corruption [1]. Furthermore, during a pandemic, cashless payment presence is also critical to prevent the spread of the COVID-19 virus, which can transmit via cash [2]. Consequently, cashless payment tool, such as credit card, debit card, and mobile payment (m-payment), has become increasingly popular. It attracts a growing number of users to use them, particularly m-payment. In December 2021, the existing m-payment issuers, such as ShopeePay, Go-Pay, OVO, LinkAja, and others, managed to accumulate 602 million transactions amounting to 35 Billion Rupiah daily [3]. However, the ability to attract such a vast number of users will not be regarded as a success of m-payment, as the success of a system is more determined by its ability to retain existing users than simply recruit new ones [4]. As a result, research that focuses on studying m-payment continuation intentions in Indonesia is necessary.

The success of an information system depends more heavily on the continuance usage than on its ability to recruit adopters to use the system [4]. Based on that fact, numerous studies are conducted to investigate factors influencing the continuance usage of information systems, such as mobile banking [5–7], learning management systems [8, 9], and e-commerce [10, 11]. The studies have numerous frameworks and variables like self-efficacy [7, 12], satisfaction [13–15], and perceived usefulness [16, 17]. Among these studied variables and frameworks, many researchers find that the fit model to explain the information system continuance model is Expectancy Confirmation Model (ECM) [9, 12, 17, 18] and Technology of Acceptance Model (TAM) [19-21]. Therefore, using one or both of these frameworks to analyze the continuance intention of an information system seems to be promising. However, the two leading models have not considered brand equity an antecedent of continuance intention.

Brand equity is an essential antecedent of continuance intention because it strongly predicts brand loyalty [22]. Then, brand loyalty is considered the same as continuance intention [23]. Therefore, brand equity is a good candidate of predictor for continuance intention.

Brand equity is the power of the brand. It makes a brand have to make anything that bears its name more valuable in the eyes of the customer [24]. With

Received: Nov. 11, 2021; received in revised form: March 22, 2022; accepted: March 22, 2022; available online: March 31, 2022. *Corresponding Author

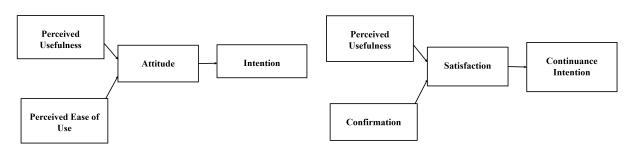


Fig. 1. Technology Acceptance Model (TAM).

good brand equity management, a company can charge a premium price to its customer for the same quality product and make consumers sure about its product quality [24, 25]. Brand equity should also be used as a tool by realizing its robustness to analyze an information system continuance that includes but is not limited to an m-payment continuance system.

Based on the context of how crucial m-payment continuance intention is in Indonesia and the current literature of continuance intention, analyzing mpayment continuance intention using robust theories of TAM and ECM and brand equity in the Indonesian context is deemed timely. The results are expected to help m-payment issuers by informing them of what needs to be improved or maintained to keep their customers using their m-payment. Thus, it can ensure the success of their m-payment.

II. LITERATURE REVIEW

Continuance intention or loyalty is the intention to keep using the same technology, brand, and goods [26]. In the research, it is the intention to keep using the same m-payment, such as ShopeePay, GoPay, OVO, LinkAja, and other m-payment brands in Indonesia. Previous research on continuance intention of m-payment in many countries has mostly gravitated around TAM and ECM as the model for analysis. The TAM model is depicted in Fig. 1.

TAM has been used as a theory base for the adoption of internet banking, m-payment, internet-based learning application, and many intentions and behaviours related to the adoption of new technology [27–32]. Similar to TAM, the ECM model also has been utilized as a base for analysis of intention for many behaviours in a smartwatch [33], mobile banking [34], e-payment [19], and chatbot [35]. ECM is shown in Fig. 2. These two leading theories have been compared and analyzed. Both theories have similarities with the same construct, like perceived usefulness. Moreover, continuance intention in ECM is a construct that can be used as intention in TAM [33].

Fig. 2. Expectancy Confirmation Model (ECM).

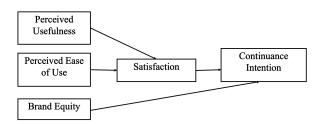


Fig. 3. The proposed model.

Considering that TAM and ECM are the leading theories to test continuance intention, the difference between the two theories is worth noticing. First, ECM proposes that satisfaction is different from attitude. It also suggests that satisfaction replaces attitude as a direct antecedent of continuance intention. Second, ECM dismisses perceived ease of use. Instead, it has a confirmation variable, which explains the discrepancy between customer expectation and reality [36, 37]. For example, Table I shows the difference in attitude and satisfaction items in mobile banking [34].

It can be seen that the two constructs are very similar in that they evaluate the satisfaction for the behaviour discussed. Their only difference lies in the cognitive and affective parts that have been used to express their satisfaction. Attitude constructs use cognitive aspects, while satisfaction constructs have affective aspects. Since ECM, a special model tailored for continuance intention, applies the satisfaction construct as an affective aspect. Therefore, in this model, satisfaction is used. Satisfaction is perceived as an improvement of the TAM model proposed by ECM.

Regarding the confirmation in ECM, the researcher aligns with previous research that confirmation tends to overlap with satisfaction as satisfaction automatically occurs when the expectation is met. So, including confirmation will cause parsimony [35]. Confirmation is excluded in the research model used (see Fig. 3). Then, as the antecedent of satisfaction, perceived ease of use and usefulness are proposed.

Both theories explain that continuance intention is mainly a product of satisfaction and attitude. Then,

Attitude		Satisfaction	
Code	Item	Code	Item
Att1	Using m-banking services is a good idea	Satis1	I am satisfied with the m-banking
Att2	Using m-banking services is beneficial	Satis2	I am pleased with the m-banking
Att3	Using m-banking services is a wise idea	Satis3 Satis4	I am contented with m-banking I am delighted with m-banking

TABLE I ITEMS FOR ATTITUDE AND SATISFACTION

the antecedent of satisfaction is mainly derived from features of the product, such as benefits acquired and how easy it is used. However, one thing that both theories have not included in their model is a value perception of m-payment. It should not be treated merely as an information system, but it is also a product with a brand behind it. It is called brand equity with its effect on satisfaction.

Brand equity postulates that a brand can have assets and value that it can leverage to get loyal customers and repurchase intention [22, 38]. It can add value in the customers' eyes and make a product have a higher value than the same product without a brand [24]. Therefore, with brand equity, a brand can have more chance of getting loyal customers and repurchase intention. In the context of using m-payment, it is continuance intention. However, in m-payment, research on the customers' brand equity perspective is still scarce. Brand equity is not equalized as brand image and measures only whether the seller has a good reputation and honesty or not [39]. These measurements are not in line with the meaning of brand equity proposed by Aaker. According to Aaker, brand equity is the extra value that a brand has. It makes the users willing to pay the premium price more than its competitor for the same services or products.

Moreover, in previous research, brand equity is also investigated as an antecedent of trust and security [22]. It is not as an antecedent of continuance intention as the research proposes. When people talk about the value of a brand, they should mention how the customers insist on using the same brand while being also given the same services offered by the competitors and how a brand is supposed to have more value without offering extra services or features [40].

A. Hypothesis

In marketing literature, brand equity is a strong predictor of loyalty [41]. Since continuance intention is a part of loyalty and the conative part of loyalty [42], brand equity is proposed as an antecedent of continuance intention in the research. Hence, the first hypothesis is as follows.

H1: Users' perception of brand equity is positively related to their continuance intention of m-payment.

ECM posits that continuance intention is determined by satisfaction. This relationship has been validated in a meta-analysis that consists of 60 studies analyzing continuance intention of various information systems, such as mobile banking, website, e-learning, Facebook, online application, and mobile applications of social media [16, 43]. Despite its validation in many fields, its validation in continuance intention of m-payment is still very limited. So, the second hypothesis is proposed.

H2: Users' satisfaction influences their continuance intention of m-payment positively.

As described previously, ECM mentions that perceived usefulness is an antecedent of satisfaction, and the relationship has been validated in various information systems [7, 26, 43]. However, its validation in continuance intention of m-payment is still very limited and even scarce in Indonesian contexts. Hence, proposing the relationship will be timely. The third hypothesis is as follows.

H3: Users' perceived usefulness influences their satisfaction of m-payment positively.

In the building process of the ECM theory, which is a combination of Expectancy Confirmation Theory (ECT) and TAM theory, it is stated that the perceived ease of use is a representation of self-efficacy. Moreover, perceived ease of use delivers the inconsistent result to attitude. So, it is recommended to drop out of the proposed ECM model [36]. However, in many TAM-based studies, perceived ease of use positively affects attitude. Similarly, attitude corresponds to satisfaction in ECT theory. So, the fourth hypothesis is proposed.

H4: Users' perceived ease of use influences their satisfaction of m-payment positively.

Then, ECM theories have been compared and combined in determining continuance intention in the application of chatbot of m-banking in Vietnam. It is found that satisfaction mediates the relationship between perceived usefulness, perceived ease of use, and continuance intention [35]. Considering chatbot and m-payment are information technology applied in finance and banking settings, there is a possibility that satisfaction also mediates the relationships in m-payment. So, the last hypotheses are as follows.

H5: Satisfaction mediates the relationship between perceived usefulness and continuance intention.

H6: Satisfaction mediates the relationship between perceived ease of use and continuance intention.

III. RESEARCH METHOD

A. Sampling

The research applies a quantitative method and an online questionnaire to collect the data. The research population is all users of m-payment in Indonesia, which were about 63.9 million people in 2021 [44]. Since the researcher does not have any access to the list of all m-payment users, the respondents are obtained from the Instagram and Facebook of the most popular m-payment, such as OVO, LinkAja, GoPay, and ShopeePay. The questionnaire is distributed by sending a direct message to the social media account of the followers who have commented on the social media page of those m-payments. The researcher also offers an incentive to the respondents who are willing to participate in filling in the questionnaire.

Based on the rule of thumb in SmartPLS, the minimum number of respondents is ten times the number of maximum arrows pointing to a construct. In this case, it is $5 \times 2 = 10$. So, the minimum respondent is $10 \times 10 = 100$. The researcher has formed a team consisting of seven people to work parallelly to contact possible respondents to ensure that the minimum number is achieved. Within three months, 424 respondents have answered. Then, several questions are asked to filter respondents that are non-payment users to make sure that they fulfil the requirement of having used the m-payment before. Only 420 responses are valid and become the number of final respondents from them.

B. Instrument

The questionnaire is used as the main data collection tool for this research. The items asked in the questionnaire are based on previous research with good validity and reliability. The items are presented in Table II.

TABLE II					
MEASUREMENT AND INDICATORS.					

Variable	Item	Source
Continuance Inten- tion (C)	C1. I tend to keep using this m-payment application then stop using it. C2. I prefer to keep using this m-	[12], [36]
	payment more compared to other m-payment applications.C3. If possible, I will stop using this m-payment application (reversed).C4. I intend to continue using m-payment services in the future.	[50]
Satisfaction (Satis)	Satis1. I am satisfied with the m- payment. Satis2. I am pleased with the m-	[12], [30]
	payment. Satis3. I am contended with the m- payment. Satis4. I am delighted with the m- payment.	
Perceived Usefulness (PUS)	PUS1. This m-payment increases my speed in doing a financial transaction. PUS2. This m-payment increases my productivity in a financial transaction. PUS3. This m-payment increases the ef- fectiveness of my financial transaction. PUS4. This m-payment is useful to me.	[31]
Perceived Ease of Use (PEU)	PEU1. This m-payment is easy to use PEU2. Using this m-payment for a fi- nancial transaction is very easy. PEU3. This m-payment is user-friendly. PEU4. This m-payment is easy to un- derstand. PEU5. It is very easy for me to make this m-payment perform its task.	[45]
Brand Equity (BEI)	 BEI1. The brand of X m-payment reflects my lifestyle. BEI2. The X m-payment brand fits well with my personality. BEI3. I can identify the X m-payment brand. BEI4. If X m-payment were a person, I would like to take him or her out for dinner. BEI5. I will like to use services with the logo of the X m-payment. 	[38]

C. Analysis Method

The research is analyzed using Structural Equation Modelling (SEM) with SmartPLS 3.0. The analysis is performed by running the algorithm of the constructs. It is to check the loading of each item of the construct so that only the items which have met the requirements are included in the model. Then, it is continued with running the bootstrapping of the model to check the significance of the relationships proposed in the model.

IV. RESULTS AND DISCUSSION

The analysis starts with a descriptive analysis of the respondents. Since the analysis is done through social media, the respondents are dominated by young respondents (17–25 years old). The results are in line with the number of Instagram and Facebook users in Indonesia, which are dominated by people aged 18–24

Indicators	Ν	Percentage (%)		
Gender				
Female	268	64		
Male	152	36		
Age				
17-25 years old	399	95		
26-34 years old	17	4		
35-43 years old	4	1		
Occupation				
Student	310	74		
Employee	110	26		
Frequently used m-payment				
OVO	97	23		
ShopeePay	147	35		
LinkAja	84	20		
GoPay	92	22		
Using more than one m-pay	ment			
Yes	323	77		
No	97	23		

TABLE IIIThe Profile of the Respondents.

years old, with the following biggest groups of 23–34 and 35–44 years old [46]. Moreover, the respondents are prmarily female, and most are students. The most frequently used m-payment is ShopeePay. However, most respondents use more than one application of m-payment. The detail of the respondents is shown in Table III.

Then, there is a two-step approach to validate a model. It assesses the outer model (measurement) and the inner or structural model [47]. In the research, it is started by evaluating the validity and reliability of the measurements. The results are shown in Fig. 4. As shown in Fig. 4 all items load more than 0.7. It is the minimum score of each item to fulfil the reliability [47]. Hence, all items are reliable.

Besides the loading factors, the reliability is also shown in the composite reliability value, which has to exceed 0.7 [48]. For this model, the composite reliability of all constructs is above 0.7, as shown in Table IV. Similarly, Average Variance Extracted (AVE) values are also more than 0.5. It means that the model is reliable.

Then, convergent validity also must be analyzed. It is also assessed by AVE. The values have to be above 0.5 [47]. In Table IV, the AVE values of all constructs are above 0.5. So, convergent validity is also achieved. The model is valid.

The AVE root square must be above the correlation score among latent variables to fulfil its discriminant validity. Table V shows the results of discriminant validity. It can also be observed by comparing the score of the first row of the table with the score of the same column. If it is higher than other scores in its column, the discriminant validity is achieved. Brand equity has discriminant validity as its first-row score. The AVE root square of 0.810 is above other scores in its column that is 0.639, 0.789, 0.684, and 0.721. Thus, discriminant validity for brand equity is achieved. Moreover, for continuance intention, the highest score in its column is 0.757. The discriminant validity for continuance intention is achieved because it is above 0.624, 0.606, and 0.653. The way to read the results is also the same for perceived ease of use, perceived usefulness, and satisfaction.

After evaluating the measurement model, validity, and reliability, the next step is to evaluate the structural model. It is conducted by assessing the path coefficients and determination of coefficient or R-squared. The results of path coefficients are shown in Table VI. Meanwhile, Table VII shows the results of the Rsquared.

In assessing hypotheses, the t-statistics value has to be above 1.96 for a hypothesis to be accepted [47]. Table VI shows the results of the first to the fourth hypothesis. The t-statistics value of 6.604 for brand equity to continuance intention means a positive and significant relationship between the two constructs. Thus, H1 is accepted. Brand equity influences continuance intention. The finding supports the theory that brand equity influences loyalty, and loyalty is a broader concept than continuance intention [42]. Therefore, strong brand equity leads to a stronger continuance intention. It is essential for m-payment issuers to make sure that their brands have strong equity by creating a brand that fits customers' personalities and lifestyles. So, they feel that the brand is a pleasant thing that they can relate to and like. Besides fitting to customers' personalities, a strong identity is also essential so that customers can identify the brand directly when they see the logo or symbol.

The contribution from this model is that the proposed relationship between brand equity and continuance intention is validated in the m-payment context. It can strengthen the marketing literature by showing that brand equity influences loyalty. It is a broader construct of continuance intention in the context of an information system. Hence, it becomes a valuable insight as the research is one of the very first studies that include brand equity in the continuance intention model of information system that ECM and TAM vastly dominate.

For H2, the t-statistics value is 9.520 for satisfaction to continuance intention. It implies that the two constructs have a significant and positive relationship. The hypothesis is accepted. This finding is in line with the meta-analysis of information system usage [16]

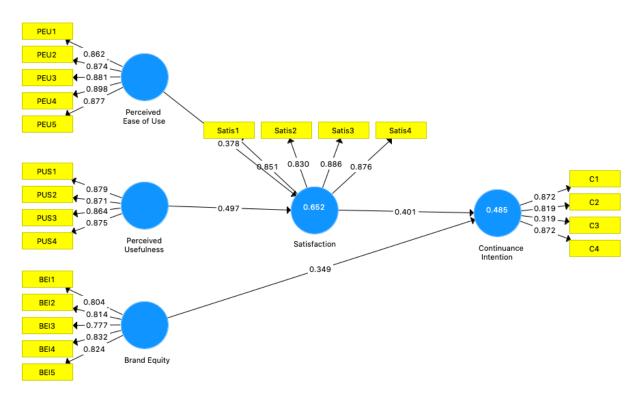


Fig. 4. The measurement and structural model.

TABLE IV The Results of Reliability and Validity Test.

Variable	Composite Reliability	Result	Average Variance Extracted (AVE)	Result
Brand Equity	0.905	0.905 > 0.7: Reliable	0.657	0.657 > 0.5: Valid
Continuance Intention	0.830	0.830 > 0.7: Reliable	0.573	0.573 > 0.5: Valid
Perceived Ease of Use	0.944	0.944 > 0.7: Reliable	0.771	0.771 > 0.5: Valid
Perceived Usefulness	0.927	0.927 > 0.7: Reliable	0.761	0.761 > 0.5: Valid
Satisfaction	0.920	0.920 > 0.7: Reliable	0.741	0.741 > 0.5: Valid

TABLE V The Result of Discriminant Validity.

	Brand Equity	Continuance Intention	Perceived Ease of Use	Perceived Usefulness	Satisfaction	Result
Brand Equity	0.810					0.810 > 0.639; 0.789; 0.684; 0.721 (Valid)
Continuance Intention	0.639	0.757				0.757 > 0.624; 0.606; 0.653 (Valid)
Perceived Ease of Use	0.789	0.624	0.878			0.878 > 0.695; 0.724 (Valid)
Perceived Usefulness	0.684	0.606	0.695	0.872		0.872 > 0.760 (Valid)
Satisfaction	0.721	0.653	0.724	0.760	0.861	0.861 (Valid)

and shows that besides brand equity, m-payment issuers should pay attention to satisfaction, which causes continuance intention. Hence, ensuring that the customers are satisfied becomes an essential factor in maintaining the continuance of customers' intention or loyalty. Consequently, m-payment issuer must manage its customers' satisfaction to keep making them want to continue using their m-payment.

The same finding is also applied to H3 and H4 with the t-statistics value of 12.830 and 9.520 consecutively.

Hence, H3 and H4 are also accepted. Perceived usefulness and perceived ease of use influence satisfaction. Moreover, it also shows that perceived usefulness has the strongest relationship with satisfaction. It is followed by perceived ease of use to satisfaction as the second strongest relationship. It implies that mpayment issuer must make sure that m-payment is fast and reliable, easy to understand, and user friendly. So, the m-payment issuer should continue to check

THE RESULTS OF PATH COEFFICIENTS FOR THE HYPOTHESES.							
	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics (O/STDEV)	P-Values	Result	
H1: Brand Equity \rightarrow Continuance Intention	0.352	0.355	0.053	6.604	0.000	Accepted	
H2: Satisfaction \rightarrow Continuance Intention	0.405	0.403	0.058	6.963	0.000	Accepted	
H3: Perceived Use- fulness \rightarrow Satisfac- tion	0.497	0.497	0.040	12.380	0.000	Accepted	
H4: Perceived Ease of Use \rightarrow Satisfaction	0.378	0.380	0.040	9.520	0.000	Accepted	

TABLE VI

the speed and reliability of m-payment's response to customers' inquiry and request if they want to keep their satisfaction and continuance intention.

Considering that this model is derived from two existing leading models of ECM and TAM with an extension of brand equity, the model validated the role of satisfaction as a more specific construct with more salient belief when assessing continuance intention compared with attitude proposed by TAM. However, TAM also shows valuable antecedents of satisfaction: perceived ease of use and perceived usefulness. The finding shows that these two constructs are the more specific constructs to evaluate satisfaction. It is in line with the previous finding in chatbot in Vietnam that satisfaction should be assessed with perceived ease of use and usefulness, not by confirmation as proposed by ECM [35].

As the framework suggests that satisfaction is derived from perceived ease of use and usefulness, it is highly recommended that the m-payment issuer always pay attention to these two factors. They can ensure that the applications are always user friendly. The applications should not cause the user to be frustrated in using it by fast responding and giving clear benefit to them.

After assessing the hypotheses, the R-squared result is also evaluated. The model is considered weak if the value is between 0.19 to below 0.33; moderate if between above 0.33 to 0.67; and strong if the value is above 0.67 [47]. Table VII shows the results. First, the R-squared of continuance intention is 0.485. It means that satisfaction and brand equity explain 48.5% of continuance intention. Second, for satisfaction, the R-squared is 0.652. The satisfaction is explained by perceived usefulness and ease of use about 65.2%. Both values are above 0.33, showing that the model is moderate.

From Table VIII, it is found that both mediating effects of satisfaction are accepted. H5 and H6 are

TABLE VII **R-SQUARED RESULTS.**

	R-Squared	Adjusted R-Squared
Continuance Intention	0.485	0.483
Satisfaction	0.652	0.650

accepted. Satisfaction mediates the relationship between perceived ease of use and perceived usefulness to continuance intention. The research validates the role of satisfaction as a mediator between perceived ease of use and perceived usefulness to continuance intention, which is still rarely investigated in the context of m-payment. Then, at the same time, the factors also influence continuance intention. The result aligns with the proposed relationship on chatbot continuance intention in Vietnam [35]. Therefore, using satisfaction despite attitude to investigate continuance intention has helped the model to reach its parsimony. Specifically, in m-payment usage, m-payment issuer should pay attention to satisfaction to ensure continuance intention by always making sure that the application is effective, fast, reliable, and user-friendly.

Based on this finding, it is found that all the items in the perceived usefulness are influential to satisfaction. In the end, it also influences continuance intention. The finding shows that the abilities of m-payment to increase the speed of financial transaction and productivity and effectiveness of financial transaction of its users becomes things that must be managed by m-payment issuer. These indicators can maintain or increase its users' satisfaction and continuance intention.

To increase the customers' satisfaction further, the m-payment issuer should also manage perceived ease of use as it influences customer satisfaction. Then, in turn, it influences continuance intention. Based on the perceived ease of use items, the m-payment must be easy to use, user-friendly, and easy to understand. The easy-to-understand m-payment application increases

TABLE VIII Mediator Analysis of Specific Indirect Effects.						
	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics (O/STDEV)	P-Values	Result
H5: Perceived Use- fulness \rightarrow Satisfac- tion \rightarrow Continu- ance Intention	0.200	0.198	0.034	5.854	0.000	Accepted
H6: Perceived Ease of Use \rightarrow Satis- faction \rightarrow Continu- ance Intention	0.152	0.151	0.028	5.378	0.000	Accepted

satisfaction and continuance intention.

V. CONCLUSION

The research investigates the factors that influence people's intention to keep using m-payment with TAM and ECM. From R-squared, the model proposed is moderate. Then, the results show that perceived usefulness has the strongest relationship with satisfaction. It is followed by relationships of perceived ease of use to satisfaction, satisfaction to continuance intention, and brand equity to continuance intention.

There are two research implications. First, practically, it is recommended that m-payment issuers pay more attention to the management of brand equity to increase and maintain continuance intention in the future. Several indicators with good loading scores when connected to continuance intention in the proposed model are found from the measurement indicators on brand equity. For example, a good brand is shown by its ability to reflect the users' personality, and a brand should fit the personality of its users and bears a logo that customers directly recognize and relate with. The brand should also be liked by its users. Second, theoretically, the finding contributes to the body of knowledge by acknowledging brand equity as an antecedent of continuance intention. It is a possible extension of the continuance intention model that ECM and TAM have dominated.

There are several research limitations. First, the confirmation variable is not considered in the research as satisfaction automatically occurs when expectations are met. So, there is not much contribution in terms of what the issuer of m-payment can do to improve the satisfaction by including confirmation variable. They can only lower the expectation or increase the effort to achieve previously set expectations to be met or exceeded. Another limitation is the small number of respondents. The respondents are only obtained from social media. So, it causes limitation in terms of generalizing the findings, especially to other m-payment users who are not very active on social media.

For future research, if the purpose is to compare models or conduct the path analysis, confirmation variable by ECM and attitude are proposed. Hence, the Rsquared result of each model, such as TAM, ECM, and the proposed model, can be compared. The validation of the model is clear and can explain more variance of continuance intention in m-payment. These steps have not been done in the research as the researcher tries to select the variable that is considered more salient. In this case, satisfaction is chosen to become part of the proposed model.

ACKNOWLEDGEMENT

I gratefully acknowledge the contribution of Nadhifa Nurusania and Thalita Vania Kurniasari for their assistance in data collection.

REFERENCES

- R. K. Nisa, "Cegah korupsi, Mendagri dorong cashless transaction," 2020. [Online]. Available: https://bit.ly/3tPLgZF
- [2] M. Al Amin, M. S. Arefin, M. S. Alam, and T. F. Rasul, "Understanding the predictors of rural customers' continuance intention toward mobile banking services applications during the COVID-19 pandemic," *Journal of Global Marketing*, pp. 1–24, 2021.
- [3] Bank Indonesia, "Jumlah uang elektronik beredar," 2021. [Online]. Available: https: //www.bi.go.id/id/statistik/ekonomi-keuangan/ ssp/uang-elektronik-jumlah.aspx
- [4] W. L. Shiau, Y. Yuan, X. Pu, S. Ray, and C. C. Chen, "Understanding fintech continuance: Perspectives from self-efficacy and ECT-IS theories," *Industrial Management & Data Systems*, vol. 120, no. 9, pp. 1659–1689, 2020.
- [5] A. Susanto, Y. Chang, and Y. Ha, "Determinants of continuance intention to use the smartphone banking services: An extension to the expectation-confirmation model," *Industrial Man*agement & Data Systems, vol. 116, no. 3, pp. 508–525, 2016.

- [6] Y. Sun and S. A. H. Havidz, "Factors impacting the intention to use m-payment," in 2019 International Conference on Information Management and Technology (ICIMTech), vol. 1. Jakarta/Bali, Indonesia: IEEE, Aug. 19–20, 2019, pp. 290–294.
- [7] A. Gupta, A. Yousaf, and A. Mishra, "How preadoption expectancies shape post-adoption continuance intentions: An extended expectationconfirmation model," *International Journal of Information Management*, vol. 52, pp. 1–13, 2020.
- [8] M. N. A. Rahman, S. N. A. S. Zamri, and L. K. Eu, "A meta-analysis study of satisfaction and continuance intention to use educational technology," *International Journal of Academic Research in Business and Social Sciences*, vol. 7, no. 4, pp. 1059–1072, 2017.
- [9] A. A. Rabaa'i, S. A. ALmaati, and X. Zhu, "Students' continuance intention to use Moodle: An expectation-confirmation model approach," *Interdisciplinary Journal of Information, Knowledge, and Management*, vol. 16, pp. 397–434, 2021.
- [10] A. Putra, "Factors influencing the adoption of mcommerce in Indonesia: A study of TAM and TPB integration model," Master's thesis, University Institute of Lisbon, 2018.
- [11] D. Cyr, M. Head, and A. Ivanov, "Design aesthetics leading to m-loyalty in mobile commerce," *Information & management*, vol. 43, no. 8, pp. 950–963, 2006.
- [12] A. A. Rabaa'i and S. A. ALMaati, "Exploring the determinants of users' continuance intention to use mobile banking services in Kuwait: Extending the expectation-confirmation model," *Asia Pacific Journal of Information Systems*, vol. 31, no. 2, pp. 141–184, 2021.
- [13] P. Raman and K. Aashish, "To continue or not to continue: A structural analysis of antecedents of mobile payment systems in India," *International Journal of Bank Marketing*, vol. 39, no. 2, pp. 242–271, 2021.
- [14] M. F. Johar, A. F. Alwie, and Jahrizal, "Pengaruh pemasaran relasional dan harga terhadap kepuasan dan loyalitas pelanggan Tokopedia pada mahasiswa Fakultas Ekonomi dan Bisnis Universitas Riau tahun akademik 2017-2018," *Jurnal Tepak Manajemen Bisnis*, vol. 10, no. 4, pp. 776– 788, 2018.
- [15] D. Darmawan, "The effect of brand experience on brand trust and brand loyalty," *Translitera: Jurnal Kajian Komunikasi dan Studi Media*, vol. 7, no. 2, pp. 13–24, 2018.
- [16] F. B. Franque, T. Oliveira, C. Tam, and F. D. O. Santini, "A meta-analysis of the quantitative stud-

ies in continuance intention to use an information system," *Internet Research*, vol. 31, no. 1, pp. 123–158, 2020.

- [17] T. T. Le, H. M. Pham, N. H. Chu, D. K. Nguyen, and H. M. Ngo, "Factors affecting users" continuance intention towards mobile banking in Vietnam," *American Journal of Multidisciplinary Research & Development (AJMRD)*, vol. 2, no. 4, pp. 42–51, 2020.
- [18] Y. Y. Cao, X. H. Qin, J. J. Li, Q. Q. Long, and B. Hu, "Exploring seniors' continuance intention to use mobile social network sites in China: A cognitive-affective-conative model," *Universal* Access in the Information Society, vol. 21, pp. 71–92, 2020.
- [19] K. Ladkoom and B. Thanasopon, "Factors influencing reuse intention of e-payment in Thailand: A case study of PromptPay," in *Proceedings of* the 22nd International Conference on Enterprise Information Systems (ICEIS 2020), vol. 1, 2020, pp. 743–750.
- [20] E. Fernando, Surjandy, Meyliana, and D. Touriano, "Development and validation of instruments adoption FinTech services in Indonesia (Perspective of trust and risk)," in 2018 International Conference on Sustainable Information Engineering and Technology (SIET). Malang, Indonesia: IEEE, Nov. 10–12, 2018, pp. 283–287.
- [21] Meyliana, E. Fernando, and Surjandy, "The influence of perceived risk and trust in adoption of fintech services in Indonesia," *CommIT (Communication and Information Technology) Journal*, vol. 13, no. 1, pp. 31–37, 2019.
- [22] N. H. Quan, N. T. K. C. Chi, D. T. H. Nhung, N. T. K. Ngan, and L. T. Phong, "The influence of website brand equity, e-brand experience on e-loyalty: The mediating role of e-satisfaction," *Management Science Letters*, vol. 10, no. 1, pp. 63–76, 2020.
- [23] C. Poromatikul, P. De Maeyer, K. Leelapanyalert, and S. Zaby, "Drivers of continuance intention with mobile banking apps," *International Journal* of Bank Marketing, vol. 38, no. 1, pp. 242–262, 2020.
- [24] D. A. Aaker, "Measuring brand equity across products and markets." *California Management Review*, vol. 38, no. 3, pp. 102–120, 1996.
- [25] Z. Qorbani, H. Koosha, and M. Bagheri, "The impact of brand equity on customer equity," in 2019 15th Iran International Industrial Engineering Conference (IIIEC). Yazd, Iran: IEEE, Jan. 23–24, 2019, pp. 212–222.
- [26] T. J. Larsen, A. M. Sørebø, and Ø. Sørebø, "The

role of task-technology fit as users' motivation to continue information system use," *Computers in Human Behavior*, vol. 25, no. 3, pp. 778–784, 2009.

- [27] H. H. Chang, C. Y. Huang, C. S. Fu, and M. T. Hsu, "The effects of innovative, consumer and social characteristics on willingness to try nanofoods: Product uncertainty as a moderator," *Information Technology & People*, vol. 30, no. 3, pp. 653–690, 2017.
- [28] G. Q. Eltin, "Pengaruh kepercayaan, persepsi kegunaan, dan persepsi kemudahan penggunaan terhadap niat berperilaku dalam mengadopsi Financial Technology (Fintech)," Bachelor's thesis, Fakultas Ekonomi dan Bisnis, Universitas Lampung, 2019.
- [29] L. P. Choo, G. K. Sidhu, and C. Y. Fook, "Investigating ESL students' writing performance in the pre-diploma English language preparatory course," in *International Conference on Advanced Research in Business and Social Sciences 2015*, Kuala Lumpur, Malaysia, Sept. 2–3, 2015, pp. 229–238.
- [30] P. G. Schierz, O. Schilke, and B. W. Wirtz, "Understanding consumer acceptance of mobile payment services: An empirical analysis," *Electronic Commerce Research and Applications*, vol. 9, no. 3, pp. 209–216, 2010.
- [31] N. Singh, N. Sinha, and F. J. Liébana-Cabanillas, "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*, vol. 50, pp. 191–205, 2020.
- [32] A. D. Santosa, N. Taufik, F. H. E. Prabowo, and M. Rahmawati, "Continuance intention of baby boomer and X generation as new users of digital payment during COVID-19 pandemic using UTAUT2," *Journal of Financial Services Marketing*, vol. 26, no. 4, pp. 259–273, 2021.
- [33] E. Park, "User acceptance of smart wearable devices: An expectation-confirmation model approach," *Telematics and Informatics*, vol. 47, pp. 1–11, 2020.
- [34] B. Foroughi, M. Iranmanesh, and S. S. Hyun, "Understanding the determinants of mobile banking continuance usage intention," *Journal of Enterprise Information Management*, vol. 32, no. 6, pp. 1015–1033, 2019.
- [35] M. Ashfaq, J. Yun, S. Yu, and S. M. C. Loureiro, "I, chatbot: Modeling the determinants of users' satisfaction and continuance intention of AI-

powered service agents," *Telematics and Informatics*, vol. 54, pp. 1–17, 2020.

- [36] A. Bhattacherjee, "Understanding information systems continuance: An expectationconfirmation model," *MIS Quarterly*, vol. 25, no. 3, pp. 351–370, 2001.
- [37] D. M. Nguyen, Y. T. H. Chiu, and H. D. Le, "Determinants of continuance intention towards banks' chatbot services in Vietnam: A necessity for sustainable development," *Sustainability*, vol. 13, pp. 1–24, 2021.
- [38] X. Gong, C. M. K. Cheung, K. Z. K. Zhang, C. Chen, and M. K. O. Lee, "Cross-side network effects, brand equity, and consumer loyalty: Evidence from mobile payment market," *International Journal of Electronic Commerce*, vol. 24, no. 3, pp. 279–304, 2020.
- [39] K. Garrouch, "Does the reputation of the provider matter? A model explaining the continuance intention of mobile wallet applications," *Journal of Decision Systems*, vol. 30, no. 2-3, pp. 150–171, 2021.
- [40] M. Hafez, "The impact of social media marketing activities on brand equity in the banking sector in Bangladesh: The mediating role of brand love and brand trust," *International Journal of Bank Marketing*, vol. 39, no. 7, pp. 1353–1376, 2021.
- [41] X. Chen and H. Qasim, "Does e-brand experience matter in the consumer market? Explaining the impact of social media marketing activities on consumer-based brand equity and love," *Journal* of Consumer Behaviour, vol. 20, no. 5, pp. 1065– 1077, 2021.
- [42] D. Ball, P. Simões Coelho, and A. Machás, "The role of communication and trust in explaining customer loyalty: An extension to the ECSI model," *European Journal of Marketing*, vol. 38, no. 9/10, pp. 1272–1293, 2004.
- [43] C. Tam, D. Santos, and T. Oliveira, "Exploring the influential factors of continuance intention to use mobile apps: Extending the expectation confirmation model," *Information Systems Frontiers*, vol. 22, no. 1, pp. 243–257, 2020.
- [44] C. M. Annur, "Survei: OVO rajai pangsa pasar e-wallet Indonesia pada 2020," 2021. [Online]. Available: https://bit.ly/3JQjv91
- [45] N. Peña-García, I. Gil-Saura, A. Rodríguez-Orejuela, and J. R. Siqueira-Junior, "Purchase intention and purchase behavior online: A crosscultural approach," *Heliyon*, vol. 6, no. 6, pp. 1– 11, 2020.
- [46] C. M. Annur, "Ada 91 juta pengguna Instagram di Indonesia, mayoritas usia berapa?" 2021.

[Online]. Available: https://bit.ly/3Nz8gUA

- [47] I. Ghozali and H. Latan, Partial least squares konsep, teknik dan aplikasi menggunakan program SmartPLS 3.0 untuk penelitian empiris. Semarang: Badan Penerbit UNDIP, 2015.
- [48] J. F. Hair Jr, G. T. M. Hult, C. M. Ringle, and M. Sarstedt, A primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). Thousand Oaks: SAGE publications, 2014.