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Understanding the adoption of digital payment in Indonesian SMEs using modified technology acceptance model

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ABSTRACT

The purpose of this study is to assess users' acceptance of OVO (one of the apps that Indonesians frequently use for digital payments) among Indonesian SMEs using a modified version of the technology acceptance model (TAM). A comprehensive investigation is required to understand the factors influencing the acceptability of digital payments in Indonesia, especially in the SME sector. Two hundred and forty-seven SEM actors were subjected to an offline questionnaire. This study adopted a modified technology acceptance model (TAM) with Partial least squares structural equation modeling (PLS-SEM). SmartPLS software is used to evaluate the data. The findings show that the driving force behind the use of digital payments is significantly correlated with its perceived usefulness and security. The influence of these factors on behavioural intention is affected by attitudes towards utilizing. The findings demonstrate the extent to which this digital payment mechanism is relevant and applicable to the majority of SMEs in Indonesia. This study provides information about the key factors that govern users' consideration to use OVO (as a representation of digital payment apps that are used by SME actors). The intention to adopt digital payment in Indonesian SMEs is high if the user believes that the apps are beneficial and secure.

Contribution/Originality: Following the COVID-19 pandemic, this is the first study to demonstrate an evaluation of the market relevance, applicability levels, and motivations to use digital payment methods among SME actors in Morowali, Indonesia.

1. INTRODUCTION

Due to recent advancements in information technology (IT), the current trend towards digitization is significantly changing the value of financial services with the introduction of novel business models, such as finance startup companies (Puschmann, 2017). The third phase of the fintech industry is now underway and being propelled by the rise of new start-ups that can link financial services with technology to satisfy consumer's demands (Setiawan, Nugraha, Irawan, Nathan, & Zoltan, 2021). Leveraging digital technologies, financial technology or FinTech start-ups provide cutting-edge financial services and promote advancements in industries including trading, wealth management, and payments (Chuen & Teo, 2015; Kim, Choi, Park, & Yeon, 2016). FinTech start-ups are newly established businesses that offer financial services using digital technologies involving the Internet,

mobile computing, and data analytics to promote, develop, or challenge financial services (Gimpel, Rau, & Röglinger, 2018).

As a result of the establishment of new information technology (IT) supported service models, which have expedited the digital servitization of financial goods, startup companies and large technology corporations have typically developed more user-friendly and customer-oriented digital banking applications. Fintech companies have also developed many of these cutting-edge financial solutions. Some of the most recent technological advancements may replace or change the business operations of more established institutions (Haddad & Hornuf, 2023).

In the monetary system these recent years, digital payment in the form of electronic money (e-money) is one of the many retail payment innovations that have been implemented globally, especially after the COVID-19 pandemic. The pandemic pushed people to change their lifestyles from cash to cashless to minimize human physical contact. Not only in a developed country but also in a developing one like Indonesia (Pambudi & Rahadi, 2021). Bank Indonesia's governor encouraged people to reduce their reliance on cash by conducting the National Non-Cash Movement. This movement worked to gradually reduce the use of cash in society by increasing public knowledge of non-cash payment methods. Despite its geographical location and vast population, Indonesia's development of electronic-based payment instruments has lagged behind that of other ASEAN nations. This represents an unrealized opportunity to increase access to digital payment systems (Raharja, Muhyi, & Herawaty, 2020).

In Indonesia, there are several digital payment services, and one of the most popular apps is OVO. It is even said to be the most popular e-money app by Snapchart in 2019 (Indrawan, 2021). This startup-based application provides online payment and transaction services. It can be used in purchase transactions, services, food, entertainment, and payments in e-commerce. In both the third and second quarters of 2018, OVO ranked as Indonesia's second-largest monthly active user. (Ariani & Harsono, 2022) report that at the start of the COVID-19 pandemic, OVO service transactions significantly increased, resulting in a 276% increase in users, a 15% increase in orders for food delivery services, and a 110% growth in e-commerce.

Indonesian urban areas seem to be quite familiar with digital payment technology. According to the E-Wallet Industry Outlook 2023 report from Insight Asia, out of 1,300 urban residents surveyed, 74% of them have used digital payments (Adelia & Indah, 2023). In this group, around 61% use multiple online payment applications. In contrast to rural communities, they are still making adjustments in terms of online payments, so the development of online payments in rural areas is relatively slow. One area that is still developing in terms of using online payments is Morowali, where the range of online payment facilities is rarely seen. In general, people still make payments in cash, so it is difficult to reduce dependence on the use of cash.

The SMEs in Morowali are the subject of this study. To assist SMEs in growing fairly in the digital era, it is important to highlight that SMEs are one of the drivers of the Indonesian economy. The low adoption of online payments by SMEs in Morowali is the motivation for this research. The modified technology acceptance model (TAM) is the most effective technique for this study. This method enables the reviewer to have a full understanding of how users perceive technology. Thus, the goal of this study is to assess users' acceptance of OVO, one of the apps that Indonesians frequently use for digital payments, among Indonesian SMEs using a modified version of the technology acceptance model (TAM).

2. LITERATURE REVIEW

2.1. Electronic Money

Cashless payments are typically made via intra-bank or inter-bank transfers over the bank's private network rather than by exchanging money. Additionally, card payments can be used to substitute non-cash payments, such as using cards (credit card, debit card, or ATM card) (Khiong et al., 2022). Based on the current monetary units, "electronic money" is developed and simply replaces them in some economic sectors. Since this characteristic can be

found in all forms of money substitutes, it does not necessarily mean that "electronic money" is the new type of money. The novelty of "electronic money" is just a technological one, a logical development in the history of payment methods. "Electronic money" is not an information phenomenon; rather, it is information in the sense of the transfer of ownership rights over real monetary units. Payment methods used to organize cashless transactions provide comparable information (Vlasov, 2017).

2.2. OVO

In Indonesia, OVO is the most popular mobile payment service among more than 100 others. Up to the end of December 2018, there were 115 million OVO users. This increase is 400% greater than the three largest purchases in transportation, retail, and e-commerce. A related earlier study on OVO in 2020 makes clear that mobility is the least important TAM element. The OVO payment system's users' attitudes and intentions are most strongly influenced by its perceived utility. Trust, usefulness, usability, and mobility are significant factors that influence attitudes. Despite the fact that usefulness seems to be the primary factor directly predicting attitude, when the indirect effects of usefulness are taken into account, attitude also has a considerable influence. Additionally, compared to attitude, trust and mobility maintain stronger direct influences on intention. One can infer from the suggested model that there was no statistically significant connection between intention and ease of use (Hidayat, Pangaribuan, Putra, & Taufiq, 2021). Although this previous research is reliable, more recent research is needed, especially after the COVID-19 pandemic. Our study may provide the most recent information on fintech adoption in Indonesia as well as information on the impact of the COVID-19 epidemic on the growth of e-money in Indonesia, particularly in the SME sector.

2.3. Security

Building trust in the digital economy has thus far primarily been viewed as a means of addressing the issue of maintaining the security and privacy of transactions. However, confidence in the digital economy is about developing social connections and networks that fulfill their promises, whether it is a product, a team effort, or just trustworthy information. Similar to the rest of the internet, online trust is continually changing in both its creation and its application (Aschmoneit & Lenz, 2001).

In the context of this research, security refers to the security system that the OVO application offers. In addition to technical factors like authentication and confidentiality, security concerns also take user well-being and a sense of security into account (Shin, 2009). Security is one of the efforts used to safeguard information assets from potential dangers. Therefore, it can indirectly ensure company continuity and reduce possible threats. Customers in China are encouraged to utilize mobile banking due to its safe system security (Laforet & Li, 2005). Customers must have confidence that their payment transactions may be performed as desired and that no unintended parties will see their personal information (Shaw, 2014). Several research findings outline the connection between security and user adoption intentions (Boonsiritomachai & Pitchayadejanant, 2019; Chawla & Joshi, 2019).

2.4. Technology Acceptance Model (TAM) and Hypotheses

A new era in technology must be accepted by everyone (Aggelidis & Chatzoglou, 2009). In recent decades, researchers have developed several models to better understand how users embrace and accept technology. Several times, the effectiveness model for various information technology-based applications has been approved (Carter & Bélanger, 2005). However, the most reliable and well-established technological base is the technology acceptance model (TAM) (Carter & Bélanger, 2005). Specifically, acceptance of technology can be explained by using TAM, which explains the user's behavioral intention.

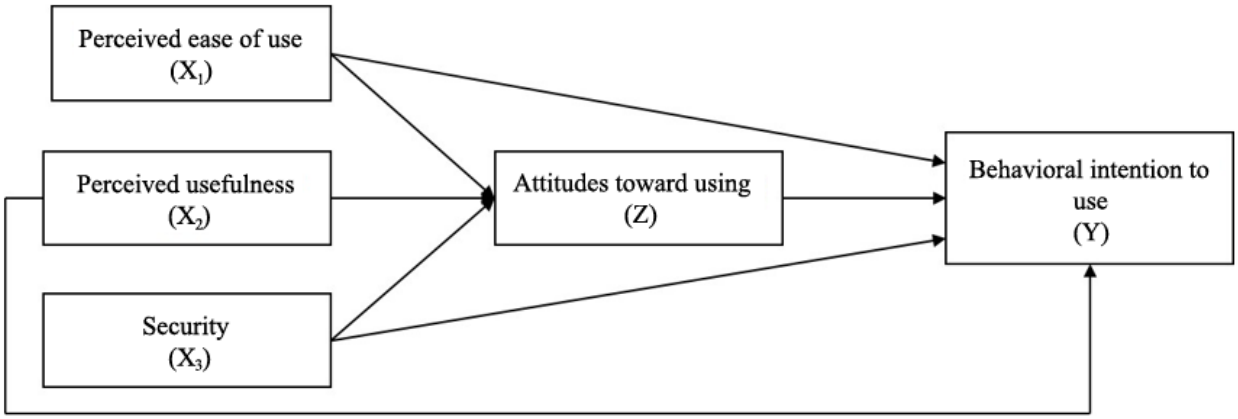

Figure 1. Conceptual model.

There are five known constructs in TAM (Davis, 1989) used in this study, as shown in Figure 1:

(a) Perceived ease of use: The degree to which an individual considers using technology will require the least amount of effort.

(b) Perceived usefulness: The degree to which an individual considers that utilizing technology can enhance performance based on perceived usefulness.

(c) Attitude towards using: Individual evaluation of attitudes towards using technology.

(d) Behavioral intention to use: Interest (desire) in the person's behavior using technology.

(e) Actual technology usage: The frequency of using technology was influenced by the time to interact with technology.

2.5. Direct Effect Hypotheses

In this study, the main constructs are focused on perceived ease of use (PEOU), perceived usefulness (PU), security (SC), attitude towards using (ATU), and behavioral intention (BI) to use. Users' attitude towards the technology is crucial in determining whether they would be truly engaged with it or find it unpleasant. The two key elements believed to determine a user's attitude are PEOU and PU, with PU being significantly correlated with PEOU. Davis claims that perceived usefulness relates to how much a person considers using a certain system will enhance the quality of their work, while PEOU describes how much the technology user considers using a particular technology will be effortless. According to Marangunić and Granić, (2015) beliefs are what drive attitudes, whereas personal concepts about whether a person has access to the resources and opportunities needed to engage in the action are what influence perceived behavioral control.

In this study, PEOU refers to the effectiveness of Fintech service implementation, which includes evaluating the Fintech service's user interface and the ease with which Fintech services may be accessed through different devices. It has been demonstrated that user-friendly displays and interfaces boost customer engagement with financial services and promote consumer adoption of new technology. A previous study found that PEU has a beneficial impact on the adoption of fintech (Nugraha, Setiawan, Nathan, & Fekete-Farkas, 2022).

PU and PEOU are key factors in assessing the technology's level of acceptance. Features and service additions in technology applications would be the main interests of the users (Akram, Ansari, Fu, & Junaid, 2020; Hsieh & Lai, 2020). The role of PU and PEOU affects attitudes and intentions in technology, which is the intention of the user to use technology based on the benefit and ease of using that technology (Bailey, Pentina, Mishra, & Ben Mimoun, 2017; Driediger & Bhatiasevi, 2019; Sun & Chi, 2018). The higher the PEOU of m-commerce, the more positive attitude of the user who is using the application (Chi, 2018). According to a different study by Kuo and Yen (2009) PU and PEOU are the two factors that have the biggest effects on ATU. Based on those findings, these hypotheses can be conducted:

H_1: Perceived ease of use (PEoU) holds a positive and significant influence on attitudes towards using OVO.

H_2: Perceived usefulness (PU) holds a positive and significant influence on attitudes towards using OVO.

Besides PU and PEOU, security is also proven to understand users' attitudes and intentions to use technology (Zhang et al., 2019). The application developers need to create a high level of security and a comfortable application (Grassegger & Nedbal, 2021; Yoon, Vonortas, & Han, 2020). The technology design is made in detail, easy to use, and effective enough to be accepted in public (Tao et al., 2018; Zhang et al., 2019). Consequently, the following hypothesis is put forth based on the modified TAM:

H_3: Security has a positive and significant influence on attitudes using OVO.

BI has proven to have a positive and significant impact on fintech adoption in Vietnam (To & Trinh, 2021). Furthermore, a recent study among Indonesians showed the influence of intention to use against perceived ease of use and perceived usefulness (Denaputri & Usman, 2019; Siagian, Tarigan, Basana, & Basuki, 2022). Based on the findings, a hypothesis can be made:

H_4: Perceived ease of use positively and significantly influenced behavioral intention of using OVO.

H_5: Perceived usefulness positively and significantly influenced behavioral intention of using OVO.

According to earlier research (Denaputri & Usman, 2019; Siagian et al., 2022) security has a significant impact on customers' intentions to use mobile payments. Therefore, this hypothesis can be applied:

H_6: Security can significantly and positively influence the user's intention to use OVO.

The most significant direct influence on people's intentions to use fintech in times of crisis is user attitude (Hu, Ding, Li, Chen, & Yang, 2019; Jünger & Mietzner, 2020; Setiawan et al., 2021).

H_7: Behavioral intention using OVO is significantly and positively affected by the attitude towards use.

2.6. Indirect Effect Hypothesis

As mentioned above, behavioral intention is influenced by the three variables (perceived ease of use, perceived usefulness, and security) (Denaputri & Usman, 2019; Siagian et al., 2022; To & Trinh, 2021), and the three variables also influence attitude towards using (Bailey et al., 2017; Dirsehan & Can, 2020; Driediger & Bhatiasevi, 2019; Sun & Chi, 2018; Zhang et al., 2019) an indirect hypothesis can be conducted. The following hypothesis is proposed:

H_8: Behavioral intention using OVO is significantly influenced by perceived ease of use through attitude toward using.

H_9: Behavioral intention using OVO is significantly influenced by perceived usefulness through attitude toward using.

H_{10}: Behavioral intention using OVO is significantly influenced by security through attitude toward using.

3. METHODOLOGY

The target population in this study is SMEs in Morowali Regency, Central Sulawesi, Indonesia. The data collection process was carried out using a questionnaire survey. In selecting respondents, this study used a purposive sampling technique with the criteria of SME people who were already using OVO. Out of 247 SME respondents, 109 of them met the predetermined criteria (having used OVO before). A five-point Likert scale was used to gauge the respondents' level of agreement (1 = "Strongly Disagree" to 5 = "Strongly Agree"). The variable description is explained in Table 1.

Using the Structural Equation Modeling with Partial Least Squares (PLS-SEM) method, the users of OVO online payment adoption are analyzed with several variables described in Figure 1, such as PEOU, PU, SC, ATU, and BI. The PLS-SEM data analysis method may examine a number of concurrently constructed correlations between the independent and dependent variables, where each variable can be constructed from a number of indicators. The objective of SEM is to calculate the association between variables in a model, including the correlation between latent variables and indicators. Regression analysis and factor analysis are two analyses that are combined in SEM. The analysis consists of two stages. First, the measurement model was tested to see if each indicator's construct validity and reliability were acceptable. Second, the structural model was analyzed to see if

there was any correlation between constructs or effect between variables (Setiawan et al., 2021). The SEM with PLS method is commonly used in this type of research to understand users' adoption of technologies in many countries (Al Kurdi, Alshurideh, Nuseir, Aburayya, & Salloum, 2021; Ali, Javed, & Danish, 2021; Khoa & Khanh, 2021; Nugraha et al., 2022; Setiawan et al., 2021; Tambotoh, Manuputty, & Banunaek, 2015; Yang et al., 2022; Zeng, Liu, Gong, Hertogh, & König, 2021). In this study, we focused on users' adoption among Indonesians, especially SMEs in the Kalimantan area. The contributing variables can vary, but this research uses the factors mentioned above and can be seen in Table 1.

Table 1. Variable description.

No	Construct variable	Indicator	References
1	Perceived ease of use	OVO is easy to understand	Davis (1989)
		OVO is easy to use for transaction	
		OVO is practical	
		OVO is flexible	
2	Perceived usefulness	OVO saves time in the transaction process	Davis (1989)
		OVO is connected to a vast network	
		OVO promotes faster payment	
		OVO is beneficial in transaction	
		OVO minimalizes loss of money	
3	Security	OVO's technology is very safe	Flavián, Guinalíu, and Gurrea (2006)
		OVO's payment services are safer than traditional payments	
		The possibility of losing money saved using OVO is low	
		Transactions made using OVO are safe	
4	Attitude toward using	Using OVO is a good idea	Crespo, Sánchez, and Bosque (2013)
		Using OVO is very necessary for transaction activities	
		Using OVO will be fun	
		Using OVO is a wise decision	
5	Behavioral intention	Will try to use OVO every time you make a transaction	Crespo et al. (2013)
		Don't mind using OVO as a transaction tool	
		Will use OVO for a long time	

Table 2. Profile the survey respondents.

Profile	Classification	Frequency (n = 109)	Value (%)
Gender	Male	66	61%
	Female	43	39%
Age	25-32	16	15%
	33-40	19	17%
	41-48	31	28%
	>48	43	39%
Education	Junior high school	29	27%
	High school	73	67%
	Diploma or bachelor's degree	7	6%
	Masters or doctorate degree	-	-
Net income	± IDR 3–5 million	81	74%
	± IDR 6–10 million	28	26%
	> IDR 10 million	-	-
Business establishment	1-3 years	18	17%
	4-6 years	69	63%
	>6 years	22	20%

4. RESULTS

4.1. Characteristics of the Respondents

Table 2 provides 109 respondent profiles. The gender is dominated by men, with a percentage of 61%. Most of the respondents were older than 48, with a percentage of 39%. Higher education level, with 67% of high school

graduates. Net income in a month is around IDR (Indonesian Rupiah) 3-5 million, according to 74% of respondents. The length of the business is between 4-6 years, or 63%.

4.2. Evaluation of the Outer Model

The tests were performed to measure the Outer model with reflective indicators. The suitability of the measurement model was evaluated by assessing markers of reliability and validity prior to testing the hypotheses. The degree to which the constructed variables are free of error and produce outcomes that are consistent is known as reliability. This value demonstrated the consistency of the data. The reliability tests for this study used Cronbach Alpha and Composite reliability. The degree to which a construct variable differs from a group of variables is described as validity. This value demonstrated the accuracy of the data. The validity of the study was evaluated using discriminant and convergent validity tests.

4.3. Reliability Test

Item loadings were used to evaluate the constructed items' or indicators' reliability. Chin (1998) asserts that a threshold of more than 0.7 denotes the reliability of the data. All of the item loading data in this study has exceeded 0.7 (Table 3), which means each individual object has a sufficient relationship to its construct.

The Variable Perceived ease of use has 4 valid items with a loading factor value between 0.873 to 0.921 (the highest item, X1.3). Variable Perceived usefulness has 5 valid items with a loading factor value between 0.845 and 0.903 (the highest item is X2.3). Variable Security has 4 valid items with loading factor values between 0.714 and 0.825 (the highest item is X3.2). Variable Behavioral intention has 3 valid items with a loading factor value between 0.763 to 0.882 (the highest item, Y.3). The Variable Attitude towards using has 4 valid items with a loading factor value between 0.725 to 0.841 (the highest item, Z.4).

Internal data consistency is evaluated using Cronbach's Alpha and composite reliability. Cronbach's Alpha value for each variable matches the threshold mentioned by Nunnally and Bernstein (1994), which is greater than 0.7. The composite reliability number of each variable used is greater than 0.7 (ranging from 0.875 to 0.944) (Table 3). All of the variables can be considered consistent and reliable. Moreover, given the high composite reliability numbers, the data can be categorized as having a high level of reliability.

Table 3. Item loadings, construct reliability, and convergent validity.

Construct	Item	Loading factor	AVE	Cronbach's alpha	CR
Perceived ease of use (PEOU)	PEOU1	0.916	0.807	0.923	0.944
	PEOU2	0.873			
	PEOU3	0.921			
	PEOU4	0.881			
Perceived usefulness (PU)	PU1	0.900	0.743	0.913	0.935
	PU2	0.868			
	PU3	0.903			
	PU4	0.790			
	PU5	0.845			
Security (SC)	SC1	0.777	0.601	0.780	0.858
	SC2	0.825			
	SC3	0.714			
	SC4	0.782			
Behavioral intention (BI)	BI1	0.763	0.642	0.814	0.877
	BI2	0.860			
	BI3	0.882			
Attitude toward using (ATU)	ATU1	0.815	0.700	0.785	0.875
	ATU2	0.725			
	ATU3	0.819			
	ATU4	0.841			

4.4. Validity Test

4.4.1. Convergent Validity

The degree to which numerous indicators of the same construct are connected with one another is measured through an evaluation known as convergent validity. Convergent validity must be established with the indicator's item loading, composite reliability (CR), and average variance extracted (AVE). When a set of construct elements is considered to have convergent validity, they are all related to the same underlying construct. The value lies between 0 and 1, in accordance with Fornell and Larcker (1981) notion. For convergent validity, the AVE value must be more than 0.50 (Ab Hamid, Sami, & Sidek, 2017). In this study, all the AVE results exceeded 0.5; they ranged from 0.601 to 0.807 (Table 3). Therefore, it supports convergent validity, which means that the construct and the items both exhibit shared variance.

4.4.2. Discriminant Validity

To perform a better validity test, both methods of discriminant validity were used in this study, which are cross-loading and Fornell-Larcker criterion. The factor loading signals on the assigned construct must be greater than all loadings of other constructs when assessing cross-loading, provided that the minimum threshold of item loading is greater than 0.70 (Table 4) (Ab Hamid et al., 2017).

Table 4. Cross-loading discriminant validity.

Indicator	X1 (PEOU)	X2 (PU)	X3 (SC)	Z (ATU)	Y (BI)
PEOU1	0.916	-0.196	-0.217	-0.165	-0.155
PEOU2	0.873	-0.207	-0.194	-0.091	-0.142
PEOU3	0.921	-0.195	-0.151	-0.14	-0.139
PEOU4	0.881	-0.153	-0.109	-0.065	-0.06
PU1	-0.256	0.9	0.58	0.708	0.726
PU2	-0.198	0.868	0.562	0.671	0.656
PU3	-0.108	0.903	0.72	0.723	0.737
PU4	-0.201	0.79	0.485	0.579	0.61
PU5	-0.166	0.845	0.681	0.681	0.643
SC1	-0.137	0.517	0.777	0.594	0.568
SC2	-0.216	0.557	0.825	0.648	0.646
SC3	-0.069	0.427	0.714	0.438	0.467
SC4	-0.167	0.661	0.782	0.646	0.634
BI1	-0.087	0.511	0.495	0.763	0.654
BI2	-0.053	0.742	0.672	0.86	0.758
BI3	-0.207	0.689	0.722	0.882	0.761
ATU1	-0.044	0.647	0.694	0.708	0.815
ATU2	-0.156	0.593	0.46	0.571	0.725
ATU3	-0.2	0.651	0.59	0.73	0.819
ATU4	-0.089	0.625	0.654	0.758	0.841

All items still show construct-forming cross-loading rates that are higher for each variable than the loading values for the other variables, as shown in (Table 4) cross-loading of discriminant validity result. Each variable's loading factor value is still higher than that of the corresponding variable or indicator.

4.5. Fornell Larcker

The Fornell-Lacker criterion determines how closely latent constructs correlate with the average extracted variance (AVE) square root. A latent construct should be more capable of explaining the variance of its indicator than the variance of other latent constructs. Thus, the correlation coefficients with other latent constructs must be lower than the square root of the AVE for each construct (Ab Hamid et al., 2017).

Table 5. Discriminant validity of the construct using Fornell-Larcker criterion.

Variable	PEOU	PE	SC	ATU	BI
PEOU	0.898				
PE	-0.214	0.862			
SC	-0.197	0.706	0.776		
ATU	-0.14	0.782	0.761	0.837	
BI	-0.149	0.784	0.755	0.868	0.801

Referring to Table 5, each construct's roots of the AVE (Fornell-Larcker Criterion) have stronger diagonal values than their correlations with other variables. The correlation with other variables is less than the overall variable with a number on the variable. The measuring model therefore exhibited adequate discriminant validity.

4.6. Evaluation of the Structural Inner Model

The structural model (inner model) is assessed using the coefficients between variables and the value of the coefficient of determination (R2) (Figure 2). The value represents a crucial metric for evaluating how well the model manages to take into account the variations in the dependent variable. According to Daud et al. (2022) a score of nearly 1 means that the independent variables provide almost all of the information required to predict the dependent variable's variation. The structural diagram can be formed as follows:

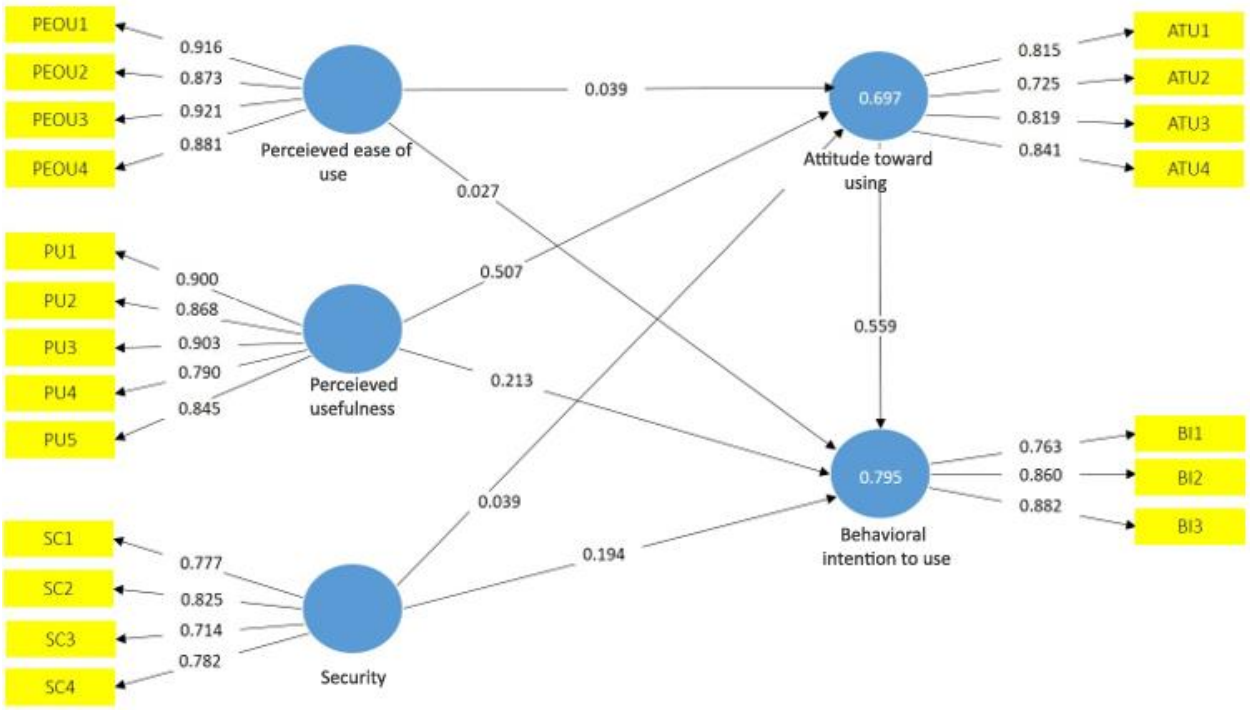

Figure 2. Structural model diagram after data analysis.

The R square, Q square, and Goodness of Fit Index tests are used to measure the inner model's coefficient of determination and predictive relevance (GoF).

According to Hair, Ringle, and Sarstedt (2011) the R square value represents the magnitude of the effect or the ratio of the diversity of exogenous to endogenous variables. The influence of the variables (PEOU, PU, and SC) on the variable Attitude towards usage is represented by the coefficient of determination (R-square) obtained from model 1 (Table 6) of 0.697, or 69.7%. Additionally, in model 2, the variables (PEOU, PU, SC, and ATU) have a 0.795, or 79.5%, influence on the variable Perceived behavioral intention. The R square coefficient category is divided into three sizes: small for R squares of around 0.25, moderate for R squares of between 0.5 and 0.75, and large for R squares of more than 0.75 (Hair et al., 2011).

Table 6. Determination coefficient result.

Paths	R square
PEOU, PU, SC → ATU	0.697
PEOU, PU, SC, ATU → BI	0.795

The R-Square deviates, and the F-Square illustrates this. The F square coefficient category is divided into three subcategories: small for F squares of 0.02 to 0.15, moderate for F squares of 0.15 to 0.35, and large for F squares of greater than 0.35 (Cohen, 2013). The effect size results for this study can be seen in Table 7. It ranged from very small to big.

Table 7. Effect size table result.

Exogen	Model 1 (Z)		Model 1 (Y)	
	F square	Effect	F square	Effect
PEOU	0.005	Very small	0.003	Very small
PU	0.422	Big	0.077	Small
SC	0.270	Adequate	0.072	Small
ATU			0.463	Big

4.7. Predictive Relevance (Q^2)

The formula described by Hair, Ringle, and Sarstedt (2013) determines the overall diversity of data that the model can account for. The diversity of data that the model can describe, according to the Q square calculation's findings, is 0.938. In other words, the model can account for 93.8% of the information in the data. This model's category falls within the strong model category (> 0.35).

4.8. Goodness of Fit Index (GoF)

The average value of the coefficient of determination is multiplied by the average value of its communality (AVE) to determine the Goodness of Fit model's accuracy (Hair et al., 2013). Given that the GoF calculation yielded a result of 0.708, it can be said that the model's accuracy falls into the large category (> 0.36).

4.9. Hypotheses Testing

This part uses SmartPLS software to assess the coefficients or parameters that demonstrate the influence of one latent variable on another latent variable. If the p-value is less than 0.05, the effect is considered significant; if it is larger than 0.05, the effect is considered not significant. In total, there are 7 direct effects and 3 indirect effects in the study's model.

Table 8. Effect results with T-statistics.

Effect	Path coefficient	T statistics	P-values	Remarks
PEOU → ATU	0.039	0.745	0.456	Not significant
PU → ATU	0.507	4.917	0.000	Significant
SC → ATU	0.404	3.897	0.000	Significant
PEOU → BI	0.027	0.506	0.613	Not significant
PU → BI	0.213	3.307	0.001	Significant
SC → BI	0.194	3.248	0.001	Significant
ATU → BI	0.559	7.878	0.000	Significant

4.10. Direct Effect Hypothesis

Overall, 5 of the 7 hypotheses support the data (Table 8). All of the hypotheses positively affect the variables, but two of them are not significant (PEOU → ATU and PEOU → BI). Both not-significant results demonstrate

that PEOU has no effect on ATU (p = (0.456 > 0.050), t = (0.745 <1.96)) or behavioral intention (p = (0.613 > 0.050), t = (0.506 < 1.96)). Therefore, the result does not support H1 and H4.

Attitude towards using is more supported by perceived usefulness (p = (0.000 <0.050), t = (4.917 > 1.96)) and security (p = (0.000 <0.050), t = (3.897 > 1.96)). The behavioral intention data mirrors the attitude towards using the data. Behavioral intention has an impact on both perceived usefulness and security (p = (0.001 0.050), t = (3.307 > 1.96), and p = (0.001 0.050), t = (3.248 > 1.96, respectively). Moreover, attitude towards using also significantly influenced behavioral intention (p = 0.000 <0.050, t = 7.878 > 96). With that being explained, H2, H3, H5, H6, and H7 are accepted based on the data.

4.11. Indirect Effect Hypothesis

The findings of the indirect effect test are shown in the Table 9:

Table 9. Indirect effect hypothesis test result.

Effect	Path coefficient	T statistics	P-values	Remarks
PEOU → ATU → BI	0.022	0.757	0.449	Not significant
PU → ATU → BI	0.284	4.009	0.000	Significant
SC → ATU → BI	0.226	3.794	0.000	Significant

The indirect effect of variable PEOU on variable BI through variable ATU is not significant (Table 9) (p = (0.449 > 0.05), t= (0.757 <1.96)). The ATU variable doesn't block the effect of PEOU on BI to use OVO, but it does partially block the effect of PEOU on BI, which is important.

Perceived usefulness and security of a variable Behavioral intention through variables Attitude towards using is significant (Table 9) (p = (0.000 < 0.05), t = (4.009 > 1.96) and (p = (0.000 < 0.05), t = (3,794 > 1.96), respectively). The ATU variable mediates the effect of PU and SC on BI to use OVO. Also, PU and SC are said to be partially mediated by BI since both have a direct effect on BI.

5. DISCUSSION

A hypothesis test can be carried out if a research model is thought to be appropriate. In this study, the research model is considered fit (since it meets the criteria of reliability and validity tests). Therefore, the hypothesis was later tested. Based on the direct effect hypothesis, the results explain that attitudes towards using were strongly influenced by perceived usefulness and security. Digital payment users are more likely to use this OVO app if they feel it is beneficial and safe for them. The findings also offer insight into how crucial quality and utility are when making digital payment apps.

Perceived usefulness and security towards behavioral intentions were found to be significantly correlated. An intention or desire in the context of behavioral science represents a drive to engage in an activity. In this case, the usefulness and level of safety of the apps have a significant impact on users' motivation to use them. Users will give this digital payment a try if they believe it will simplify their lives. They are also more likely to put their trust in these applications if they feel that their transactions are secure.

Behavior intention is strongly correlated with attitude towards using. A user's desire to use the apps will probably increase if they have a good feeling or experience. Throughout the early stages of technology adoption, attitude is an accurate indicator of behavior. According to psychology theory, the attitude-related factors of behavior, cognition, and impact have a positive influence on people's motivation to use technology (Yang, Lee, & Zo, 2017).

As for the indirect effect, the attitude towards using variables mediates the effect of perceived usefulness and security on behavioral intention to use OVO. The likelihood that someone will use digital payment applications increases if they have a pleasant experience and assume the apps are useful and secure.

This research finding matches previous research that said the user's attitude is the most important factor towards Fintech adoption in Indonesia (Setiawan et al., 2021). Another study also mentioned the effect of perceived usefulness and security on customers' intention to use mobile payments in Indonesia, which was found to be significant (Denaputri & Usman, 2019).

6. CONCLUSION

6.1. Conclusion

This research has analyzed the underlying relationships between perceived ease of use, perceived usefulness, attitude towards using, security, and behavioral intention of OVO apps as a representation of digital payment apps in Indonesian SMEs. The empirical analysis of this digital payment's adoption using a structural model based on TAM has been evaluated and validated. Most of the structural model's hypothesized causal connections between the variables are solidly supported. The study offers more proof that using the modified TAM model to gauge the level of study acceptability is valid. According to our research, it is fair to develop relationships using modified TAM to explain Indonesian SMEs' acceptance of digital payments.

This study provides information about the key factors that govern users' consideration to use OVO (as a representation of digital payment apps that are used by SME actors). The data reveal a parameter of how market-relevant and applicable this digital payment method is among SME actors in Indonesia. The findings suggest that both attitudes towards using and behavioral intentions are influenced by perceived usefulness and security. Two of the dependent variables (behavior intention and attitude towards using) are strongly correlated as well. Additionally, the attitude towards using OVO mediates the influence of perceived usefulness and security on behavioral intention to use OVO. With that being said, the adoption of digital payment in Indonesian SMEs will likely have a higher chance if the user has a positive experience and believes the apps are beneficial and secure.

6.2. Limitations and Further Research Suggestion

Nonetheless, this study recognizes notable limitations while still suggesting approaches for future investigation. The size of the respondent pool is an essential factor that requires careful consideration. The study dynamics can be considerably changed by increasing the number of respondents. A larger respondent pool results in a more substantial dataset and broadens the research's focus. Increased data volume results in a more thorough and complex comprehension of the research topic. A sizable sample dimensions also improves the statistical validity of results, enabling more trustworthy generalizations and insights. However, it is critical to note that a larger sample size comes with the issue of organizing and interpreting larger volumes of data, which necessitates advanced approaches and resources. Despite these factors, the advantages of a wider respondent base highlight the significance of investigating methods to get beyond such obstacles, providing a promising direction for future research projects.

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