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Millenials Endorse Environment Factors as Continuance Intention of the Mobile Payment Technology During Covid-19 in Indonesia

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Abstract

The purpose of this paper is to determine the effect of additional value, government support and system quality as environmental factors towards continuance intention of mobile payment during COVID-19 in Indonesia through satisfaction as a mediating variable. The study highlights how environmental factors can increase millennials' satisfaction in using mobile payments intention during COVID-19. Data were collected from 268 mobile payment users who transact more than three times a week using a purposive sampling approach through a questionnaire. This study uses SEM with SmartPLS software. The results showed that user satisfaction as a mediation significantly influenced the continuance intention of mobile payment during COVID-19. User satisfaction is directly influenced by environmental factors, which contained additional value, government support, and system quality. Moreover, system quality shows the most significant influence followed by additional value and government support. This study only focuses on the millennial generation in Indonesia, where the use of mobile payments is not only used by the millennial generation. This study also only focuses on conditions during the COVID-19 pandemic. This study proposed a research model adapted from the Technology Continuance Theory (TCT) and Technological Personal Environmental (TPE) models to measure the continuance intention of mobile payments. This study provides insight that environmental factors such as additional value, government support, and system quality can increase customer satisfaction and the continuance intention to use mobile payments. In addition, this study also provides insights for related parties such as mobile payment service providers, the government, and network operators in optimizing mobile payment services.

Keywords: Environment Factors, Satisfaction, Continuance Intention, Mobile Payment, COVID-19.

1. Introduction

Along with the increasing cases of the COVID-19 pandemic in Indonesia, the public has been urged to shift towards non-cash transactions, which has led to the rapid use of digital payment transactions. The large number of internet and smartphone users accompanied by an increase in the volume of digital payment transactions based on smartphone technology can accelerate financial inclusion and encourage the customer to change towards digital transactions (Chakraborty & Mitra, 2018). A report from the Alvara Research Center (2020) found that the millennial generation in

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Indonesia has the highest penetration rate of digital wallet usage at 23.8% when compared to other generations such as generation Z and generation X, which are 20.6% and 12.8%, respectively. Research conducted by Brandon (2017) and Dahlberg (2015), shows that millennials use cellphones 150 times per day so that most businesspeople change alternative ways to purchase goods / services, bills, and invoices with mobile devices and wireless communication technology in mobile payment. The ease and speed offered by mobile payment service providers can make users satisfied with the quality of the mobile payment system. User satisfaction has a very important role, if user is not satisfied with the mobile payment service provider, they can switch to other alternatives (Zhou, 2013).

The World Health Organization (WHO) stated that cash can be a factor in spreading the virus of COVID-19 (Kompas.com, 2020a). Therefore, the WHO encourage the usage of non-cash transactions to minimize physical contact due to the convenience, efficiency and secure transaction offered by the mobile payment system (Brown, 2020; Huang, 2020; Oliveira et al., 2016). This has prompted Indonesia's central bank to support digital transactions in Indonesia during the COVID-19 pandemic (Bank Indonesia, 2020; IDN Financials, 2020). Environmental factors such as additional value have been identified as having an influence on the continuance intention to use mobile payments (Putri et al., 2020). Currently the millennial generation dominates the use of mobile payment because it is easy and practical when making transactions (Houston, 2019; McKinsey & Company, 2020), supported by attractive promos during COVID-19 provided by mobile payment service providers such as cashback and discounts that can attract and retain customers, thus making customers switch to new payment methods like mobile payment (Kompas.com, 2020a, 2020b, 2020c; Pham & Ho, 2015; Sierzchula et al., 2014). According to Khayer & Bao (2019), user behavior after early adoption may adjust, either based on the actual perceived experience they may increase or lessen future use. User will stop using the mobile payment if they are not satisfied.

As mobile payments have been used globally almost all over the world, it cannot be denied that environmental characteristics such as socio-cultural and other external influences can also influence user behavior (Cabanillas & Fernandez, 2014; Zhang et al., 2011). Nevertheless, most of the mobile payments studies ignores environmental factors. Hence, developing environmental factors that incorporate socio-culture into the continuance intention model of mobile payment need to be done. According to Hofstede (1984), socio-culture affects people's and organizational behavior over time. As claimed by Sundqvist et al. (2005), national wealth and cultural similarity have a positive effect on technology adoption.

One of the determining factors driving the adoption of mobile payments is environmental factors. Karsen et al. (2019), among others, show that most studies only focus on technology and individual characteristics, while research that focuses on exploring the influence of environmental factors on the continuance intention to use mobile payments in Indonesia (Hunafa et al., 2017; Putri et al., 2020) still less studied, especially in the millennial generation during the COVID-19 using the adapted TCT (Technological Continuance Theory) and TPE (Technological Personal Environment) model. The TPE model is adapted to explain the phenomenon of technology acceptance from an environmental side, while the TCT model explains the effect of customer satisfaction on the continuance intention to use mobile payment. Thus, this study uses the TCT model adopted from the research conducted by Liao et al. (2009) to provide an understanding of user satisfaction and continued use intention after adopting mobile payments.

This study focuses on analyzing the influence of additional value, government support, and system quality as environmental factors on the continuance intention to use mobile payments during COVID-19 with the satisfaction variable as a mediating variable. Researchers chose the additional value, because of attractive promos provided by mobile payment service providers during COVID-19 such as cashback and discounts can make customers switch to mobile payment and chose the government support variable due to the government support and regulations in using mobile payments during COVID-19. Furthermore, researchers chose the system quality variable because of the increase in the ease and speed of users accessing mobile payments by service providers during COVID-19,

because optimal quality system can provide satisfaction to users (Zhou, 2013). Whereas, for the satisfaction variable as a mediating variable because when user is satisfied with them, customer will tend to continue their intention behavior (Cao et al., 2018). The quantitative research design used in this study using judgmental sampling method in collecting data. Therefore, the data from this study were obtained through primary data using a questionnaire. Thus, this research was conducted to answer the research questions below:

a) How is the association between variables of additional value, government support, system quality, satisfaction, and continuance intention of mobile payment?
b) What environmental factors most influence the continuance intention to use mobile payments for millennials during the COVID-19 pandemic in Indonesia?

2. Literature Review

Technology Continuance Theory (TCT)

The Technology Continuance Theory (TCT) clarified that individual will build expectations of a technology after several periods of use to be compared with heir experience against the performance of the technology, Liao et al. (2009). The comparison results will later show the form of service confirmation or disconfirmation that will affect the level of user satisfaction. The TCT model has more applicability and has explanatory power when compared to the TAM (Technology Acceptance Model), ECM (Expectation Confirmation Model), and COG (Cognitive Model) (Rahi et al, 2020).

Technology Personal Environment (TPE)

TPE model is modified from the Technological Organizational Environment (TOE) model, which is generally used by organizations as a measurement standard for technology acceptance. Therefore, the model is deemed unsuitable for the acceptance of technology on the individual side, whereas the TPE model can better clarify how individual accept the technology. The TPE framework consists of 3 classifications, specifically: technology (in terms of internal and external factors), personal (related to characteristics of individual) and environment (related to the availability of support related to the object under study and social conditions) (Hunafa et al., 2017). Therefore, the TPE model is a suitable model to explain the technology acceptance from an environmental perspective (Putri et al., 2020). According to Karsen et al. (2019), previous studies on mobile payment did not pay attention to the environmental context, which only focused on technology and characteristics of individual.

Mobile Payment

Mobile payment is payment process through mobile device to processing financial transactions securely via cellular networks or other wireless technologies such as Bluetooth, Near Field Communication (NFC), Radio-Frequency Identification (RFID) and others (Ghezzi et al., 2010). Other called it m-payment or m-wallet. Mobile payments in Indonesia utilize server-based electronic money to offer services, such as virtual transfers, bill payments, telecommunication top-ups, public transport tickets, on-site retail payments, and on-site dining payments (Agusta & Hutabarat, 2017). Mobile payments have become a necessity for the public at this time in making transactions during the lockdown, quarantine, and can be used as an instrument to promote social distancing policies due to the COVID-19 pandemic. Most mobile payment services were served through online so that customers are able to utilize various mobile payment options online (C.C & Prathap, 2020).

Additional Value

According to Kotler and Keller (2016) promotion is an activity that communicates product advantages and persuades target customers to buy it. Additional values that are regularly used in the digital payments' promotion are various sets of short-term incentive tools, designed to stimulate the faster and larger purchase of a particular service or product by consumers or merchants. When customers make a buying purchase, they consider the product promotion incentive factors as directly related to the product, and environmental incentive factors as indirectly related to the product (Chen & Li, 2020). Customers switch to new payment methods such as mobile payments because of discount promotions. Users tend to use digital payment methods that offer additional value (Pham & Ho, 2015).

Government Support

The government has a primary obligation as a regulator in protecting its people from potential negative outcomes. Government policies can encourage or prevent consumer behavioral intentions to regulate innovations, such as m-payments (Chaurasia et al., 2019) as a form of preventing the spread of COVID-19. The government support, it can be interpreted as policies, backbone infrastructure, security and access guarantees in digital transactions (Aji et al., 2020a). Research conducted by Sobti (2019) shows the positive relation between the effect of demonetization on the use of mobile payments. Furthermore, Aji et al. (2020a, 2020b) states that consumers will use mobile payment services where there are significant benefits that are felt.

System Quality

Delone & McLean (2003) mentioned that technical quality of the overall system performance represents the system quality. There are specific elements in system quality such as user's perception and evaluation of mobile payment systems such as ease of use, speed of access, navigation, and visual attractiveness were proposed and measured in various previous studies (Kim et al., 2004; Yuan et al., 2020; Zhou, 2011). If the system of mobile payment is difficult to use and has a poor interface design, users may feel that the provider does not have the capability and integrity to offer good service quality. Thus, poor system quality as well as the increases of difficulty in using mobile payment system can interrupt the users experience in using mobile payment (Zhou, 2013).

Satisfaction

Kotler (2002) emphasized that customer satisfaction is a person's happy feelings that arise after comparing their perceptions or impressions of technology performance. The COVID-19 outbreak has created concern among the public regarding the transmission of the virus. Through cash exchanges with digital payments, it can help prevent pandemics. And therefore, the adoption of mobile payments is considered a preventive health behavior so that people are satisfied with the existence of mobile payments (C.C & Prathap, 2020). Therefore, the quality system of mobile payment is the main determinant of continuance intention to use mobile payment. User will stop using the mobile payment if they are not satisfied with the mobile payment system (Khayer & Bao, 2019). Research by Zhou (2014) discovered that satisfaction, flow, and trust determine the continuation of using m-payment service.

Continuance Intention

Technology adoption reflects a confirmation of expectations which serves as an element that supports the continuance intention to use (Baabdullah et al., 2019). According to Khayer & Bao (2019),

if user satisfaction and initial expectations is fulfilled, the level of satisfaction can be determined. Research by Mouakket & Bettayeb (2015) stated that continuance intention is defined as the level to which an individual will intentionally continue to use the service for longer period.

3. Methodology

Environmental factors are factors related to socio-culture so that they are unique and specific to case studies (Karsen et al., 2019). It is also aspects that drive the adoption of mobile payments (Sahu & Singh, 2018). In previous research, the factors found were additional value factors, system quality, culture, government policies, suitability, and infrastructure (Lin et al., 2017; Putri et al., 2020; Sahu & Singh, 2018). After early adoption, user behavior may adjust based on the actual and at the end perceived experience. User will stop using the mobile payment if they are not satisfied with the system. Existing research has found that the strong determinant of continuity behavior is satisfaction (Kim et al., 2009; Kuo et al., 2009; Liu et al., 2011). Humbani and Wiese (2019) explained that to adopt and continue to use technology is vital to study because adoption cannot be accomplished if the continuance intention to use technology has not been measured.

Figure 1 shows the adapted Technological Personal Environmental (TPE) and Technology Continuance Theory (TCT) model. The TPE model was adapted to explain the phenomenon of technology acceptance from an environmental side. Based on the TPE model Jiang et al., (2010), the environmental context is included in several social variables that can deliver guidance for conceptualizing and operationalizing social variables. One of them is institutional theory and the other is imitation theory. Based on Jiang et al., (2010), institutional variables that are conceptualized and operationalized can be included in the TPE model. Similarly, imitation theory also addresses why social individuals imitate one another.

DiMaggio & Powell (1983) and (Scott, 2001) suggest three institutional pressures consisting of normative, coercive, and mimetic, besides that there are imitation theories such as trait-based imitation, frequency-based imitation, and outcome-based imitation. There are 2 types of coercive pressure, namely competition and regulation. Regulatory pressure represents a variable of government support because it comes from professional regulatory bodies and government agencies (Harcourt et al., 2005). According to DiMaggio & Powell (1983), this pressure may force individuals to adopt the same behaviors, attitudes, and practices. Meanwhile, outcome-based imitation represents the variable system quality and additional value. Levitt & March (1988) stated that individuals can imitate behavior based on the results they feel. Moreover, Technology Continuance Theory (TCT) model is used because it presents predictions on user validation of previous usage based on satisfaction and directly tests its effect on continuance intention to use mobile payments.

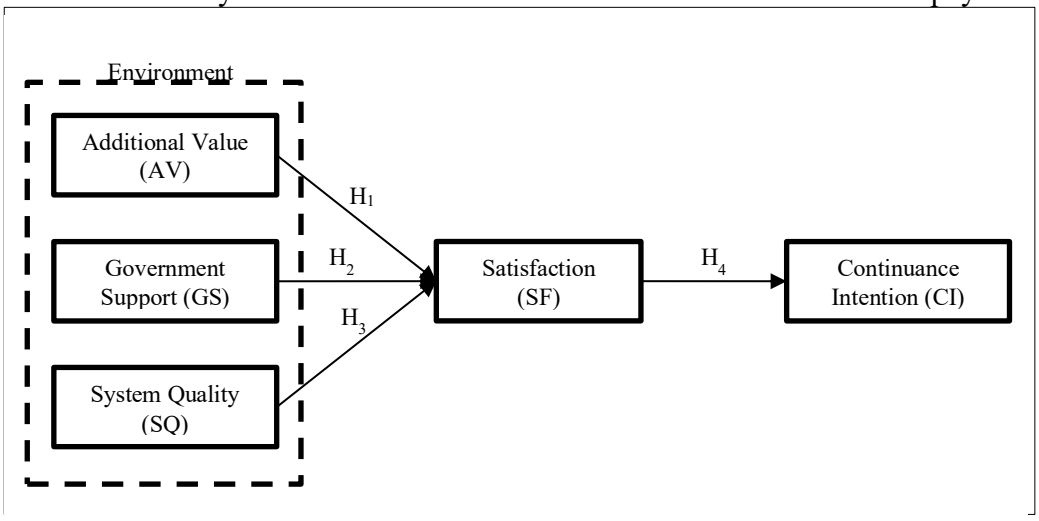

Figure 1. Research Model

Additional Value

Previous research has shown that financial incentives in the form of cashback, points, and discounts have a positive effect in encouraging digital payments (Valverde & Zegarra, 2011). In addition, this study was confirmed by Zhao et al. (2019), reveal that the main drivers in consumer payment options are points and rewards, and show that financial incentives have a positive effect in encouraging the use of mobile payment.

H_1: *Additional Value (AV)* has a positive effect on *Satisfaction (SF)* in using mobile payments

Government Support

In the context of electronic wallets, infrastructure, policy, speed of access, and security assurances are supporting factors of government in digital transactions (Aji et al., 2020a). Several empirical studies show that regulations of government have positively triggered the application of non-cash transactions such as e-commerce, online banking, mobile banking, and others (Verma et al., 2019). Based on research conducted by Baabdullah et al. (2019) stated that the user's intention to use mobile payment is influenced by their ability to explore the internet and gain access to facilities of online payment. According to Hunafa et al. (2017), the availability of more comprehensive supporting facilities will result in high individual perceptions of the use of mobile payments. Moreover, the level of satisfaction in using mobile payments can be shaped by user satisfaction and initial service expectations that are met (Khayer & Bao, 2019).

H_2: *Government Support (GS)* has positively affected *Satisfaction (SF) in mobile payments*.

System Quality

Guo & Poole (2009) discovered that low system quality is not able to provide satisfaction to users because they tend to adopt a sophisticated mobile payment system, which can be concluded that perceived complexity affects the flow of online shopping. Similar findings are also discovered by Gao & Waechter (2017). In addition, user satisfaction in social networks is determined by the quality of the system (Zhang, 2010), and Lin et al. (2017) determine that satisfaction in the mobile platform's technology is also positively related to system quality. Previous research has shown that customer satisfaction is confidently enhanced by user expectations in service use (Baabdullah et al., 2019; Humbani & Wiese, 2019).

H_3: *System Quality (SQ)* has positively affected *Satisfaction (SF)* in using mobile payments

Satisfaction

Cao et al. (2018) discovered that ongoing intention to use mobile payments service is positively influenced by satisfaction. The intention to continue using the service tends to be shown when the user is satisfied with the service (Cao et al., 2018). That is reinforcing by previous research that shows that satisfaction is a fundamental driver in the intention of sustainable use of mobile payments (Azizah et al., 2018; Humbani & Wiese, 2019; Khayer & Bao, 2019).

H_4: *Satisfaction (SF)* has a positive effect on *The Continuance Intention (CI)* of mobile payments

Measurement

The questionnaire uses a scale of 5 Likert (1 represents highly disapproving and 5 represents highly agreeing). To fit the current context, the items in the questionnaire were adapted from several previous studies. The items selected must represent the concept of generalization to be made, to ensure the validity of the contents of the scale. Therefore, the items selected for this study are adapted from previous studies to ensure the validity of the content. Researchers tested the validity and reliability of data using PLS-SEM methods used through SmartPLS software. Items regarding the *additional value* and *government support* were adapted from the study of Pham & Ho (2015), Aji et al (2020a) along other research related to the context of mobile payments. For items regarding *system quality* adapted from the study of Tam & Oliveira (2017), Zhou (2013). Whereas for items regarding *satisfaction* adapted from the studies of Khayer & Bao (2019), Zhou (2013), and *continuance intention*, it was adapted from several studies by Khayer & Bao (2019), Verma et al. (2019), Zhao (2017).

Data Collection Procedure and Analysis

In this research, the data were collected through the *purposive sampling* of 250 millennials who used mobile payments with an intensity of more than 3 times a week. The Google Form application is used to fill out questionnaires distributed through social media that are often used by millennial generation such as Line, WhatsApp, and Instagram. The first part of the questionnaire focuses on demographic data, such as age, gender, domicile, employment status, average monthly income, and intensity of use of mobile payments during COVID-19. Meanwhile, the second to sixth sections of the questionnaire discuss respondents' opinions regarding the *additional value, government support, system quality, satisfaction,* and *continuance intention* on mobile payments during COVID-19, respectively. For each question, respondents were asked to check each answer from all the statements, which answer option they thought best represented their level of approval for the mobile payment. The analysis data is conducted by PLS-SEM (Partial Least Squares Structural Equation Modeling) approach through the SmartPLS 3.3 software. The PLS-SEM approach is applied to test the proposed models and hypotheses to determine the reliability and validity of constructs. According to Hair et al. (2011), PLS-SEM is used when the research applies the expansion of existing structural theories and aims to predict the main target construction or identify key 'driving' constructs. PLS-SEM places nominal pressure on residual distribution and sample size requirements (Gefen et al., 2000). Therefore, according to Ooi and Tan (2016), PLS-SEM is more suitable to this study compared to other statistical tools because it does not require big sample size and multivariate normal distribution (Wan et al. (2014) and Verma (2017)).

4. Result and Discussion

Demographic Respondents

Table 1. Profile of Respondents

Demographic Attributes		Frequency	Percent (%)	Demographic Attributes		Frequency	Percent (%)
Gender	Male	70	26.1%	Profession	Student	140	52.2%
	Female	198	73.9%		Employees	94	41.1%
Age	21 - 30	248	92.5 %		Entrepreneur	12	4.5%
	31 - 40	20	7.5%		Housewife	11	4.1%
	> 41	0	0		Teacher	2	0.7%
Domicile	DKI Jakarta	91	34%		Not yet working	3	1.1%
	Jawa Barat	19	7.1%		Investors	1	0.4%
	Banten	117	43.7%		Freelance	2	0.7%

Demographic Attributes		Frequency	Percent (%)	Demographic Attributes		Frequency	Percent (%)
	Sulawesi Selatan	5	1.9%		TNI	1	0.4%
	Jawa Timur	12	4.5%		Civil servants	1	0.4%
	Kalimantan Barat	4	1.5%		Lawyer	1	0.4%
	Kepulauan Riau	2	0.7%	Average Monthly Income	< Rp 1.000.000	62	23.1%
	DIY	2	0.7%		Rp 1.000.000 - Rp 9.000.000	189	70.5%
	Jawa Tengah	5	1.9%		> Rp 9.000.000	17	6.3%
	Lampung	1	0.4%	The most frequently used mobile payment services during COVID-19	OVO	39	14.6%
	Bali	1	0.4%		DANA	4	1.5%
	Sumatera Barat	1	0.4%		GoPay	37	13.8%
	Riau	1	0.4%		LinkAja	2	0.8%
	Sumatera Selatan	1	0.4%		ShopeePay	60	22.4%
	Sumatera Utara	1	0.4%		BCA Mobile	116	43.3%
	Kalimantan Timur	1	0.4%		Mandiri Mobile	7	2.6%
	Aceh	1	0.4%		BRI Mobile	3	1.1%
	Kalimantan Tengah	1	0.4%	The intensity of the use of mobile payments during COVID-19	3 – 5 times / week	179	66.8%
	Kalimantan Timur	1	0.4%		> 5 times / week	89	33.2%
	Papua	1	0.4%				
Last Education	High school and equivalent	131	48.9%				
	Diploma	9	3.4%				
	Bachelor	119	44.4%				
	Postgraduate	9	3.4%				

Notes: *268 respondents

Questionnaires were distributed for one week in March 2021 to mobile payment users in Indonesia, specifically those millennials who made transactions more than three times a week using mobile payment services during COVID-19. In order to measure respondents' attitudes towards several statements, respondents were asked to fill in the personal data. The results of data collection through a questionnaire managed to collect 268 responses as shown in Table 1.

Analysis of Measurement Model

This study uses SmartPLS 3.3 software to test the relationship between indicators and their constructs through validity and reliability tests. Table 2 shows the results of construct reliability and convergent validity which consists of Factor Loading, Cronbach's Alpha (CA), Average Variance Extracted (AVE), and Composite Reliability (CR) for each indicator. Following the recommendations of Hair et al. (2009) and Ringle & Sarstedt (2011), the results of this study show the factor loading value > 0.7 and the overall AVE value is greater than 0.5, which means that the convergent validity in this research model is valid and by following per under the recommended value. In this study, four indicators were removed, namely, the Additional Value 4 (AV4) indicator, the System Quality 4 (SYS4) indicator, the Continuance Intention 1 (CI1) indicator, and the Continuance Intention 2 (CI2) indicator because these indicators did not meet the factor loading > 0.7 criteria (Ringle & Sarstedt, 2011). Therefore, only 21 indicators are used. In this study, all indicators measured are by following per under the recommended Composite Reliability (CR) and Cronbach's alpha (CA) values, namely > 0.7 (Carrasco & Jover, 2003; Hair et al., 2009), which indicates that construct reliability in the model this research is valid. Thus, individual items already have valid reliability and convergent validity. Details are shown in Table 2.

Table 2. Construct Reliability and Convergent Validity

Construct	Item Statistics				
	Construct Items	Factor Loading	Cronbach's Alpha	AVE	Composite Reliability
Additional Value	AV1	0.815	0.913	0.699	0.933
	AV2	0.892			
	AV3	0.871			
	AV5	0.793			
	AV6	0.792			
	AV7	0.849			
Government Support	GS1	0.843	0.889	0.943	0.929
	GS2	0.901			
	GS3	0.881			
	GS4	0.837			
System Quality	SYS1	0.871	0.876	0.923	0.889
	SYS2	0.861			
	SYS3	0.868			
	SYS5	0.809			
Satisfaction	SAT1	0.812	0.886	0.921	0.886
	SAT2	0.900			
	SAT3	0.855			
	SAT4	0.885			
Continuance Intention	CI3	0.749	0.929	0.914	0.876
	CI4	0.821			
	CI5	0.882			
	CI6	0.823			
	CI7	0.825			
	CI8	0.870			
	CI9	0.887			

Table 3 presents the discriminant validity of each construct. Based on this table, each construct has met the discriminant validity criteria (Fornell & Larcker (1981)) in the form of the square root value of the Average Variance Extracted (AVE) which is greater than the correlation value between each construct.

Table 3. Discriminant Validity

Construct Items	Additional Value	Continuance Intention	Government Support	Satisfaction	System Quality
Additional Value	**0.836***				
Continuance Intention	0.514	**0.838***			
Government Support	0.481	0.438	**0.866***		
Satisfaction	0.637	0.709	0.478	**0.863***	
System Quality	0.619	0.571	0.364	0.751	**0.853***

Analysis of Structural Model

The next step is to test the structural model. The feasibility of the structural model was assessed by examining the R-squared value (R2) and the significance level of the path coefficient (Hair et al., 2013). Table 4 represents the results of the hypothesis which are all accepted because each construct meets the criteria where the value of $p < 0.05$ and t-statistics > 1.96. Therefore, it can be concluded that the variable Additional Value, Government Support, and System Quality significantly influence the Continuance Intention variable with the Satisfaction variable as the mediating variable.

Table 4. Hypothesis Testing Results of The Model

Hypothesis				Path Coefficient	T-statistics	P-values	Conclusion
H_1	Additional Value (AV)	à	Satisfaction (SF)	0.207	3.477	0.001	Supported
H_2	Government Support (GS)	à	Satisfaction (SF)	0.175	4.218	0.000	Supported
H_3	System Quality (SQ)	à	Satisfaction (SF)	0.559	15.922	0.000	Supported
H_4	Satisfaction (SF)	à	Continuanc e Intention (CI)	0.709	11.194	0.000	Supported

Figure 2 shows the final analysis model that represents the path coefficient and the strong correlation between constructs. Based on Figure 2, the R-squared (R2) value in the Satisfaction (SF) variable is 0.636 which implies that the satisfaction of using mobile payment services can be explained by Additional Value, Government Support, and System Quality variables as environmental variables up to 63.6%, while the rest amounting to 36.4% can be explained by other variables. While the R-squared (R2) value in the Continuance Intention (CI) variable is 0.502, indicates that all exogenous variables can explain intention to continue using mobile payment at 50.2%, while the rest 49.8% can be clarified by other variables outside this model. Thus, the R-squared (R2) value in this study shows a moderate effect between constructs because the value of R2 > 0.5 is obtained (Ringle

& Sarstedt, 2011), the greater the R2 value, the stronger the correlation between variables in research model.

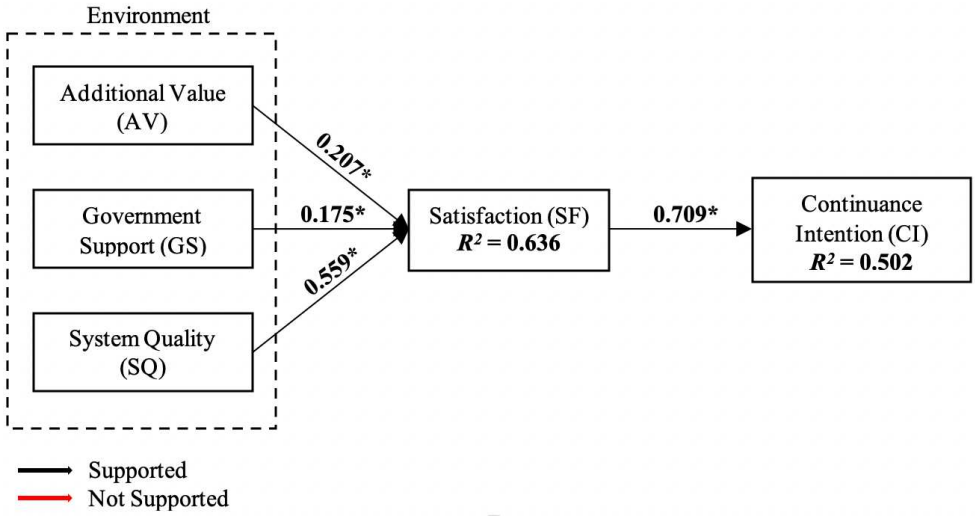

Figure 2. Model Results

Discussion

This research focusses on continuance intention of the mobile payment technology by millennials in Indonesia during the COVID-19 pandemic. Based on the results of the path coefficient, additional value, government support, and system quality variable have a significant effect on mediation satisfaction. Furthermore, the satisfaction variable has proven to have a positive effect on the continuance intention to use mobile payments during COVID-19.

Variable additional value positively affects the satisfaction. The additional value is referred to as gifts or rewards, points, and promotions such as discounts and electronic coupons. Rewards, points, promotions like discounts and electronic coupons are given to users who use the mobile payment service at certain times. For example, the mobile payment service of ShopeePay ranks second in the use of mobile payments for millennials during COVID-19. ShoppePay provides promotions ranging from discounts, cashback, to free shipping (Bisnis.com, 2020). The provision of additional value provided by mobile payment service providers has made millennials accustomed to using mobile payment services in making payment transactions. Promotional programs is the main reason users used non-cash transactions (Aprilyani, 2018; Jakpat, 2018).

This study confirmed the government support has positively affected satisfaction. Indicators of this variable are government support such as policies, security guarantees in digital transactions, and innovations in the form of QRIS (Quick Response Code Indonesian Standard), improvements to network infrastructure and network quality. QRIS is issued and supervised by Bank Indonesia to make transactions quickly, practically and safely (Bank Indonesia, 2019). This study shows that government support facilities such as QRIS have been implemented evenly to various mobile payments that are often used by millennial generation in Indonesia, such as BCA Mobile, ShopeePay, OVO, DANA, Mandiri Mobile, BRI Mobile, and Link Aja. This method facilitates non-cash payments as a solution to prevent the spread of the coronavirus which was previously transacted with cash. This finding is in line with the research of Aji et al. (2020a) which states that Indonesian society is willing to use mobile payments if they feel the benefits of using mobile payments. Several empirical studies also show that government regulations have positively triggered the implementation of non-cash transactions such as online banking, e-commerce, mobile banking, and others (Verma et al., 2019).

System quality has the strongest effect on satisfaction. System quality was measured in the form of application speed, ease of use, and many uses in facilitating mobile payment transactions so that it can attract millennials to switch to new payment methods such as mobile payment. If the mobile payment system operates slowly or is not optimal and difficult to use, users will feel dissatisfied with the mobile payment service. Therefore, mobile payment service providers need to develop the system quality of the mobile payment to increase customer satisfaction. This is in line with the research of Zhou (2014) which states that if user find it difficult to use mobile payments, they will not get positive benefits so they will not use mobile payments on an ongoing basis. Various payment services provided by mobile payment service providers allowed users to make transactions and obtain payment information anytime and from anywhere. This is also supported by the COVID-19 pandemic which requires people to reduce physical contact and pay in cash. Mobile payments such as GoPay, OVO, ShopeePay, DANA, and LinkAja are the most often used during the COVID-19 pandemic because they are able to adjust to consumer transaction needs in the form of payment for food delivery, transportation, online shopping, and a range of other payment service features that vary (Kompas.com, 2020b; Liputan6.com, 2021). This can increase efficiency and customer satisfaction so that they can use mobile payments continuously. This study is also in line with Pham & Ho (2015) who states that user will switch to a new payment service such as mobile payment because of additional services as a reason for user to try.

The mediation variable of satisfaction has also positively affected the continuance intention. Satisfaction indicators in the form of efficiency and satisfaction of the millennial generation experience in using mobile payments during COVID-19 received a high score from respondents. The ease of use and speed of transaction in the form of practical payment steps or real-time top-up process are the main benchmarks for consumer satisfaction in using mobile payments such as ShopeePay, OVO, and GoPay, which respectively occupy the first to last positions in terms of satisfaction (Kompas.id, 2020). Then supported by mobile payment service providers who do not charge customers for making certain transaction payments and accompanied by the provision of promotions in making transaction payments makes the millennials in Indonesia satisfied with mobile payment services during COVID-19. Furthermore, the quality of products and the quality of service offered by mobile payment service providers make customers feel satisfied with the services used. Satisfaction is a major force affecting continuance usage (Azizah et al., 2018; Humbani & Wiese, 2019; Khayer & Bao, 2019). This study is matched with Cao et al. (2018) when user is satisfied with the service, user will tend to show intention of using the service on an ongoing basis.

This study confirmed the continuance intention has significantly influenced by the mediation variable of satisfaction, where satisfaction is also significantly influenced by additional value, government support, and system quality variable. This research shows that the continuance intention in using mobile payments does not make the millennial generation depend on cashback and discount promotions provided by mobile payment service providers. This is because the indicators of efficiency, satisfaction and experience in doing transactions are the main determinants of the millennial generation in using mobile payments. This study also shows that mobile payment is the main choice when making transactions during COVID-19. Because some of the millennial generation do their activities from home as an effort to prevent the spread of the virus so that mobile payments are the main choice in order that transaction routines continue to run smoothly, such as payments for telephone bills, electricity, Municipal Waterworks (Perusahaan Daerah Air Minum), insurance, Healthcare and Social Security Agency (Badan Penyelenggara Jaminan Sosial Kesehatan), credit cards, or internet services, loans, food delivery, transportation and online shopping (Kompas.com, 2020c). This research is in line with research conducted by Zhou (2013).

5. Conclusions and Implications

This study concludes that the additional value, government support, and system quality variable can be used to measure satisfaction, and satisfaction also affects the continuance intention of the mobile payment usage. This model is strong enough, indicated by an R-squared (R2) value above 50%, which means that the continuance intention variable can be accurately explained by the additional value, government support, system quality and satisfaction variables and the rest is explained by other variables.

From a theoretical perspective, this study provides new insight that the satisfaction variable influenced by three environmental factors such as additional value, government support and system quality which have never been studied by previous researchers. This shows that the satisfaction variable can be seen from a broader side, which in terms of environmental factors side can also make customers feel satisfied.

From a managerial perspective, service providers are expected to develop mobile payment features according to user needs, behavior, transaction habits and user expectations so they can provide additional value or competitive advantage to mobile payment services. Promo recommendations and additional features are shown to customer with notifications, reminders via messages or email to encourage the continuance intention of using mobile payment service. Both the government, network operators, and service providers are expected to deliver a sophisticated cellular payment ecosystem that comprises comprehensive infrastructure, equitable and optimal network connectivity, to expand locations and merchants that provide digital transactions using mobile payment services. Apart from the need for the best quality of mobile payment services, marketers and m-payment providers need to implement an attractive visual as an added value to further encourage the continuance intention of using the mobile payment technology. However, socialization and education program regarding the benefits of using mobile payments are needed to the society and merchants to increase comprehension and awareness of the mobile payment products. Thus, this can make millennials continue to use mobile payment services, after the pandemic ends.

6. Limitations and Further Research

There are several limitations in this study that can provide guidance for further research. First, this study only focuses on the millennial generation because it has the highest penetration rate of digital wallet usage (Alvara Research Center, 2020). However, the penetration of the usage of mobile payments is not only limited to the millennial generation, so the effects of satisfaction and continuance intention to use mobile payment may differ between millennials and other generations. Therefore, further research can examine other generations such as generation X and Y. Second, this study only focuses on the conditions of the COVID-19 pandemic. Therefore, it can be strengthened by longitudinal studies comparing before and after the pandemic. Third, this study only examines three environmental factors, namely additional value, government support, and system quality so that it cannot explain other factors that can influence the continuance intention to use mobile payments. Therefore, further research can examine other factors such as perceived COVID-19 risk and innovativeness in new technologies as mediating variables to obtain a more comprehensive understanding for researchers.

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