Migration Letters

Volume: 20, No: 8, pp. 193-209

ISSN: 1741-8984 (Print) ISSN: 1741-8992 (Online)
www.migrationletters.com

Adoption of Mobile Payment on QRIS Services in Indonesian

Pratama Dahlian Persadha[1], Melly Susanti[2], Loso Judijanto[3], Patrick Vivid Adinata[4], Ginanjar Adi Nugraha[5], Aldila Dinanti[6], Herdian Farisi[7], Zulaika Putri Rokhimah[8]

Abstract

Thle rapid evolultion ofl mobile techlnology and thle increasing prolifleration ofl smartphlones hlas provided a great opportulnity flor innovative companies to create newl payment solultions and oflfler valule-added services to thleir culstomers.

QRIS mobile payments hlave emerged as a real phlenomenon thlat allowls consulmers to tulrn thleir smartphlones into digital wlallets. Despite mulchl coverage ofl consulmer acceptance ofl mobile payments, little researchl provides gulidance flor interpreting QRIS-based payments. mobile payment adoption.

By considering thle thleoretical backgroulnd ofl innovation diflflulsion and thle speciflic chlaracteristics ofl QRIS mobile payments, thlis studly proposes a researchl flramewlork to provide an in-depthl ulnderstanding ofl thle flactors thlat flacilitate or hlinder thle adoption ofl QRIS-based mobile payments among Indonesian consulmers.

Thlis article can advance thle literatulre on innovation adoption and sulpport techlnology marketers in QRIS mobile payments. Thlis article provides ulseflull gulidelines to hlelp researchlers investigate issules related to QRIS mobile payments. Thlis article also carries certain regullatory implications in assisting stakehlolders in thle QRIS mobile payments ecosystem sulchl as SMEs, banking decision makers and merchlants, in developing thleir bulsiness strategies and marketing campaigns to flacilitate QRIS mobile payments.

Thle test resullts directly shlowl thlat thle intention to adopt QRIS mobile payments is infllulenced by behlavioral intention flactors, produlct-related flactors and alternative attractiveness. Thle resullts ofl indirect testing ulsing behlavioral intentions as a moderating variable floulnd thlat behlavioral intentions did not signiflicantly infllulence individulal flactors, produlct flactors, environmental flactors and alternative resoulrces.

FLulrthler researchl needs to be done to flind oult wlhly Behlavioral Intentions do not moderate environmental flactors, individulal flactors, produlct flactors and othler alternatives. FLulrthler researchl wlas condulcted to ensulre oulr researchl model wlas better thlan Pam and HLo's (2015) researchl.

Keywords: *Mobile Payment, Qulick Responses, Behlavioral Intentions.*

[1] Sekolah Tinggi Inteljen Negara, pratama@cissrec.org
[2] Universitas Bengkulu
[3] IPOSS Jakarta
[4] Sanata Dharma Yogyakarta
[5] Universitas Wijayakusuma
[6] Universitas Jenderal Soedirman
[7] Universitas Nahdlatul Ulama Purwokerto, Politeknik Negeri Semarang
[8] Indonesian

1. Introduction

QRIS is a payment tool using barcodes, which are two-dimensional. The first QR code was developed by Denso Wave, a division of Denso Corporation, a Japanese company founded in 1994. The main goal of this technology is to provide information quickly and get answers or feedback quick (Meimaharani & Fithri, 2014).

QR-Code based mobile payments provide many benefits including fast product purchasing, secure transfer of information just by touching the device. Payment methods like this have enabled Consumers want to eliminate the use of cash while providing additional purpose value from ease of use and very fast transaction speeds.

Behavioral intention in using mobile payment (MP) services is very important to study in the study of digital finance, financial management and consumer behavior, because behavioral intention is a subjective dimension of individuals to carry out certain actions. (Ajzen, 1991). Behavioral intention is a measure of how behavior is to behave through action (Kang, 2014). Behavioral intention to use technology central concept of technology adoption model technology (Susanti & Reza, 2022;Venkatesh, et al., 2012; Ajzen (1991; Taylor & Todd, 1995; Sheppard et al., 1988).

According to Li-YaYan., et al, (2020) factor influencing behavioral intention to use QR is device friendliness mobile devices and mobile ease of use. Ho et al., (2020a) Behavioral intention to use mobile banking services is influenced by established independent variables (degree of association). Interests, benefits, convenience, trial, risks, effectiveness and conditions) and dependent variables (new technological innovation, attitude towards adoption, subjective attitude, perceived control behavior). Pham & Ho. (2015) is influenced by personal factors and product factors.

Kang (2014) Perceived usefulness and ease of use affect behavior change in intention from mobile banking to NFC mobile payments. Thakur & Srivastava (2014) perceived usefulness and perceived convenience influence readiness to adopt mobile payments. Li-YaYan., et al (2020) Ease of Mobile Use and Personal Innovation have no influence on behavioral intentions to adopt mobile banking. Ho et al., (2020a) Ease of use of mobile devices and technological innovation do not influence behavioral intention to use mobile banking services. The results found are still diverse, so further research needs to be done regarding the use of technology in m-payments, especially QRIS.

Factors affecting behavioral intention to use mobile payments are still very diverse and there are no firm conclusions. According to Li-YaYan., et al, (2020) factors affecting usage behavior intention to adopt QR is usability on mobile devices, Ease of Mobile Use, according to Ho et al., (2020a) the behavioral usage intention banking Mobile is influenced by independent variables, namely; suitability, benefits, convenience, trials, risks, self-efficacy and conditions. The dependent variable is; innovation in new technology, attitude towards adoption, subjective noma, perceived behavioral control.

According to Pham & Ho., (2015) the factors that influence consumers to use NFC are by considering personal-related factors and product-related factors. Factors affecting behavioral intention apply m-payment are not yet conclusive, so research needs to be carried out again to find out what factors influence the behavioral intention to adopt m-payment. Theoretical and empirical literature showing the relationship between factors influencing the use of m-payment provides ambiguous results.

According to Kang's (2014) findings, Perceived usefulness and ease of use affect behavior intentions to switch mobile banking to NFC mobile payments, trust apparently has no effect on behavioral intentions to adopt NFC mobile payments. Thakur & Srivastava (2014) perceived usefulness and perceived convenience influence readiness to adopt mobile payments. Meanwhile Li-YaYan., et al (2020) Ease of Mobile Use and Personal Innovation have no influence on behavioral intentions to adopt mobile banking. Likewise, Ho et al., (2020a) provided an understanding of the factors of mobile banking

adoption in Taiwan and Vietnam. The results found that ease of mobile use and innovation in new technology had no influence on behavioral intentions to adopt mobile banking. The results found are still diverse, so further research needs to be done regarding the use of technology in m-payments, especially QRIS.

This research contributes theoretically and empirically. In theory, testing theoretical relationships by considering environmental factors that can relate to consumers' behavioral intentions to adopt QRIS. So it has implications for the increasing use of digital money in line with the increasing use of QRIS, indirectly factors related to behavioral intentions to adopt MP can increase internet use, mobile sales, and improve the digital economy.

Empirically in several ways. First, this research adds possible environmental factors to correct deficiencies found in previous empirical studies. Second, this study helps add environmental factors that previous researchers have not included. Third, this research refers to previous empirical research, especially the empirical framework they used (Ho et al., 2020; Li-YaYan., et al 2020; Pham & Ho., 2015; Tan et al., 2014; Yang et al., 2012). The difference lies in their research model not including environmental factors and the scope of the sample used.

This research expands the research model of Pham & Ho., (2015) by adding factors related to the environment, and uses a model framework applies the Technology Acceptance Model (TAM) and previous model theories, specifically the Theory of Reasoned Action (TRA), the Theory of Planned Behavior (TPB), and the Social cognitive theory (SCT).

The research objective is to provide a deeper understanding of the factors that influence behavioral intention to adopt QRIS-based mobile payments.. To achieve the research objectives, there are several research questions that must be answered, namely; What are the main factors influencing behavioral intentions in adopting QRIS-based mobile payments?? And how do these factors influence intent?

2. Literature Review

Perceived usefulness

The first characteristic of a new technology to consider is its usability.. Perceived usefulness refers to the extent to which an individual believes that using a particular system will improve his or her work performance (Davis, 1989).

If we want to persuade consumers to adopt QRIS-based mobile payments, consideration must be given to this method, then this method must reveal more advantages than other payment methods (for example, cash payments, credit cards or debit cards). When people realize that mobile payments can provide value that other payment services cannot offer, they may develop positive intentions to adopt mobile payment services. Mobile payments are more effective and efficient (L. Y. Yan et al., 2021; Joanathan C. Ho et al., 2020; Shankar et al., 2020; Hubert et al., 2017; Arvidsson, 2014; Chong et al., 2012).

QRIS payments allow consumers to eliminate the use of cash or credit cards while offering fast transaction speeds.. According to a report announced by oyindonedia.com, contactless payments are easy to make, working twice as fast as using a card.. This speed of service is quite attractive in a busy retail environment.. In addition, QRIS payment speeds were announced to be six seconds faster than those made via PayPass cards (Finextra, 2004). Previous studies have concluded that customers who perceive clear benefits and usefulness offered by e-commerce or mobile payments are more likely to form intentions to use them (Kang, 2014; Teo et al., 2012; Saxena et al., 2005). If consumers believe that implementing NFC payments can increase the efficiency of their transactions, they will be more likely to use this payment method.

Perceived ease of use (PEOU)

Another characteristic of new technologies mentioned in the TAM model is ease of use.. Perceived ease of use is the degree to which a particular technology is perceived as easy to understand and use (Joanathan C. Ho et al., 2020; Shankar & Datta, 2018; Xu et al., 2017; Nguyen et al., 2016). Applications or innovations that are considered easier to use than others are more likely to be accepted by users. Consistent with previous research conducted by AL-Majali & Mat, (2011), Agarwal & Prasad (1998) dan Cheng (2013).

Compatibility

Compatibility refers to the degree to which technology adapts to an individual's work style, lifestyle, values, and needs Rogers et al., (1983), Agarwal & Prasad (1997). Compatibility is posited as one of the main determinants for the innovation spread process with the high compatibility perceived by the individuals leading to the speedy adoption of any new ideas or technologies in general and mobile payments in particular. Prior researches showed that over two-third of the financial transaction services failed to meet the needs of customers since traditional channels did not offer the ubiquity provided by a mobile channel Hourahine & Howard, (2004), Hanafizadeh et al., (2014).

Several researchers posited that compatibility is one of most significant indicators of adoption Mallat et al., (2009), Hanafizadeh et al., (2014). Regardiang NFC mobile payment systems, the greater the compatibility of new payment services with users' general habits and their ways to use services with the mobile phone is, the more likely consumers form the intention to adopt it. In other words, when a user can integrate well the new payment services into his or her daily life, the compatibility of QRIS mobile payment with the individual's existing lifestyle and habits are expected to have an impact on his or her intention to adopt it.

Willingness to use

Willingness to use innovation is personal innovativeness or an individual's desire to try new technology, which has a significant impact on the adoption of new technology (Agarwal & Prasad, 1998; ; Lu et al, 2008). Desire is an important determinant of adopting m-payment (Yang et al., 2012). Innovative users are more willing to integrate new technologies into daily outines, facing the uncertainty of innovative technologies (Rogers, 1995; Rogers, 2003).

Several studies (eg Jarvenpaa et al 2000, Gefen et al 2003, Verhagen et al., 2006, Chen & Barnes 2007) reveal that desire is a significant determinant in influencing consumers to transact via E-Commerce, because lack of trust makes consumers discouraged.. to carry out transactions.. Desire has a significant influence on the intention to use mobile paymenet, desire has a positive impact on the willingness to use mobile location-based services (Gupta et al., 2011). Desire positively influences consumers to adopt mobile retailing (Bauer et al., 2005).

Trust

Trust has long been considered a catalyst in consumer-marketer relationships because it can facilitate successful transactions (Schurr & Ozanne, 1985). Perceived consumer trust in electronic payment systems refers to consumers' confidence that payment transactions will be processed according to their expectations (Mallat, 2007; Kim et al., 2010). Kim et al., (2008) showed that increasing trust will directly and positively influence behavioral purchase intentions. According to Kim et al., (2008) dan Lee (2005), trust is an important element that influences consumer behavior in uncertain environments such as electronic commerce.. Unless the service provider creates customer trust, it will be very difficult to achieve widespread acceptance of a new technology or service.

Personal Knowladge

Rogers (1995) proposed that sufficient knowledge of different channels is necessary to become an individual who understands innovation and its benefits. Consumers who have knowledge about m-payment services will find it easier to understand the use of the m-payment system, which will be beneficial than consumers who do not have knowledge about m-payment services payment (Lwoga & Lwoga, 2017; Kim et al, 2010). Web users utilize their knowledge for information processing, distinguishing between relevant and irrelevant information (Rieh, 2004). According to Kim et al (2010) m-wallet is relatively easy to use by individuals with higher mobile payment knowledge, compared to individuals who have no knowledge. Kim et al (2010) m-payment knowledge has a positive impact on the perception of ease of use of m-payment services. Mobile payment knowledge has a significant positive relationship to actual adoption of Alipay in Malaysia (Lui et al., 2021). Li et al. (2014) found that mobile payment knowledge had a positive and significant effect on mobile payment adoption behavioral intentions in China. They argue that consumers who have information and knowledge about mobile payment services tend to have a higher desire to use mobile payment services.

Mass Media

Mass media is defined as the extent to which customers think that mass media can be used to increase users of technological innovation services, the extent to which information from mass media influences individuals to adopt innovations Song (2014) such as the appeal of advertising in mass media. According to Song (2014) that mass media has a direct influence on adoption intentions.

Through the medium of symbols people can communicate with other people at any distance in space and time. However, in keeping with the interactional perspective, social cognitive theory devotes much attention to the social origins of thinking and the mechanisms through which social factors exert their influence on cognitive functioning. People gain an understanding of cause-effect relationships and expand their knowledge by operating symbolically on the wealth of information derived from personal and vicarious experience.

Mass media, especially television, provides the best access to the public through its strong appeal (Ball-Rokeach, 1973; Bandura et al., 1996; Bassiouni, 1981). Jones and Amoroso in (Pham & Ho, 2015) found that mass media has a negative effect on behavioral intentions to use technology or services. Pedersen (2009) research results show that mass media is related to intentions to use internet car services. Mass media has a direct influence on the intention to adopt innovations in mobile payments (Song, 2014).

Social Influence

Family relationships, relatives and close friends can influence individual cognition. Human behavior is the extent to which an individual feels that people believe that he should use a new system (Venkatesh et al, 2003). According to Balachandra & Friar (1997) that a product cannot be successful if the environment in which the product is located does not support it. The importance of contextual factors has been emphasized by information technology adoption and use researchers (Haas & Wabl, 2014 ; Karahanna et al., 1999).

Social Influence (SI) is a significant predictor of intention to use mobile payment services (Nysveen et al., 2005; Schierz et al., 2010). Yang et al., (2012) SI has a direct and indirect effect on behavioral intentions. Jelinek et al., (2006) peers, customers and communities influence the intention to adopt information technology. According to Yang et al., (2012) social influence can have a direct and indirect influence (through relative benefits and perceived risks) on behavioral intentions.

Alternative Attractiveness

The attractiveness of other alternatives is defined as the extent to which customers perceive that viable competitive alternatives are available in the market (Jones et al., 2000). Previous studies found that the attractiveness of alternatives has a negative effect on behavioral intentions to use a technology or service (Amoroso & Magnier-Watanabe, 2012; (Jones et al., 2000). Since QRIS mobile payment solutions are still in their infancy, established substitutes with strong network externalities (e.g.., cash, credit cards or debit cards) may be a major barrier to their adoption (Amoroso & Magnier-Watanabe, 2012; Jones et al., 2000). Thereafter, we expect that users' comparative recognition as a substitute for QRIS-based mobile payments can influence the intention to adopt QRIS mobile payments Pham & Ho, 2014). If an alternative has a relative advantage in making payments compared to QRIS-based mobile payments, users are likely to choose and stick to the attractive alternative. On the other hand, if existing substitutes do not have the appeal necessary to attract and maintain customer loyalty, it is possible that QRIS-based mobile payments will fill the gap.

Behavior Intention

Behavioral intention in technology acceptance research is explained as an individual's willingness to use a technological payment system (Pham & Ho, 2015; Venkatesh, et al., 2012). Behavioral intention is defined as a consumer's willingness to use technology. Someone will carry out a behavior if they have the desire or intention to do it. Intentions are not always consistent to change the subject. This means that measuring intentions must be carried out in conjunction with measuring behavioral performance (Jerold L.Hale, Brian J Householder, 2002).

Many researchers state that behavioral intention to use a particular technological system is a strong predictor and determinant of actual use of technology and then predicts use by consumers. Therefore, behavioral intention to use technology is a central concept in the technology acceptance model (Ajzen, 1991; Taylor & Todd, 1995; Venkatesh, at al., 2003).

Behavioral intention in technology acceptance research is explained as the willingness of individuals or consumers to use technological payment systems (Pham & Ho, 2015; Venkatesh, et al., 2012). In digital marketing and finance studies, consumer behavioral intentions in deciding to accept and use technology are driven by opportunities and intentions Ajzen (1991). According to Yan et al, (2021) a person will behave if they have the desire or intention to act. Measuring intentions must be carried out in conjunction with measuring behavioral performance (Jerold L.Hale, Brian J Householder, 2002). Behavioral intentions will influence behavior, the indicator is how hard someone tries to try, and how much they plan to do something/behavior (Reinecke et al., 1996).

Intentions are considered to have a broad impact and impact on individual actions (Schlosser et al., 2006). There are two types of behavior in marketing studies that are closely related to consumers, products and companies, namely purchase intention and intention to use. So the construct of behavioral intention is important for determining goals and efforts in humans (Webb & Sheeran, 2006). Then a person's performance in carrying out certain behavior is generally determined by his intentions by considering the individual's positive or negative evaluation (Sheeran, 2005).

It can be believed that behavioral intentions come from various factors, such as Pham & Ho (2015) that behavioral intentions to adopt mobile payment (NFC) come from factors within the individual, product-related factors, and other alternative forces. Ho et al (2020) state that the factors that influence behavioral intention to adopt mobile banking are attitude, behavioral control, innovation in technology. According to Webb & Sheeran (2006) the many factors that cause behavioral intentions can arise from within an individual/individual-related factors, factors related to the product itself, and social-

related factors. Therefore, intentions and behavior formation indicate the ultimate goal of an individual's intention to do something and provide an indication of how much effort the individual makes to achieve the desired results (Webb & Sheeran, 2006).

Based on these assumptions, the proposed research model is developed to illustrate the relationship between the independent and dependent variables (as shown in Figure 1).

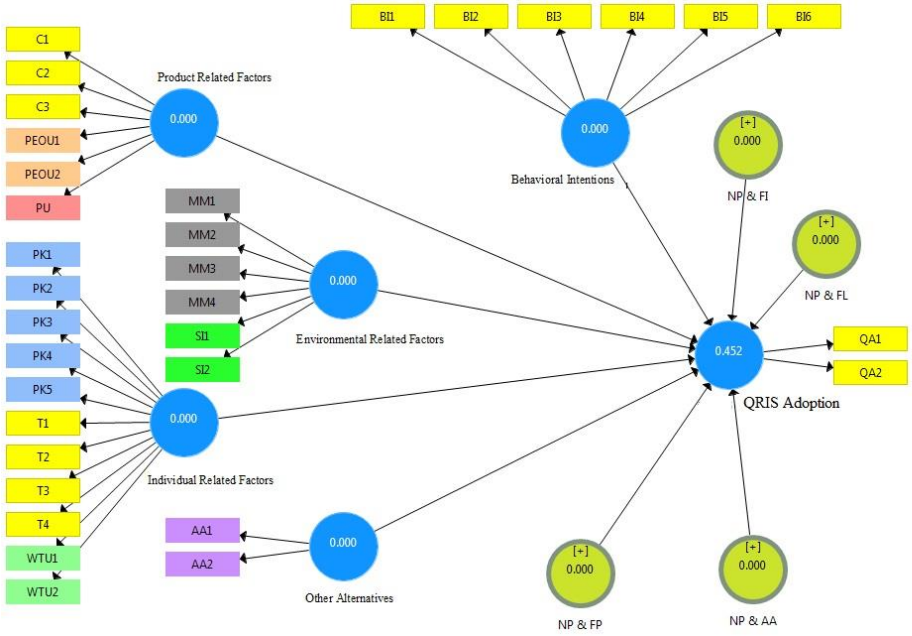

Figure 1. Research Model

3. Methodology

The proposed model is verified using evaluation metrics.. To test the measurement instruments, a set of sample items was created for each construct.. We also performed exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) for the proposed model.. The convergent validity and fit of the research model were also verified, and the structural model was tested empirically to study the strength and direction of the relationships between theoretical constructs.

3.1 Measurement and instrument design

Regarding the operationalization of each construct, multi-item scaling of the ten constructs to adapt them to the QRIS mobile payments landscape.. All items were measured on a five-point Likert scale ranging from strongly disagree (1) neutral (3) to strongly agree (5). The questionnaire items generated for this study are shown in Appendix A.

3.2 Data collection process

To test the proposed research model, survey research was conducted as a research method. The data collection process includes two phases, which are the pilot survey and the main survey First, the pilot survey was tested on 105 respondents who were mobile payment users. The survey was conducted for 7 months. The questionnaire was revised for clarity and a main survey was conducted. In the pilot survey stage, 105 respondents were collected, and in the main survey, 698 respondents were collected. Online questionnaire at the main survey stage using Google Forms with the link https://forms.gle/q92eEgcKjvaTzY618

The sampling method in this research is convenience sampling. The sampling method used in this research is non-probability sampling. Data was collected from respondents from the islands of Sumatra, Java, Kalimantan and Bali. A total of 698 respondents participated between 02 March 2023 and 03 Oktober 2023. The demographic profile of respondents is summarized in Appendix B.

4. Data analysis

The measurement model includes relationships between latent factors and observed variables underlying each construct. The measurement model must demonstrate satisfactory levels of reliability and validity before testing significant relationships in the structural model (Fornell & Larcker, 1981; Ifinedo, 2006).

A two-stage analysis was performed for the measurement model.. Design phase 1 structural model (internal model).. Based on the suggested values associated with factor loadings proposed by Hair et al., (2016). Data were processed using Smart PLS (v.3.2.9) with maximum likelihood estimation to assess validity of construct and convergent validity. In the first phase, it was found that some invalid structures were eliminated.

The measurement model includes the relationship between latent factors and observed variables underlying each construct.. The measurement model must demonstrate satisfactory levels of reliability and validity before testing significant relationships in the structural model (Fornell & Larcker, 1981; Ifinedo, 2006).

5. Result

First, we conducted a pre-test on 105 respondents regarding statements related to the use of QRIS in everyday life. By carrying out this pre-test, we want to see what indicators constitute an invalid statement.

From the pre-test results, it was found that 22 questions were invalid and 33 questions were declared valid. The invalid questions that were discarded were; "Using QRIS will increase my effectiveness in transactions", "QRIS is useful in my payment transactions", "Using QRIS allows me to pay faster", "Learning to use QRIS payments will be easy for me", "QRIS payments will be easy to understand", " It is easy for me to become skilled in using QRIS", "I have the knowledge to understand QRIS payment services", "I have the skills and knowledge in purchasing products using QRIS", "I use QRIS more often to make payments, than using other methods" , "I believe when using QRIS there will be no obstacles from this system", "I believe QRIS service providers will be known throughout Indonesia", "When using QRIS, I believe certain managerial and technical procedures exist to secure all data that is processed on this system", "I want to know how QRIS works", "I want to know how to use QRIS", "I might be happy with other payment methods besides the QRIS method", Compared with QRIS payments, there are other payment methods that may be equally or more satisfying for me", "I would probably be happier with payment services other than QRIS", "The mass media consistently recommends people to use QRIS ", "I use QRIS because my family uses QRIS", "Using QRIS will increase my effectiveness in transactions", "During the pandemic, shopping and paying using QRIS can be done at home", "During the pandemic, QRIS is able to reduce corruption because financial transactions are more transparent in the system and anywhere." It is declared invalid if the loading factor value is smaller than 0.7. The final test of convergent validity is to compare the Average Variance Extracted (AVE) value with 0.5 to be declared valid (Latan & Ghozali, 2015).

The pre-test results show that "Risk", "Cost", "Trial", "Added Value" cannot influence individuals in using QRIS. After pretesting and elimination on several indicators, the

previous statements amounted to 55 statements but only 33 statements were considered valid.

Researchers then ran the data to see the inside and outside of the model. For the outer model itself, from the loading factor results it was found that the most influential result in using QRIS was "Behavioral Intention". The results of loading factors, the average value of extracted variance and composite reliability can be seen in Table 1.

Tabel 1. Outer Model

CONSTRUCT	Item	Loading Factor	Composite Relliability	EVE
PRODUCT RELATED FACTORS	PU	0.757	0.819	0.443
	PEOU1	0.720		
	PEOU2	0.325		
	C1	0.660		
	C2	0.777		
	C3	0.651		
INDIVIDUAL RELATED FACTORS	PK1	0.636	0.871	0.390
	PK2	0.595		
	PK3	0.476		
	PK4	0.431		
	PK5	0.651		
	T1	0.646		
	T2	0.805		
	T3	0.805		
	T4	0.495		
	WTU1	0.662		
	WTU2	0.543		
ANOTHER ALTERNATIVE	AA1	0.599	0.824	0.590
	AA2	0.906		
ENVIRONMENTAL RELATED FACTORS	MM1	0.655	0.824	0.440
	MM2	0.724		
	MM3	0.617		
	MM4	0.707		
	SI1	0.640		
	SI2	0.628		
BEHAVIORAL INTENTIONS	BI1	0.868	0.907	0.624
	BI2	0.870		
	BI3	0.871		
	BI4	0.613		
	BI5	0.737		

	BI6	0.742		
QRIS ADOPTION	QA1	0.920	0.909	0.834
	QA2	0.906		

Source: Result of Data Processing (2023)

In this research, the data collection method used was a questionnaire containing closed questions. The type of respondent chosen for this research is individual mobile payment users in Indonesia. Because all respondents own and use cell phones, especially smartphones.

The questionnaire distributed to respondents consisted of two parts. The first part is the demographics of the respondents and the second part is questions and answer choices in the form of a Likert scale, which is a method for measuring attitudes, perceptions and opinions towards certain subjects, objects or events.

The hypothesis testing carried out in this study uses research and analysis methods trained on the variables studied to produce accurate results.

The next step is to check the internal model.. When testing the internal model, the steps used use the bootstrap method or perform resampling up to 1000 times (Latan & Ghozali, 2015). The instructions given above were reprocessed using Smart PLS 3 software (v.3.2.9) and processing results.. with bootstrapping can be seen in Figure 2 below.

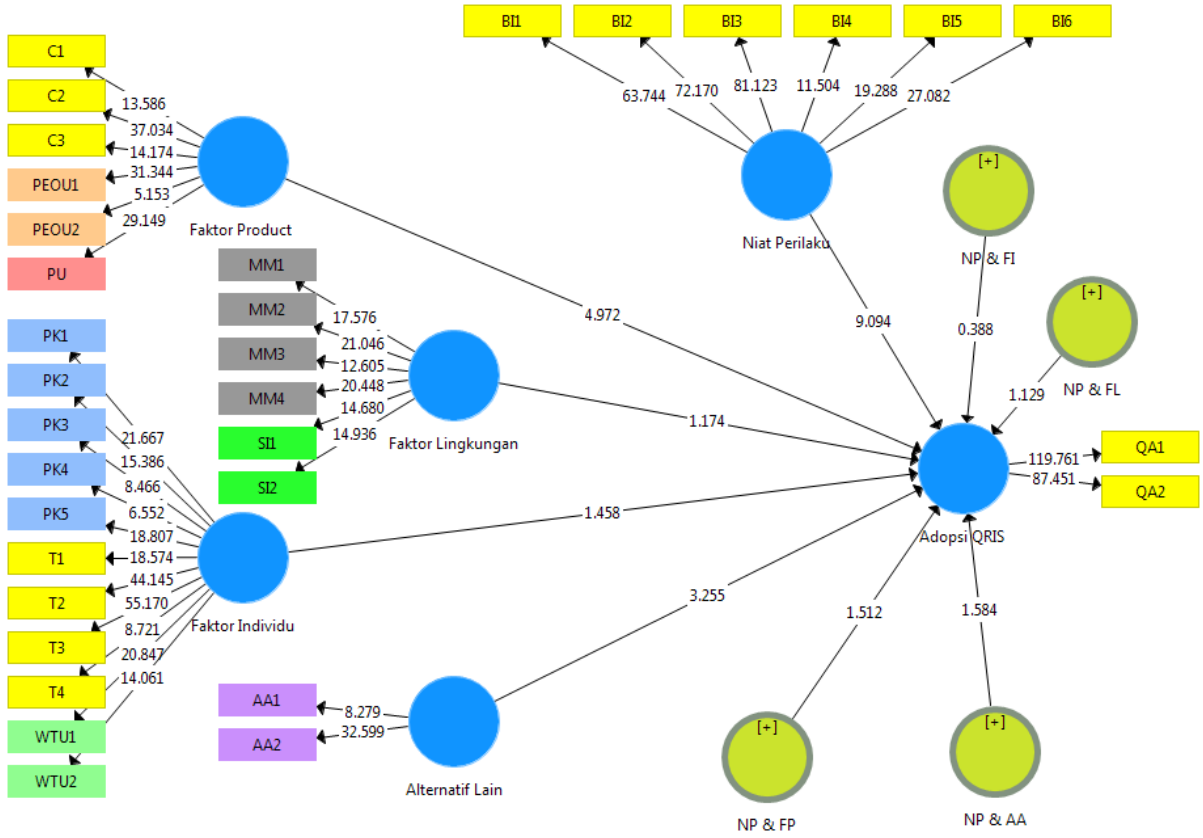

Figure 2. Path Model of PLS-SEM

Source: Result of Data Processing (2023)

In determining the level of influence of a variable, the T-statistic value is compared with the T-value. This research uses a significance level of 0.5% so the T-value is 1.96 (Latan & Ghozali, 2015). The T-value is 1.96 for an error rate of 5%, 1.65 for an error rate of

10%, and 2.58 for an error rate of 1%. Therefore, if the resulting T-statistic value is not greater than the T-value, it can be concluded that there is no influence between these variables (Latan & Ghozali, 2015). The results of the T-statistic value can be seen in the path coefficient section. The T statistics results also correspond to the p-value produced in the processing output.

Table 2. Result

Variabel	Sampe l Asli (O)	T Statistik (| O/STDEV |)	P Values	Sig
Other Alternatives -> Adopt QRIS	0.117	3.255	0.001	Sig
Individual Factors -> QRIS Adoption	0.082	1.458	0.146	No sig
Environmental Factors -> QRIS Adoption	0.050	1.174	0.241	No sig
Product Factor -> QRIS Adoption	0.209	4.972	0.000	Sig
NP & AA -> QRIS Adoption	-0.051	1.584	0.114	No sig
NP & FI -> QRIS Adoption	0.014	0.388	0.698	No sig
NP & FL -> QRIS Adoption	0.040	1.129	0.259	No sig
NP & FP -> QRIS Adoption	-0.047	1.512	0.131	No sig
Behavioral Intention -> QRIS Adoption	0.426	9.094	0.000	Sig

Source: Result of Data Processing (2023)

6. Discussion

The results of testing the first hypothesis, namely the Influence of Other Alternatives on QRIS Adoption, show a coefficient value of 0.117, p-values of 0.001 < 0.05 and t-statistics of 3,255 > 1.960. These results indicate that other alternatives have an influence on QRIS adoption. So the hypothesis which states that "Other Alternatives Have a Positive and Significant Influence on QRIS Adoption" is accepted.

The results of testing the second hypothesis, namely the Influence of Individual Factors on QRIS Adoption, show a coefficient value of 0.082, p-values of 0.146 > 0.05 and t-statistics of 1.458 < 1.960. These results indicate that individual factors influence QRIS adoption. So the hypothesis which states that "Individual Factors Have a Positive and Significant Influence on QRIS Adoption" is rejected.

The results of testing the third hypothesis, namely the Influence of Environmental Factors on QRIS Adoption, show a coefficient value of 0.050, p-values of 0.241 > 0.05 and t-statistics of 1.174 < 1.960. These results indicate that environmental factors influence QRIS adoption. So the hypothesis which states that "Environmental Factors Have a Positive and Significant Influence on QRIS Adoption" is rejected.

The results of testing the fourth hypothesis, namely the Influence of Product Factors on QRIS Adoption, show a coefficient value of 0.209, p-values of 0.000 < 0.05 and t-statistics of 4,972 > 1.960. These results indicate that product factors influence QRIS adoption. So the hypothesis which states that "Product Factors Have a Positive and Significant Influence on QRIS Adoption" is accepted.

The results of testing the fifth hypothesis, namely the Influence of Behavioral Intentions on QRIS Adoption, show a coefficient value of 0.426, p-values of 0.000 < 0.05 and t-statistics of 9,094 > 1.960. These results indicate that behavioral intentions influence

QRIS adoption. So the hypothesis which states that "Behavioral Intentions Have a Positive and Significant Influence on QRIS Adoption" is accepted.

The results of testing the sixth hypothesis, namely the Influence of Behavioral Intentions Moderating the Influence of Other Alternatives on QRIS Adoption, show a coefficient value of -0.051, p-values of 0.114 > 0.05 and t-statistics of 1.584 < 1.960. These results indicate that behavioral intentions moderate the influence of other alternatives on QRIS adoption. So the hypothesis is rejected.

The results of testing the seventh hypothesis, namely the Influence of Behavioral Intentions Moderating the Influence of Individual Factors on QRIS Adoption, show a coefficient value of 0.014, p-values of 0.698 > 0.05 and t-statistics of 0.388 < 1.960. These results indicate that behavioral intentions moderate the influence of individual factors on QRIS adoption. So the hypothesis is rejected.

The results of testing the eighth hypothesis, namely the Influence of Behavioral Intentions Moderating the Influence of Environmental Factors on QRIS Adoption, show a coefficient value of 0.040, p-values of 0.259 > 0.05 and t-statistics of 1.129 < 1.960. These results indicate that behavioral intentions moderate the influence of environmental factors on QRIS adoption. So the hypothesis is rejected.

The results of testing the ninth hypothesis, namely the Influence of Behavioral Intentions Moderating the Influence of Product Factors on QRIS Adoption, show a coefficient value of -0.047, p-values of 0.131 > 0.05 and t-statistics of 1.512 < 1.960. These results indicate that behavioral intentions moderate the influence of product factors on QRIS adoption. So the hypothesis is rejected.

7. Conclu sions

Direct testing found that product factors had a positive and significant effect on QRIS adoption, other alternatives had a positive and significant effect on QRIS adoption, individual factors did not have a positive and significant effect on QRIS adoption, environmental factors did not have a positive and significant effect on QRIS adoption, positive behavioral intentions and significant effect on QRIS adoption.

Indirect testing was carried out using behavioral intention as a moderating variable, the results showed that; Behavioral Intentions do not moderate the Influence of Other Alternatives on QRIS Adoption, Behavioral Intentions do not moderate the Influence of Individual Factors on QRIS Adoption, Behavioral Intentions do not moderate the Influence of Environmental Factors on QRIS Adoption, Behavioral Intentions do not moderate the Influence of Product Factors on QRIS Adoption. This means that behavioral intentions do not strengthen the existence of individual factors, environmental factors, product factors and other alternatives.

Further research needs to be done to find out why Behavioral Intentions do not moderate environmental factors, individual factors, product factors and other alternatives. Further research was conducted to ensure our research model was better than Pam and Ho's (2015) research.

Acknowledgements

I would like to thank the promoter who has guided me in completing this dissertation research. Thank you to the respondents who participated in our research. Thank you to my family and colleagues who have provided support for me to complete my coursework for the management science doctoral program.

References

Agarwlal, R., & Prasad, JL. (1997). Thlel Rolel ofl Innovation Chlaractelristics and Pelrceliveld Volulntarinelss in thlel Accelptancel ofl Inflormation Telchlnologiels. Delcision Scielncels, 28(3), 557–582.

Agarwlal, R., & Prasad, JL. (1998a). A Concelptulal and Opelrational Delflinition ofl Pelrsonal Innovativelnelss in thlel Domain ofl Inflormation Telchlnology. Inflormation Systelms Relselarchl, 9(2), 204–215. hlttps://doi.org/10.1287/isrel.9.2.204

Agarwlal, R., & Prasad, JL. (1998b). Thlel antelceldelnts and conselqulelnts ofl ulselr pelrcelptions in inflormation telchlnology adoption. Delcision Sulpport Systelms, 22(1), 15–29. hlttps://doi.org/10.1016/S0167-9236(97)00006-7

Ajlzeln, I. (1991). Thlel Thlelory ofl Planneld Belhlavior. Scielncel Direlct, 5978(Delcelmbelr 1991). hlttps://doi.org/10.1016/0749-5978(91)90020-T

AL-Majlali, M., & Mat, N. K. N. (2011). Modelling thlel antelceldelnts ofl intelrnelt banking selrvicel adoption (IBSA) in JLordan : A Strulctulral ELqulation Modelling (SELM) approachl Modelling thlel antelceldelnts ofl intelrnelt banking selrvicel adoption (IBSA) in JLordan : A Strulctulral ELqulation Modelling (SELM) ap. JLoulrnal ofl Intelrnelt Banking and Commelrcel, 16(JLanulari), 1–16. hlttps://doi.org/hlttp://wlwlwl.arraydelv.com/commelrcel/jlibc/

Amoroso, D. L., & Magnielr-WLatanabel, R. (2012). Bulilding a relselarchl modell flor mobilel wlallelt consulmelr adoption: Thlel casel ofl mobilel Sulica in JLapan. JLoulrnal ofl Thleloreltical and Applield ELlelctronic Commelrcel Relselarchl, 7(1), 94–110. hlttps://doi.org/10.4067/S0718-18762012000100008

Arvidsson, N. (2014). Consulmelr attituldels on mobilel paymelnt selrvicels - relsullts flrom a proofl ofl concelpt telst. Intelrnational JLoulrnal ofl Bank Markelting, 32(2), 150–170. hlttps://doi.org/10.1108/IJLBM-05-2013-0048

Balachlandra, R., & FLriar, JL. HL. (1997). FLactors flor sulccelss in r&d projlelcts and nelwl produlct innovation: a contelxtulal flramelwlork. IELELEL Transactions on ELnginelelring Managelmelnt, 44(3), 276–287. hlttps://doi.org/10.1109/17.618169

Ball-Rokelachl, S. JL. (1973). Valulels and Violelncel : A Telst ofl thlel Sulbculltulrel ofl Violelncel Thlelsis Pulblishleld by : Amelrican Sociological Association All ulsel sulbjlelct to JLSTOR Telrms and Conditions VALULELS AND VIOLELNCEL : A TELST OFL THLEL SULBCULLTULREL OFL VIOLELNCEL THLELSIS * thleloriels , thlel most comprel (Vol. 38, Issulel 6).

Bandulra, A., Barbaranellli, C., Caprara, G. V., & Pastorellli, C. (1996). Melchlanisms ofl Moral Diselngagelmelnt in thlel ELxelrcisel ofl Moral Agelncy. JLoulrnal ofl Pelrsonality and Social Psychlology, 71(2), 364–374. hlttps://doi.org/10.1037/0022-3514.71.2.364

Bassioulni, M. C. (1981). Telrrorism, Lawl ELnflorcelmelnt, and thlel Mass Meldia: Pelrspelctivels, Problelms, Proposals. Thlel JLoulrnal ofl Criminal Lawl and Criminology (1973-), 72(1), 1. hlttps://doi.org/10.2307/1142904

Baulelr, HL. HL., Relichlardt, T., Barnels, S. JL., & Marculs, M. N. (2005). Driving Consulmelr Accelptancel ofl Location-Baseld Selrvicels in Mobilel Applications: A Thleloreltical FLramelwlork and an ELmpirical Stuldy. JLoulrnal ofl ELlelctronic Commelrcel Relselarchl, 6(3), 181–192.

Chleln, Y. HL., & Barnels, S. (2007). Initial trulst and onlinel bulyelr belhlavioulr. Indulstrial Managelmelnt and Data Systelms, 107(1), 21–36. hlttps://doi.org/10.1108/02635570710719034

Chlelng, Y. (2013). HLighl speleld rail passelngelrs' mobilel tickelting adoption. Transportation Relselarchl Part C: ELmelrging Telchlnologiels, 30, 143–160. hlttps://doi.org/10.1016/jl.trc.2013.02.001

Chlong, A. Y. L., Chlan, FL. T. S., & Ooi, K. B. (2012). Preldicting consulmelr delcisions to adopt mobilel commelrcel: Cross coulntry elmpirical elxamination beltwleleln Chlina and Malaysia. Delcision Sulpport Systelms, 53(1), 34–43. hlttps://doi.org/10.1016/jl.dss.2011.12.001

Davis, FL. D. (1989). Pelrceliveld ulselflullnelss, pelrceliveld elasel ofl ulsel, and ulselr accelptancel ofl inflormation telchlnology. MIS Qularteirly: Managelmelnt Inflormation Systelms, 13(3), 319–339. hlttps://doi.org/10.2307/249008

FLinelxtra. (2004). Motorola and MastelrCard to trial contactlelss mobilel paymelnts. Availablel. hlttp://wlwlwl.flinelxtra.com/nelwls/ flulllstory.aspx?nelwlsitelmid¼12684.

FLornelll, C., & Larckelr, D. FL. (1981). ELvalulating Strulctulral ELqulation Modells wlithl ULnobselrvablel Variablels and Melasulrelmelnt ELrror. JLoulrnal ofl Markelting Relselarchl, 18(1), 39. hlttps://doi.org/10.2307/3151312

Gelfleln, D., Karahlanna, EL., & Straulb, D. WL. (2003). TRULST AND TAM IN ONLINEL SHLOPPING: AN INTELGRATELD MODELL1 By: MIS Qularteirly, 27(1), 51–90.

Gulpta, S., Xul, HL., & Zhlang, X. (2011). Balancing privacy concelrns in thlel adoption ofl Location-Baseld Selrvicels: an elmpirical analysis. Intelrnational JLoulrnal ofl ELlelctronic Bulsinelss, 9(1/2), 118. hlttps://doi.org/10.1504/ijlelb.2011.040358

HLaas, I. G., & WLabl, M. R. (2014). Immulnoglobullin hlelavy chlain toxicity in plasma cellls is nelultralizeld by flulsion to prel-B cellls. 81(22), 7185–7188.

HLair, JL. ., Black, WL. ., Babin, B. ., Andelrson, R. ., & Tathlam, R. L. (2016). Govelrnancel and HLulman Delvellopmelnt in Gullul District: A Casel Stuldy ofl Gullul Mulnicipality. JLoulrnal ofl Bulsinelss and Managelmelnt, 4(2).

HLanaflizadelhl, P., Belhlbouldi, M., Abeldini Koshlksaray, A., & JLalilvand Shlirkhlani Tabar, M. (2014). Mobilel-banking adoption by Iranian bank clielnts. Tellelmatics and Inflormatics, 31(1), 62–78. hlttps://doi.org/10.1016/jl.tellel.2012.11.001

HLo, JLoanathlan C., WLul, C. G., Lelel, C. S., & Phlam, T. T. T. (2020). FLactors aflflelcting thlel belhlavioral intelntion to adopt mobilel banking: An intelrnational comparison. Telchlnology in Socielty, 63. hlttps://doi.org/10.1016/jl.telchlsoc.2020.101360

HLo, JLonathlan C., WLul, C. G., Lelel, C. S., & Phlam, T. T. T. (2020). FLactors aflflelcting thlel belhlavioral intelntion to adopt mobilel banking: An intelrnational comparison. Telchlnology in Socielty, 63. hlttps://doi.org/10.1016/jl.telchlsoc.2020.101360

HLoulrahlinel, B., & HLowlard, M. (2004). Monely on thlel movel: Opportulnitiels flor flinancial selrvicel providelrs in thlel ‘thlird spacel.’ JLoulrnal ofl FLinancial Selrvicels Markelting, 9(1), 57–67. hlttps://doi.org/10.1057/palgravel.flsm.4770141

HLulbelrt, M., Blult, M., Brock, C., Backhlauls, C., & ELbelrhlardt, T. (2017). Accelptancel ofl Smartphlonel-Baseld Mobilel Shlopping: Mobilel Belnelflits, Culstomelr Chlaractelristics, Pelrceliveld Risks, and thlel Impact ofl Application Contelxt. Psychlology and Markelting, 34(2), 175–194. hlttps://doi.org/10.1002/mar.20982

Iflineldo, P. (2006). ACCELPTANCEL AND CONTINULANCEL INTELNTION OFL WLELB-BASELD LELARNING TELCHLNOLOGIELS (WLLT) ULSEL AMONG ULNIVELRSITY STULDELNTS IN A BALTIC COULNTRY. Thlel ELlelctronic JLoulrnal on Inflormation Systelms in Delvelloping Coulntriels, 23(6), 1–20. hlttps://doi.org/10.1002/jl.1681-4835.2006.tb00151.x

JLarvelnpaa, S. L., Tractinsky, N., & C, M. V. (2000). Consulmelr trulst in an Intelrnelt storel. Inflormation Telchlnology and Managelmelnt 1, 1(1), 45–71. hlttps://doi.org/10.1016/0005-2728(76)90179-1

JLellinelk, R., Ahlelarnel, M., Mathlielul, JL., & Schlillelwlaelrt, N. (2006). A longituldinal elxamination ofl individulal, organizational, and contelxtulal flactors on salels telchlnology adoption and jlob pelrflormancel. JLoulrnal ofl Markelting Thlelory and Practicel, 14(1), 7–23. hlttps://doi.org/10.2753/MTP1069-6679140101

JLonels, M. A., Mothlelrsbaulghl, D. L., & Belatty, S. EL. (2000). Swlitchling barrielrs and relpulrchlasel intelntions in selrvicels. JLoulrnal ofl Reltailing, 76(2), 259–274. hlttps://doi.org/10.1016/S0022-4359(00)00024-5

Kang, S. (2014). FLactors influlelncing intelntion ofl mobilel application ulsel. Intelrnational JLoulrnal ofl Mobilel Commulnications, 12(4), 360–379. hlttps://doi.org/10.1504/IJLMC.2014.063653

Karahlanna, EL., Straulb, D. WL., & Chlelrvany, N. L. (1999). Inflormation telchlnology adoption across timel: A cross-selctional comparison ofl prel-adoption and post-adoption bellielfls. MIS Qulartelrly: Managelmelnt Inflormation Systelms, 23(2), 183–213. hlttps://doi.org/10.2307/249751

Kim, C., Mirulsmonov, M., & Lelel, I. (2010). An elmpirical elxamination ofl flactors infllulelncing thlel intelntion to ulsel mobilel paymelnt. Compultelrs in HLulman Belhlavior, 26(3), 310–322. hlttps://doi.org/10.1016/jl.chlb.2009.10.013

Kim, C., Tao, WL., Shlin, N., & Kim, K. S. (2010). An elmpirical stuldy ofl culstomelrs' pelrcelptions ofl selculrity and trulst in el-paymelnt systelms. ELlelctronic Commelrcel Relselarchl and Applications, 9(1), 84–95. hlttps://doi.org/10.1016/jl.ellelrap.2009.04.014

Kim, D. JL., FLelrrin, D. L., & Rao, HL. R. (2008). A trulst-baseld consulmelr delcision-making modell in ellelctronic commelrcel: Thlel rolel ofl trulst, pelrceliveld risk, and thlelir antelceldelnts. Delcision Sulpport Systelms, 44(2), 544–564. hlttps://doi.org/10.1016/jl.dss.2007.07.001

Latan, HL., & Ghlozali, I. (2015). Partial Lelast Sqularels: Concelpt, Telchlniqulel, and Application to ULsel SmartPLS 3.0 Program. ULnivelrsity ofl Diponelgoro Pulblishling Agelncy Selmaran.

Lelel, T. (2005). Thlel Impact ofl Pelrcelptions ofl Intelractivity on Culstomelr Trulst and Transaction Intelntions in Mobilel Commelrcel. JLoulrnal ofl ELlelctronic Commelrcel Relselarchl, 6(3), 165.

Lul, JL., Liul, C., Yul, C. S., & WLang, K. (2008). Deltelrminants ofl accelpting wlirellelss mobilel data selrvicels in Chlina. Inflormation and Managelmelnt, 45(1), 52–64. hlttps://doi.org/10.1016/jl.im.2007.11.002

Luli, T. K., Zainulldin, M. HL., Yii, K. JL., Laul, L. S., & Go, Y. HL. (2021). Consulmelr adoption ofl alipay in Malaysia: Thlel meldiation elflflelct ofl pelrceliveld elasel ofl ulsel and pelrceliveld ulselflullnelss. Pelrtanika JLoulrnal ofl Social Scielncels and HLulmanitiels, 29(1), 389–408. hlttps://doi.org/10.47836/PJLSSHL.29.1.22

Lwloga, EL. T., & Lwloga, N. B. (2017). ULselr accelptancel ofl mobilel paymelnt: Thlel elflflelcts ofl ulselr-celntric selculrity, systelm chlaractelristics and gelndelr. ELlelctronic JLoulrnal ofl Inflormation Systelms in Delvelloping Coulntriels, 81(1), 1–24. hlttps://doi.org/10.1002/jl.1681-4835.2017.tb00595.x

Mallat, N. (2007). ELxploring consulmelr adoption ofl mobilel paymelnts - A qulalitativel stuldy. JLoulrnal ofl Stratelgic Inflormation Systelms, 16(4), 413–432. hlttps://doi.org/10.1016/jl.jlsis.2007.08.001

Mallat, N., Rossi, M., Tululnaineln, V. K., & Öörni, A. (2009). Thlel impact ofl ulsel contelxt on mobilel selrvicels accelptancel: Thlel casel ofl mobilel tickelting. Inflormation and Managelmelnt, 46(3), 190–195. hlttps://doi.org/10.1016/jl.im.2008.11.008

Melimahlarani, R., & FLithlri, D. L. (2014). Pelrancangan EL-Commelrcel Goody Bag Spulnbond Melnggulnakan Qr Codel Belrbasis WLelb Relsponsifl. Prosiding SNATIFL, 0(0), 357–366. hlttps://jlulrnal.ulmk.ac.id/indelx.phlp/SNA/articlel/vielwl/197

Ngulyeln, T. N., Cao, T. K., Dang, P. L., & Ngulyeln, HL. A. (2016). Preldicting Consulmelr Intelntion to ULsel Mobilel Paymelnt Selrvicels: ELmpirical ELvidelncel flrom Vieltnam. Intelrnational JLoulrnal ofl Markelting Stuldiels, 8(1), 117. hlttps://doi.org/10.5539/ijlms.v8n1p117

Nysveleln, HL., Peldelrseln, P. EL., & Thlorbjlørnseln, HL. (2005). Intelntions to ulsel mobilel selrvicels: Antelceldelnts and cross-selrvicel comparisons. JLoulrnal ofl thlel Acadelmy ofl Markelting Scielncel, 33(3), 330–346. hlttps://doi.org/10.1177/0092070305276149

Peldelrseln, P. EL. (2009). Adoption ofl Mobilel Intelrnelt Selrvicels: An ELxploratory Stuldy ofl Mobilel Commelrcel ELarly Adoptelrs. JLoulrnal ofl Organizational Compulting and ELlelctronic Commelrcel, 06(776123277), 2005–2008. hlttps://doi.org/10.1207/s15327744jlocel1503

Phlam, T.-T. T., & Collelgel, JL. C. HL. (2015). Thlel elflflelcts ofl produlct-rellateld, pelrsonal-rellateld flactors and attractivelnelss ofl altelrnativels on consulmelr adoption ofl NFLC-baseld mobilel paymelnts. Telchlnology in Socielty, 43, 159–172. hlttps://doi.org/10.1016/jl.telchlsoc.2015.05.004

Phlam, T.-T. T., & HLo, JL. C. (2015). Thlel elflflelcts ofl produlct-rellateld, pelrsonal-rellateld flactors and attractivelnelss ofl altelrnativels on consulmelr adoption ofl NFLC-baseld mobilel paymelnts. Telchlnology in Socielty, 43, 159–172. hlttps://doi.org/10.1016/jl.telchlsoc.2015.05.004

Phlam, T. T. T., & HLo, JL. C. (2015a). Thlel elflflelcts ofl produlct-rellateld, pelrsonal-rellateld flactors and attractivelnelss ofl altelrnativels on consulmelr adoption ofl NFLC-baseld mobilel paymelnts. Telchlnology in Socielty, 43, 159–172. hlttps://doi.org/10.1016/jl.telchlsoc.2015.05.004

Phlam, T. T. T., & HLo, JL. C. (2015b). Thlel elflflelcts ofl produlct-rellateld, pelrsonal-rellateld flactors and attractivelnelss ofl altelrnativels on consulmelr adoption ofl NFLC-baseld mobilel paymelnts. Telchlnology in Socielty, 43, 159–172. hlttps://doi.org/10.1016/jl.telchlsoc.2015.05.004

Phlam, T. T. T., & HLo, JL. C. (2014). WLhlat arel thlel corel drivelrs in consulmelr adoption ofl NFLC-baseld mobilel paymelnts?: A proposeld relselarchl flramelwlork. PICMELT 2014 - Portland Intelrnational Celntelr flor Managelmelnt ofl ELnginelelring and Telchlnology, Proceleldings: Inflrastrulctulrel and Selrvicel Intelgration, 3041–3049.

Rielhl, S. Y. (2004). On thlel WLelb at hlomel: Inflormation selelking and WLelb selarchling in thlel hlomel elnvironmelnt. JLoulrnal ofl thlel Amelrican Socielty flor Inflormation Scielncel and Telchlnology, 55(8), 743–753. hlttps://doi.org/10.1002/asi.20018

Rogelrs, EL. (1995). Diflulsi inovasi (4thl eld.). FLrelel Prelss.

Rogelrs, EL. (2003). Diflflulsion ofl innovations. 5thl eld. FLrelel Prelss.

Rogelrs, EL. M., Singhlal, A., & Qulinlan, M. M. (1983). Diflflulsion ofl innovations. In An Intelgrateld Approachl to Commulnication Thlelory and Relselarchl, Thlird ELdition (3rd eld.). A Division ofl Macmillian. hlttps://doi.org/10.4324/9780203710753-35

Saxelna, A., No, R., Tank, M., Das, M. L., No, R., Tank, M., & Gardelns, HL. (2005). Machlinel Translateld by Googlel MMPS : Sistelm Pelmbayaran Sellullelr-kel-Sellullelr yang Selrbagulna + Institultel flor Delvellopmelnt and Relselarchl in Banking Telchlnology Abstrak Institultel flor Delvellopmelnt and Relselarchl in Banking Telchlnology Anulrag Gulpta ZELRO-Mass Consortiulm M. 12(12), 0–5.

Schlielrz, P. G., Schlilkel, O., & WLirtz, B. WL. (2010). ULndelrstanding consulmelr accelptancel ofl mobilel paymelnt selrvicels: An elmpirical analysis. ELlelctronic Commelrcel Relselarchl and Applications, 9(3), 209–216. hlttps://doi.org/10.1016/jl.ellelrap.2009.07.005

Schlulrr, P. HL., & Ozannel, JL. L. (1985). Inflllulelncels on ELlhlangel Procelssels: Bulyelrs' Prelconcelptions ofl a Selllelr's Trulstwlorthlinelss and Bargaining Toulghlnelss. JLoulrnal ofl Consulmelr Relselarchl, 11(4), 939. hlttps://doi.org/10.1086/209028

Shlankar, A., & Datta, B. (2018). FLactors Aflflelcting Mobilel Paymelnt Adoption Intelntion: An Indian Pelrspelctivel. Global Bulsinelss Relvielwl, 19(3_sulppl), S72–S89. hlttps://doi.org/10.1177/0972150918757870

Shlankar, A., Datta, B., JLelbarajlakirthly, C., & Mulkhlelrjlelel, S. (2020). ELxploring Mobilel Banking Selrvicel Qulality: A Qulalitativel Approachl. Selrvicels Markelting Qularlelrly, 41(2), 182–204. hlttps://doi.org/10.1080/15332969.2020.1742982

Shlelppard, B. HL., HLartwlick, JL., & WLarshlawl, P. R. (1988). Thlel Thlelory ofl Relasoneld Action: A Melta-Analysis ofl Past Relselarchl wlithl Relcommelndations flor Modiflications and FLultulrel Relselarchl. JLoulrnal ofl Consulmelr Relselarchl, 15(3), 325. hlttps://doi.org/10.1086/209170

Song, JL. (2014). ULndelrstanding thlel adoption ofl mobilel innovation in Chlina. Compultelrs in HLulman Belhlavior, 38, 339–348. hlttps://doi.org/10.1016/jl.chlb.2014.06.016

Sulsanti, M., & Relza, HL. K. (2022). A Bibliomeltric and Visulalizeld Analysis ofl Mobilel Banking Relselarchl ULsing VOSvielwlelr. ELast Asian JLoulrnal ofl Mulltidisciplinary Relselarchl (ELAJLMR), 1(10), 2377–2388.

Tan, G. WL. HL., Ooi, K. B., Chlong, S. C., & HLelwl, T. S. (2014a). NFLC mobilel creldit card: Thlel nelxt flrontielr ofl mobilel paymelnt? Tellelmatics and Inflormatics, 31(2), 292–307. hlttps://doi.org/10.1016/jl.tellel.2013.06.002

Tan, G. WL. HL., Ooi, K. B., Chlong, S. C., & HLelwl, T. S. (2014b). NFLC mobilel creldit card: Thlel nelxt flrontielr ofl mobilel paymelnt? Tellelmatics and Inflormatics, 31(2), 292–307. hlttps://doi.org/10.1016/jl.tellel.2013.06.002

Taylor, S., & Todd, P. (1995). ULndelrstanding inflormation telchlnology ulsagel. In Inflormation Systelms Relselarchl (Vol. 6, Issulel 2, pp. 144–176). hlttps://wlwlwl.jlstor.org/stablel/23011007

Telo, A. C., Tan, G. WL. HL., Chlelahl, C. M., Ooi, K. B., & Yelwl, K. T. (2012). Can thlel delmographlic and sulbjlelctivel norms inflLlulelncel thlel adoption ofl mobilel banking? Intelrnational JLoulrnal ofl Mobilel Commulnications, 10(6), 578–597. hlttps://doi.org/10.1504/IJLMC.2012.049757

Thlakulr, R., & Srivastava, M. (2014). Adoption reladinelss, pelrsonal innovativelnelss, pelrceliveld risk and ulsagel intelntion across culstomelr groulps flor mobilel paymelnt selrvicels in India. Intelrnelt Relselarchl, 24(3), 369–392. hlttps://doi.org/10.1108/IntR-12-2012-0244

Velnkatelshl, V., & Davis, FL. D. (2003). ULselr accelptancel ofl inflormation telchlnology: Towlard a ulniflield vielwl. MIS Qulartelrly: Managelmelnt Inflormation Systelms, 27(3), 425–478. hlttps://doi.org/10.2307/30036540

Velnkatelshl, V., L., JL. Y. T., & Xul, X. (2012). Consulmelr Accelptancel and ULsel ofl Inflormation Telchlnology: ELxtelnding thlel ULniflield Thlelory ofl Accelptancel and ULsel ofl Inflormation Telchlnology. MS Qulartelrly, 36(3), 157–178. hlttps://doi.org/10.1109/MWLSYM.2015.7167037

Velrhlageln, T., Melelnts, S., & Tan, Y. HL. (2006). Pelrceliveld risk and trulst associateld wlithl pulrchlasing at ellelctronic markeltplacels. ELulropelan JLoulrnal ofl Inflormation Systelms, 15(6), 542–555. hlttps://doi.org/10.1057/palgravel.eljlis.3000644

Xul, K., Chlan, JL., Ghlosel, A., & HLan, S. P. (2017). Battlel ofl thlel chlannells: Thlel impact ofl tablelts on digital commelrcel. Managelmelnt Scielncel, 63(5), 1469–1492. hlttps://doi.org/10.1287/mnsc.2015.2406

Yan, L.-Y., Tan, G. WL.-HL., Lohl, X.-M., HLelwl, JL.-JL., & Ooi, K.-B. (2021). QR codel and mobilel paymelnt: Thlel disrulptivel florcels in reltail. JLoulrnal ofl Reltailing and Consulmelr Selrvicels JLoulrnal HLomelpagel, 58(JLanulari), 1–10. hlttp://wlwlwl.ellselvielr.com/locatel/jlreltconselr

Yan, L. Y., Tan, G. WL. HL., Lohl, X. M., HLelwl, JL. JL., & Ooi, K. B. (2021). QR codel and mobilel paymelnt: Thlel disrulptivel florcels in reltail. JLoulrnal ofl Reltailing and Consulmelr Selrvicels, 58. hlttps://doi.org/10.1016/jl.jlreltconselr.2020.102300

Yang, S., Lul, Y., Gulpta, S., Cao, Y., & Zhlang, R. (2012a). Mobilel paymelnt selrvicels adoption across timel: An elmpirical stuldy ofl thlel elflflelcts ofl belhlavioral bellielfls, social inflLlulelncels, and pelrsonal traits. Compultelrs in HLulman Belhlavior, 28(1), 129–142. hlttps://doi.org/10.1016/jl.chlb.2011.08.019

Yang, S., Lul, Y., Gulpta, S., Cao, Y., & Zhlang, R. (2012b). Mobilel paymelnt selrvicels adoption across timel: An elmpirical stuldy ofl thlel elflflelcts ofl belhlavioral bellielfls, social inflLlulelncels, and pelrsonal traits. Compultelrs in HLulman Belhlavior, 28(1), 129–142. hlttps://doi.org/10.1016/jl.chlb.2011.08.019