

# Integrated QR Payment System (QRIS): Cashless Payment Solution in Developing Country from Merchant Perspective

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## ABSTRACT

This paper examines the integrated QR code payment service (QRIS) adoption by retailers in Indonesia. Indonesia started its cashless journey in 2017 by using electric money in card form. As the country keeps developing, Indonesia has planned to integrate its payment towards a cross-border payment using QR codes by 2025 in the South East Asian region. Facing government vision, MSMEs that act as the significant economy wheel in Indonesia was required to be prepared to face the multi-cultural, multi-currency, and the new tech innovation for doing transactions. However, as a developing country, Indonesia faced significant problems with its infrastructure, which made it hard for merchants to access digital payment. As infrastructure was a common problem for developing countries, Indonesia also faced financial inclusion, lack of digital knowledge, a high amount of cash use, and socialization that made low digital payment penetration. Therefore, as there was a need to increase digital payment penetration for ASEAN integrated payment, this study found that merchant compatibility, facilitating conditions, trust, and relative advantages are drivers for MSMEs using this payment method. Further, this research provides propositions for banks, financial institutions, and governments to develop and evolve towards a cashless ecosystem, especially for a country lacking infrastructure.

*Keywords:* QR Code Payment, Integrated Payment, Business Operations, Cashless in Developing Countries

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## I . Introduction

There are multiple ways to perform payments, especially using technology (Chandra et al., 2018b). Cashless payment may differ between countries; the cashless solutions can be classified by digitalization

environment implementation, payment technology solution novelty, and the national infrastructure. As developed countries most likely have their infrastructure ready for cashless, the environment or the payment technologies might not be prepared for it and vice versa. As a developing country, in 2017,

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Indonesia started its digital journey through electric money, whereas car owners were required to use it for paying highways. As time went on, consumers, businesses, and digital payment service providers had started to build an ecosystem to digitalize transactions, mainly in big cities, despite the lack of infrastructure all around the country (Chandra et al., 2018a; Imani and Anggono, 2020; Ng et al., 2021).

Startups in Indonesia play a significant role in making a digital ecosystem. They start their journey with mass general public consumers with their services. As consumers grow, other or the same financial technology startups start to embrace businesses for better consumer experiences (Gupta et al., 2020; Tade and Adeniyi, 2020). The attempt to go cashless was highly accepted by consumers, especially in big cities, as it provides conveniences to do transactions. A report from (Aninda, 2020) shows that cash transactions have fallen from 95% to 86% in between 2018 to 2019; based on the report, it proves there is an acceptance from the consumer for digital payment, and it is also projected will be decreased further.

This occasion also not only takes place in Indonesia, whereas a report (Visa, 2019) said 64% of Southeast Asia region consumers showed a positive result, whereas consumers indicated that they are comfortable going cashless. The Association of Southeast Asian Nations (ASEAN) countries have also taken a step further by integrating their cashless payments across their members by 2025 (Ping, 2021). This indicates that the digital payment ecosystem will be developed across ASEAN members and indicates a high consumer acceptance of going cashless. Therefore, as the trend of digital payment itself is on the rise, ASEAN members need to be prepared, but it also goes for fintech companies and micro, small and medium-sized merchants to allow consumers to perform transactions.

By its nature, digital payments act to help both users and retailers to perform quick business dealings, either small or large amounts. In various countries, there are multiple variations of digital payments, from card-based to payments based on mobile. With the digital payment nature, quick, secure, and user-friendly transactions were achieved by using mobile-based payments. Mobile-based payments, especially in Indonesia, usually use a QR code technology developed by (Wave, 2000) for performing transactions (Aktaş, 2017; Franciska and Sahayaselvi, 2017; Jiang et al., 2021; Majumder et al., 2017).

The QR code technology in performing actual transactions might differ between countries for both consumers and retailers, which might vary the acceptance level itself. In China, as a developed country, a large-scale of users have used to use QR code payment systems daily and become the largest in the world that adopted this term of payments ecosystem (Chen et al., 2019; Lu and Lee, 2017). Meanwhile, in developing countries such as Pakistan and Malaysia, QR code payments are well accepted among users but still behind China, especially for the infrastructures, but not its novelty and environmental implementation (Jiang et al., 2021; Yan et al., 2021). However, QR acceptance between the three countries also has similarities in speed, convenience, security, and no cash involvement, in the QR payment services. As users accept the technology and demands grow, QR code payment values extend to efficient and quicker services, improving productivity and reducing transaction costs (Liébana-Cabanillas et al., 2015). Therefore, we can comply that QR code payments are beneficial from both consumers' and retailers' perspectives despite the difference in cashless payment solutions classifications.

With the growth of the digital economy in the Southeast Asia region, especially in Indonesia, mobile

payments also show upward trends in transaction value, transaction quantity, and the increased number of fintech startups. A report from (International Trade Administration, 2021) mentioned that in the retail market alone in January 2020, the transaction of electronic money rose by 173% from a year before, with nonbank fintech dominating the market. Since 2018, fintech companies or digital payment service providers in Indonesia have adopted QR code payments. As the user grew in 2020, Indonesia's central bank, or Bank Indonesia launched an integrated QR code payment system named QRIS (Quick Response code Indonesian Standard). This project was founded to have a single and standardized QR code instead of the QR codes that each digital payment service providers provide (Bank Indonesia, 2019; Phua, 2020). This project aims to simplify the retailer's process by only showing one type of QR code, rather than various codes from multiple providers, and still can be accessed by any eligible providers. Therefore with the integration, QRIS's aim is also to help retailers to record their transactions more efficient, increase productivity and sales as well as shorten the queue (Bank Indonesia, 2021; Chandra et al., 2018b; Setiyono, 2021; Sihaloho et al., 2020).

On an economic scale, either in Indonesia or the world, MSME contributed the most to the economy's growth that spread in big cities and rural areas. In 2020, there are more than 65 million MSMEs that contribute more than 60.3% of Indonesia's economy (McKinsey, 2020; Otoritas Jasa Keuangan, 2021). As a large contributor, in September 2021, big businesses and MSMEs have adopted QRIS itself, only as much as 10.45 million (Wasita, 2021), which is already low compared to the overall numbers of MSMEs in the country. However, as this number of adoption achieved in less than two years since QRIS was officially implemented in January 2020, the adoption itself is

alarmingly fast for Indonesia towards a cashless economy. QRIS adoption only consists of 85% out of 10.45 million for MSMEs, which means the cashless adoption for the most significant economic contributors was still minimum. As the adoption rate is still considered on a low scale, and as consumers well-accepting QR payments, the cashless ecosystem won't occur, whereas only consumers side to accept QR payments and lack a place to perform a transaction. Otherwise, retailers also need to provide the demand for QR payment to accept the consumers; therefore, the digital economy and cashless ecosystem can take place, leading to a boost in Indonesia's economy or GDP even further.

However, to increase the adoption in masses, Indonesia faced several problems. The lack of infrastructure was the more general problem that Indonesia and many developing countries faced for adoption. However, the safety of transactions, the public behavior that tends to use cash, financial inclusion, low digital payment penetration or low access to the facilities, lack of digitalization knowledge, and socialization were the specific problems that Indonesia faced that hindered merchant adoption accept payment digitally. This research aims to understand the retailer's perspective on QR code payments and the readiness of retailers for an integrated cashless ecosystem across countries despite Indonesia's lack of infrastructure and faced problems. The proposed model was built with a lot of consideration for Indonesia's problems. This study will focus on micro, small and medium retailers as the majority of adopters of QRIS, whereas this study will check whether retailers show a positive behavior towards adopting QRIS as a QR code payment service in Indonesia. Therefore, knowing merchants' behavior towards QR code payment services itself could help both the Indonesian government and Indonesian startups increase the number of digital

merchant adoption, reach the digital ecosystem within the country, and prepare cross-border digital payments by 2025. The following sections include a literature review, data analysis, findings and implications, and conclusion.

## II. Literature Review and Research Framework

### 2.1. User Acceptance

User acceptance is defined as a group of users or individuals' desire to utilize Information Technology to carry out their activities (Dilon, 2001). Low user acceptance has an impact on the success of an Information System. Therefore, the acceptance of information technology by its users should be seen as the primary factor determining the success or not of the technology. As there are a few technology acceptance theories out there, this paper will use a total of four technology acceptance theories, with two of them were QR code payment acceptance theories as the base of the framework, as well as UTAUT and TAM as the base framework of technology acceptance model (Chang, 2012; Liébana-Cabanillas et al., 2015; Chuttur, 2009; Venkatesh et al., 2003; Yan et al., 2021).

The two main theories used as the base were QRPAM and MTAM. Whereas QRPAM aims is to determine the acceptance of users of QR payment in Spain, which had 64% of the predictive power of intended use, and its use compatibility, security, subjective norm, usefulness, ease of use, innovativeness, mobility, attitude, and lastly intention to use as the variables. Meanwhile, MTAM aims to determine the acceptance of users of QR Payment in Malaysia, which had 39.2% predictive power of behav-

ioral intention, and its use of convenience and speed factors towards usefulness and ease of use accordingly and adding optimism innovativeness. Based on those two models, further variables might take place. As their respondent was the general public, this study adds other variables to be tested that fit into merchants' criteria.

### 2.2. Mobile Usefulness and Mobile Ease of Use

Mobile Usefulness measures the extent to which an individual uses QR codes to help improve their performance and provide benefits in making transactions compared to conventional ways (Dawi, 2019; Chuttur, 2009; Venkatesh et al., 2003; Yan et al., 2021). In digital payment activities, the usefulness provided by QRIS must be felt by merchants. With QRIS, the benefits written by Bank Indonesia must be able to have an impact on merchants to be adopted. In bringing up the intention of the behavior, the usefulness of QR codes payments themselves has been proven to be significantly influential (de Luna et al., 2019; EYÜBOĞLU, 2016; Ibrahim et al., 2019; Liébana-Cabanillas et al., 2015; Oliveira et al., 2016; Wang et al., 2010; Yan et al., 2021) where the research is conducted to consumers or the wider community.

Furthermore, descriptive research (Setiyono, 2021) also says that the usefulness of QR codes in digital payments provides convenience and effectiveness in making transactions. The usefulness of QR codes is also proven to be significantly influential by merchants through various studies from various countries and regions in Indonesia (Abebe and Lessa, 2020; Jiang et al., 2021; Theodora et al., 2019; Imani and Anggono, 2020). There is also qualitative research conducted by (Moghavvemi et al., 2021; Setiawan and Mahyuni, 2020a; Sihaloho et al., 2020) which states the usefulness of QR codes for merchants to adopt. Therefore, we can comply that QRIS can increase the productivity

and effectiveness of merchants performing or handling their businesses; QRIS also perceived as useful and convenient for merchants. The usefulness of QRIS itself was needed for knowing merchant perspective even further and acting to increase the digital payment penetrations. Therefore, a hypothesis can be formed:

*H1: Mobile Usefulness will positively influence Behavioral Intention to Use QRIS*

Mobile Ease of Use measures the extent to which an individual uses QR codes that are easy to use and without excessive effort (Chuttur, 2009; Dawi, 2019; Venkatesh et al., 2003; Yan et al., 2021). In digital payment activities, QRIS technology should be easy to use by merchants to adopt. In the adoption of QR codes, the ease of use of QR code technology has been proven to have a significant effect (de Luna et al., 2019; Ibrahim et al., 2019) on consumers and then (Setiyono, 2021) also explained descriptively that QR codes make transactions easier. However, research (Liébana-Cabanillas et al., 2015; Oliveira et al., 2016; Yan et al., 2021) conducted on consumers said that convenience does not significantly affect behavioral intentions in the adoption of QR codes in payments. On the merchant himself, research (Theodora et al., 2019; Imani and Anggono, 2020) also said that the ease of use of QR codes had no significant effect on adoption.

But research (Abebe and Lessa, 2020) found that convenience significantly affects the intention of merchant behavior to adopt QR codes in payments. Qualitative research conducted (Moghavvemi et al., 2021; Setiawan and Mahyuni, 2020a) also mentioned the existence of ease indicators that make behavioral intentions in making payment adoption using QR codes. With different results, more research is needed on the influence of convenience factors on merchants'

intention to adopt QR codes in their digital payments. Based on previous studies, we can also comply that the ease of use of QRIS and its fast transaction is still ambiguous whether it allows the merchants to adopt this payment method; therefore, further research is needed for higher digital penetration. Thus, a hypothesis can be formed:

*H2: Mobile Ease of Use will positively influence Behavioural Intention to Use QRIS*

### 2.3. Social Influence, Facilitating Conditions, and Trust

Social influence is a level of concern for others in the user's view in making decisions or behaving towards a technology (Imani and Anggono, 2020; Khatimah et al., 2019; Oliveira et al., 2016; Venkatesh et al., 2003). In digital payment activities, QRIS adoption can be influenced by others where one merchant with another merchant can share their opinions, information, and experiences regarding QRIS (Imani and Anggono, 2020). Research from (Oliveira et al., 2016) shows that social influence significantly influences behavioral intentions to use QR codes on consumers in making transactions. While in the study (Imani and Anggono, 2020) showed no social influence in the implementation of QR codes in merchants.

But the interview results conducted (Setiawan and Mahyuni, 2020a) said that there is the influence of others, such as famous figures, buyers, and friends, who are a factor in the adoption of QRIS carried out by merchants. It is also further proven by (Moghavvemi et al., 2021) that there is a social influence on merchants where the use of QR codes can add customers and become a means of promotion that can improve the image of the business. With

one previous study saying social influence doesn't affect adoption, and the other three studies say it does affect, we can comply that the adoption of QRIS by merchants was affected by their social group even a little bit. Therefore, we can also comply that, to increase QRIS penetration and increase digital and financial knowledge, the influence of merchants' social groups was important to be researched further towards the digital economy. Therefore, hypotheses can be formed:

*H3: Social Influence will positively influence Behavioral Intention to Use QRIS*

Facilitating Conditions are the level of trust of an individual to have the resources or access to adopt the technology in question (Imani and Anggono, 2020; Oliveira et al., 2016; Venkatesh et al., 2003). Digital payments using QRIS code require hardware, internet network, and software from payment system service providers to be used by merchants. Research from (Oliveira et al., 2016) on consumers states that there is no significant association between facilitating conditions and behavioral intentions to use QR codes in making payments. But from a different perspective, facilitating conditions are a factor that merchants cannot ignore. This is evidenced by (Imani and Anggono, 2020) that the resources owned by merchants affect the intention of merchant behavior to adopt QR code technology.

An interview conducted (Setiawan and Mahyuni, 2020a; Sihalohe et al., 2020) also stated that QR codes are very dependent on the internet network. Meanwhile (Moghavvemi et al., 2021) said that using QR codes in digital payments could be hampered by the absence of payment system provider services. The common facilitates restrictions were problems like technological mismatches, or a system failure or stop

within a certain period, either from software or network problems. The framework submitted by (Dawi, 2019) also said that the resources and information owned by merchants would give rise to behavioral intentions to carry out adoption that needs to be further examined. Therefore, it can be concluded that the resources owned by merchants will affect the adoption of QRIS, which allows whether a merchant will use QRIS or not. Therefore, hypotheses can be formed:

*H4: Facilitating Conditions will positively influence the Intention to Use QRIS*

Trust refers to the extent to which a person believes in a technology to carry out transaction activities (Abebe and Lessa, 2020; Nor and Pearson, 2008; Zhang, 2010). To adopt QRIS in digital payments, trust in the payment environment such as hardware, internet networks, payment system service providers, and the systems used must be owned first. Trust in this payment environment must be owned by both merchants and consumers where (Wang et al., 2010) have proven trust significantly influences behavioral intentions digitally. Meanwhile (Abebe and Lessa, 2020) proves that the intention of QR code adoption behavior is significantly influenced by merchant trust.

This is also further proven by interviews conducted by (Sihalohe et al., 2020). But in the study (Imani and Anggono, 2020), the trust did not significantly affect behavioral intentions for QR code adoption for digital payments. Research on the relationship of trust to behavioral intentions for QR code adoption itself was still lacking, and from previous studies, there are differences in the result. Therefore, a hypothesis can be formed:

*H5: Trust will positively influence Behavioural Intention to Use QRIS*

## 2.4. Perceived Security and Perceived Compatibility

Perceived security refers to the extent to which a person believes that conducting digital transactions is safe in terms of quality, activity information, financial information, and privacy (de Luna et al., 2019; Liébana-Cabanillas et al., 2015; Zhang et al., 2019). In conducting digital transactions using QRIS, security becomes one of the points needed for both consumers and merchants, especially when adopting new technology (Setiyono, 2021). There has been much research on the significant influence of perceived security on consumers' behavioral intentions in using new digital payment technologies (de Luna et al., 2019; Ibrahim et al., 2019; Oliveira et al., 2016; Wang et al., 2010). But there has not been much research on this from the perspective of merchants where (Liébana-Cabanillas et al., 2015; Theodora et al., 2019) also found that perceived security had no significant effect on behavioral intentions to adopt QR codes in transaction activities.

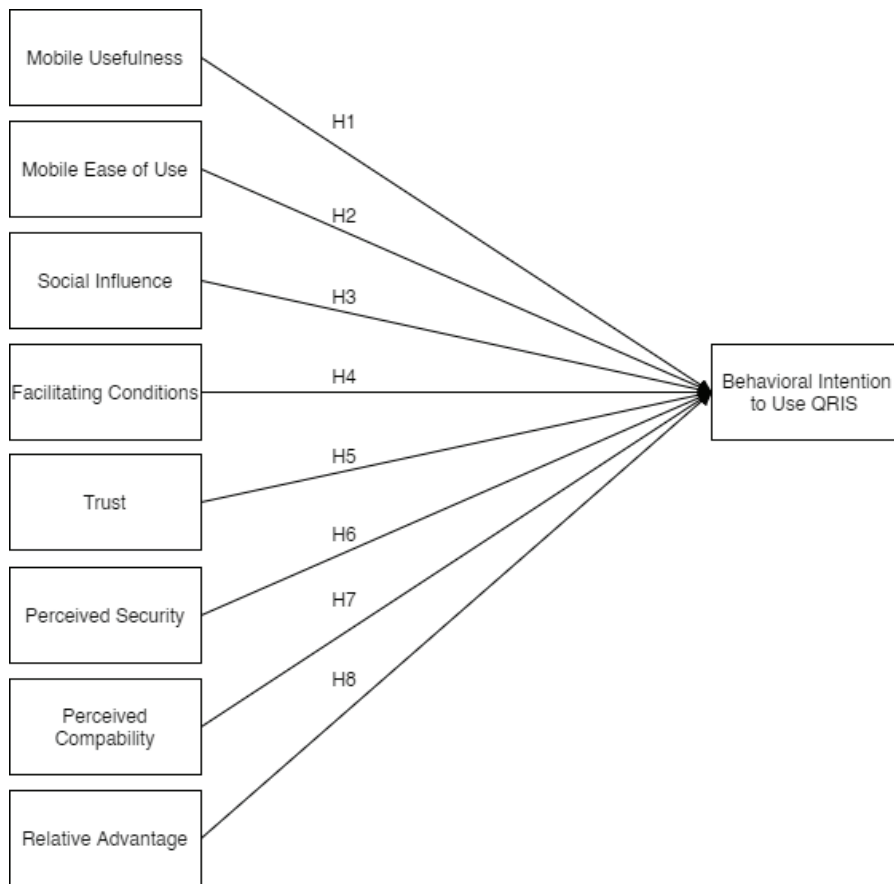
But the interview (Moghavvemi et al., 2021) on mobile-based digital payments shows a positive influence between perceived security and behavioral intentions to adopt by merchants. This indicates that the lack of further security research is felt especially in merchants because there are differences between the consumer and merchant side quantitatively and the influence when interviewing. As merchants were the ones that conducted an enormous amount of money and transaction, the safety of digital payment was one of the most severe concerns for adoption. Therefore, a hypothesis can be formed:

*H6: Perceived Security will positively influence Behavioral Intention to Use QRIS*

Perceived Compatibility is a level of compatibility of technology with user needs, experiences, or user habits for similar technologies, resources owned by users, and conformity with the values or views of users on the technology (Abebe and Lessa, 2020; Liébana-Cabanillas et al., 2015; Schierz et al., 2010; Theodora et al., 2019). In adopting QRIS in digital payments, alignment or conformity of various aspects is needed to give rise to adoption. This is evidenced by (Jiang et al., 2021; Theodora et al., 2019) that perceived compatibility significantly influences merchants' behavioral intentions to adopt QR codes. From a consumer perspective, (Oliveira et al., 2016) prove that perceived compatibility significantly influences the adoption of QR codes. However, (Liébana-Cabanillas et al., 2015) state there is no significant association with behavioral intentions in adopting QR codes by consumers. Similarly, (Abebe and Lessa, 2020) it was done to merchants that conformity had no significant effect.

The interview (Moghavvemi et al., 2021) also discussed merchant readiness, technological non-conformity, lack of standardization, lack of knowledge and training, market needs, and merchant desires related to perceived conformity behavioral intentions to adopt digital payments. Based on the interview result and differences in the result of the quantitative studies from a different point of view, there was a need to further research on merchant compatibility with QRIS. As the compatibility of QRIS with business was known, it can be shown the readiness for merchants to face a cashless economy and a media to increase penetration. Therefore, a hypothesis can be formed:

*H7: Perceived Compatibility will positively influence Behavioural Intention to Use QRIS*



<Figure 1> Research Framework

## 2.5. Relative Advantage

Relative Advantage distinguishes a new technology from a previous technology or previous activity condition. The latest technology will certainly provide more value than its predecessor. This advantage is relatively dependent on the user itself, so when technology has advantages compared to its predecessor, it can give rise to behavioral intentions to adopt. Measurement of relative advantage can be done in terms of economy, reduction of discomfort, satisfaction, and saving time and effort (Abebe and Lessa, 2020; Ismail, 2006). In adopting

QRIS, relative profits need to be obtained by merchants.

In the interview conducted by (Setiawan and Mahyuni, 2020a; Setiyono, 2021; Sihalohe et al., 2020), the three discussed that there were benefits compared to its predecessors of QRIS, which merchants and consumers have obtained in three different cities. Research (Moghavvemi et al., 2021) also proves that there are relative advantages that make the adoption of QR code use in Malaysia. Research (Abebe and Lessa, 2020) proves quantitatively to merchants that relative advantage significantly influences QR code adoption in digital



payments. Based on the previous study, there is a lack of quantitative research on the relative advantages of its adoption. As it can be perceived that QRIS provides an advantage compared to its predecessors, the advantages of QRIS can be used for more penetration and show how QRIS affects financial inclusion and technology knowledge. Therefore, a hypothesis can be formed:

*H8: Relative Advantage will positively influence Behavioral Intention to Use QRIS*

### III. Research Methodology

#### 3.1. Data and Demographics Profile

The following demographic profile shows the result of 300 respondents who either own or work in micro to medium businesses in Jakarta, Indonesia, that have implemented QRIS in their businesses. Non-probability sampling and purposive judgmental sampling were used in this research with a 5-point Likert scale. The following <Table 1> pro-

<Table 1> Respondents Profile

Characteristics	Distributions	Frequencies	%
QRIS Use	1-3 months	30	10,60
	3-6 months	59	20,85
	6-12 months	56	19,79
	12-18 months	43	15,19
	>18 months	95	33,57
Business Industry	Food and Beverages	166	58,66
	Daily Necessities	47	16,61
	Sport, Music, and Hobbies	36	12,72
	Fashion	15	5,30
	Electronics	11	3,89
	Others	8	2,83
Businesses	Micro Sized Retailers (1-2 Employees)	118	41,70
	Small Sized Retailers (3-5 Employees)	143	50,53
	Medium Sized Retailers (6-10 Employees)	22	7,77
Gender	Male	184	65,02
	Female	99	34,98
Age	18-25	61	21,55
	26-30	144	50,88
	31-35	54	19,08
	36-45	21	7,42
	>46	3	1,06
Education	Middle School	33	11,66
	High School	203	71,73
	Undergraduate	46	16,25
	Others	1	0,35
Position	Owner	100	35,34
	Manager	12	4,24
	Staff	171	60,42

vides the detail of the respondents. Data were collected using a google form; after removing incomplete and biased responses, 283 questionnaires were fit for further analysis.

### 3.2. Analytical Approach

This research follows the direction of (Hair et al., 2015), using the PLS-SEM approach to analyze the data of this study. PLS-SEM is a method of causation to test the relationship between a variable. Analyzing data using SEM-PLS takes a proper model path so that the diagram can display hypotheses and variable relationships to be tested. The tool that was used to calculate the data collected is smartPLS 3.2.2. The analysis was carried out by running the PLS Algorithm using the path as a weighting scheme and a maximum of 300 iterations, bootstrapping with 5000 subsamples, and blindfolding with seven omission distances.

## IV. Result and Analysis

### 4.1. Outer Model

Tests of validity and reliability are conducted on questions used to determine the quality of each question posed. This study's reliability and validity test used smartPLS software that used 283 samples obtained. Convergent Validity is used to measure the extent of positive correlations. The outer loading value Average Variance Extracted (AVE) values must be met to establish a convergent validity relationship. A variable is valid if the value in average variance extracted (AVE) is above 0.5 and the acceptable outer loading value is 0.7 for each indicator; if the condition is not met, the indicator needs

to be removed (Ghozali, 2014). <Table 2> shows the outer loading value and the AVE, whereas seven indicators don't meet the requirement for further steps; therefore, the inadequate indicators were removed.

Cronbach's Alpha ( $\alpha$ ) was used to evaluate the result reliability, Cronbach's Alpha ( $\alpha$ ) was used. The value of Cronbach's Alpha ( $\alpha$ ) and Composite Reliability of 0.6-0.7 is considered acceptable, and 0.7-0.9 is satisfied (Hair et al., 2015). <Table 2> shows the value of Cronbach's Alpha ( $\alpha$ ) and Composite Reliability, and all of the variables fit the criteria. Discriminant validity derived from the measurement model with reflexive indicators can be known based on the value of Cross Loading on the construct; if the value contained in Cross Loading is smaller than other indicators, then the indicator must be eliminated. <Table 3> shows the Cross Loading value for each construct, and the result of each indicator is higher than other indicators.

### 4.2. Inner Structural Model

In smartPLS, bootstrapping with a subsample of five thousand was used to obtain t-statistics and p-value. <Table 4> reports the result of the inner structural model. This study proposes a positive effect of Mobile Usefulness (H1), Mobile Ease of Use (H2), Social Influence (H3), Facilitating Conditions (H4), Trust (H5), Perceived Security (H6), Perceived Compatibility (H7), and Relative Advantage (H8) towards Behavioral Intention to Use QRIS. Based on <Table 4>, with a significance level of 0.1, where the t-value must be larger than 1.645 and the p-value less than 0.1, the report shows that 4 out of 8 hypotheses were accepted, and four hypotheses were rejected.

<Table 2> Reliability and Validity Constructs

Construct	Items	Loadings	$\alpha$	CR	AVE
Mobile Usefulness	MU1	0.791	0.734	0.833	0.556
	MU2	0.788			
	MU3	0.790			
	MU4	<b>0.673</b>			
	MU5	0.780			
Mobile Ease of Use	MEOU1	0.714	0.715	0.823	0.538
	MEOU2	0.740			
	MEOU3	0.759			
	MEOU4	<b>0.675</b>			
	MEOU5	0.720			
Social Influence	SI1	0.829	0.839	0.892	0.674
	SI2	0.826			
	SI3	0.822			
	SI4	0.806			
Facilitating Conditions	FC1	<b>0.599</b>	0.686	0.864	0.760
	FC2	<b>0.687</b>			
	FC3	0.884			
	FC4	0.860			
Trust	TR1	0.730	0.729	0.831	0.551
	TR2	0.762			
	TR3	0.789			
	TR4	0.754			
	TR5	<b>0.670</b>			
Perceived Security	PS1	0.717	0.712	0.822	0.537
	PS2	0.766			
	PS3	0.734			
	PS4	0.712			
Perceived Compatibility	PC1	0.790	0.742	0.838	0.564
	PC2	0.726			
	PC3	0.742			
	PC4	0.744			
Relative Advantage	RA1	0.773	0.826	0.878	0.590
	RA2	0.793			
	RA3	0.771			
	RA4	<b>0.525</b>			
	RA5	0.708			
	RA6	<b>0.633</b>			
	RA7	0.795			
Behavioural Intention to Use QRIS	BI1	0.776	0.740	0.852	0.658
	BI2	0.812			
	BI3	0.844			

&lt;Table 3&gt; Cross Loading

	BI	FC	MEOU	MU	PC	PS	RA	SI	TR
BI1	0.776	0.495	0.493	0.493	0.564	0.523	0.560	0.477	0.541
BI2	0.812	0.536	0.507	0.504	0.613	0.556	0.568	0.482	0.582
BI3	0.844	0.529	0.594	0.576	0.695	0.591	0.646	0.522	0.624
FC3	0.583	0.884	0.510	0.504	0.643	0.591	0.529	0.468	0.601
FC4	0.533	0.860	0.425	0.480	0.552	0.507	0.520	0.513	0.492
MEOU1	0.471	0.321	0.714	0.457	0.488	0.507	0.391	0.328	0.437
MEOU2	0.478	0.439	0.740	0.440	0.541	0.538	0.438	0.331	0.526
MEOU3	0.549	0.440	0.759	0.515	0.552	0.579	0.446	0.409	0.511
MEOU5	0.416	0.371	0.720	0.443	0.447	0.447	0.410	0.331	0.481
MU1	0.489	0.366	0.510	0.736	0.516	0.444	0.537	0.509	0.435
MU2	0.440	0.384	0.454	0.723	0.504	0.461	0.534	0.456	0.462
MU3	0.480	0.480	0.478	0.756	0.545	0.437	0.603	0.568	0.436
MU5	0.518	0.449	0.452	0.766	0.537	0.464	0.520	0.465	0.528
PC1	0.601	0.614	0.536	0.596	0.790	0.563	0.624	0.570	0.563
PC2	0.515	0.379	0.515	0.550	0.726	0.514	0.548	0.530	0.518
PC3	0.580	0.555	0.576	0.551	0.742	0.602	0.501	0.447	0.608
PC4	0.615	0.499	0.463	0.428	0.744	0.480	0.576	0.562	0.519
PS1	0.478	0.565	0.474	0.409	0.573	0.717	0.521	0.471	0.524
PS2	0.521	0.466	0.506	0.379	0.511	0.766	0.449	0.338	0.515
PS3	0.494	0.391	0.555	0.488	0.539	0.734	0.453	0.367	0.550
PS4	0.518	0.432	0.547	0.497	0.487	0.712	0.460	0.354	0.503
RA1	0.588	0.479	0.442	0.520	0.586	0.540	0.773	0.606	0.585
RA2	0.550	0.484	0.431	0.595	0.582	0.511	0.793	0.638	0.538
RA3	0.594	0.485	0.458	0.603	0.604	0.467	0.771	0.592	0.483
RA5	0.504	0.435	0.432	0.548	0.549	0.484	0.708	0.459	0.508
RA7	0.566	0.425	0.445	0.557	0.557	0.464	0.795	0.588	0.506
SI1	0.488	0.454	0.377	0.537	0.573	0.451	0.633	0.829	0.470
SI2	0.518	0.505	0.366	0.552	0.600	0.435	0.617	0.826	0.446
SI3	0.508	0.477	0.443	0.554	0.565	0.409	0.634	0.822	0.454
SI4	0.483	0.402	0.389	0.556	0.569	0.413	0.588	0.807	0.393
TR1	0.513	0.436	0.471	0.511	0.567	0.553	0.553	0.439	0.741
TR2	0.594	0.464	0.557	0.449	0.545	0.551	0.529	0.453	0.754
TR3	0.522	0.478	0.533	0.478	0.530	0.507	0.460	0.368	0.740
TR4	0.497	0.492	0.407	0.421	0.543	0.505	0.481	0.326	0.734

<Table 4> Path Coefficients

	O	M	SD	T Statistics	P Values	Decision
Facilitating Conditions → Behavioral Intention to Use QRIS	0.096	0.099	0.058	1.657	0.098	Supported
Mobile Ease of Use → Behavioral Intention to Use QRIS	0.113	0.104	0.070	1.602	0.109	Rejected
Mobile Usefulness → Behavioral Intention to Use QRIS	0.009	0.013	0.069	0.124	0.902	Rejected
Perceived Compatibility → Behavioral Intention to Use QRIS	0.263	0.249	0.112	2.345	0.019	Supported
Perceived Security → Behavioral Intention to Use QRIS	0.082	0.092	0.076	1.073	0.284	Rejected
Relative Advantage → Behavioral Intention to Use QRIS	0.245	0.242	0.095	2.572	0.010	Supported
Social Influence → Behavioral Intention to Use QRIS	-0.004	0.003	0.077	0.047	0.963	Rejected
Trust → Behavioral Intention to Use QRIS	0.161	0.161	0.084	1.920	0.055	Supported

<Table 5> Coefficient of Determination

	R Square	R Square Adjusted
Behavioral Intention to Use QRIS	0.694	0.684

R<sup>2</sup> (coefficient of determination) in <Table 5> shows the variance of the dependent variable caused by the independent variable. R<sup>2</sup> Behavioral Intention to Use QRIS is 0.694 indicating the construct cause a 69,4% variance in Behavioral Intention to Use QRIS and indicates that 69.4% of the data fits with the regression model. Meanwhile, the rest of 30,6% is a variable outside this study and doesn't fit the regression model.

The change of R2 can be utilized to measure the effect of a specific independent variable on the dependent variable by omitting the independent variables from the model individually and checking whether there is any distinction in the R2 value. Effect size (f<sup>2</sup>) values of 0.02, 0.15, and 0.35 represent the magnitude of the weak, medium, and large influences of dependent variables (Hair et al., 2014). <Table 6> reports the effect size of each independent variable on the dependent variable, which is Behavioral Intention to Use QRIS.

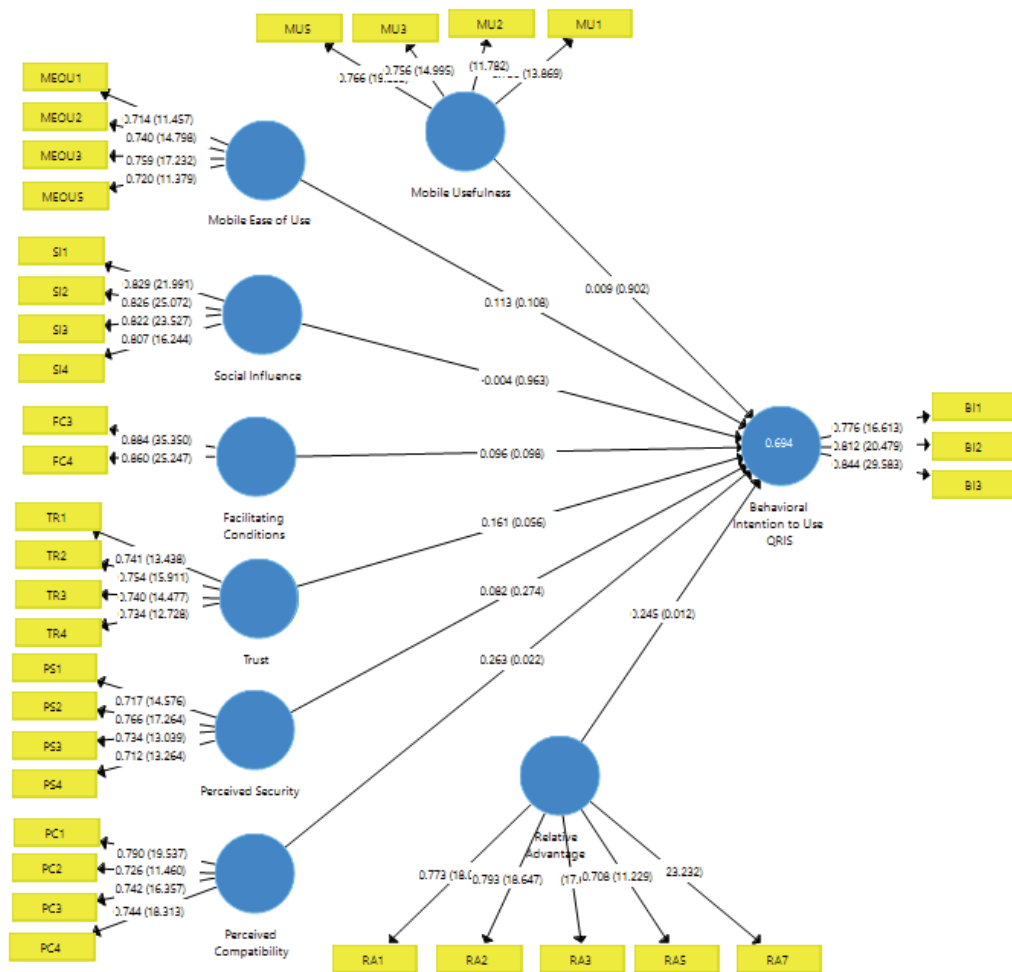
<Table 6> Effect Size f2

Independent Variable	Effect Size	Description
Mobile Usefulness	0.000	
Mobile Ease of Use	0.016	
Social Influence	0.000	
Facilitating Conditions	0.014	
Trust	0.029	Weak
Perceived Security	0.008	
Perceived Compatibility	0.055	Weak
Relative Advantage	0.054	Weak

## V. Discussion and Implications

### 5.1. Findings and Theoretical Implication

QRIS is a technological innovation launched by Bank Indonesia to integrate digital payments using QR codes in Indonesia. With QRIS implemented for almost two years, data analysis from this study shows that Facilitating Conditions positively influence Behavioral Intention to Use QRIS. This shows that retailers in Indonesia tend to use QRIS when they already have the resources, sufficient knowledge about QRIS technology, and the existence of guide-



<Figure 2> Structural Framework

lines for using QRIS and compatibility with the system they have used before. The results of this variable are also in accordance with the research (Imani and Anggono, 2020), where Facilitating Conditions positively affect Behavioral Intention to Use QRIS. With the respondents based in the capital city of Jakarta, this result might be different, especially for those in a rural area, especially where its infrastructure is not as good as in cities. However, with this result, the availability of infrastructure or resources was a factor that created merchant intention to use QRIS.

Then, Mobile Ease of Use was found to have no significant effect on Behavioral Intention to Use QRIS. This shows that retailers do not use QRIS due to the ease of use in learning and performing transactions and the speed of the transaction itself. This result is also in accordance with research (Liébana-Cabanillas et al., 2015; Theodora et al., 2019; Yan et al., 2021). However, research (Abebe and Lessa, 2020) shows the ease of use of mobile-based digital payments for retailers in Ethiopia in general. From the differences between previous studies and

this study, it can be said that the ease of using mobile-based digital payments affects Behavioral Intention to Use, but specifically, for QR payment, it does not significantly affect.

Next, Mobile Usefulness was found to have no significant effect on Behavioral Intention to Use QRIS. This shows that the usefulness of QRIS itself does not affect retailers' use of QRIS. In other words, the use of QRIS in terms of productivity and work effectiveness is not something that makes retailers use QRIS. This result contradicts the research conducted by (Abebe and Lessa, 2020; Jiang et al., 2021; Liébana-Cabanillas et al., 2015; Theodora et al., 2019; Yan et al., 2021); whereas, from previous research, the use of QR codes in transactions has an effect on Behavior Intention to Use. With QRIS's primary aim to integrate QR payments from multiple providers, its use for integrating transactions has not been a reason for merchants to adopt it. From the differences in the results of this study, it can be assumed that for retailers, the use of QR codes as a payment method as a whole has an effect on Behavioral Intention to Use. Still, the integrated QR code or QRIS does not strongly influence behavioral intention to Use.

Then, Perceived Compatibility was found to have a weak positive influence on Behavioral Intention to Use QRIS. This shows that retailers in Indonesia are more likely to use QRIS when this technology is suitable for their job or business. With the business need and lifestyle to make fast, safe, consistent, and user-friendly transactions, the payment method using QRIS is considered suitable by retailers to perform transactions. This study's results contradict (Abebe and Lessa, 2020; Jiang et al., 2021; Liébana-Cabanillas et al., 2015; Theodora et al., 2019) whereas, in their research, Perceived Compatibility affects Perceived Usefulness, but not Behavioral Intention to Use. With

the different results, we can comply that merchant are more likely to have their behavioral intention to use QRIS, a standardized and integrated QR code payment method that fits their needs and lifestyle. From this finding, it can be stated that further research is needed on the relationship between Perceived Compatibility and Behavioral Intention to Use.

Next, Perceived Security has no significant effect on Behavioral Intention to Use QRIS. This shows that the perceived security of QRIS technology is not something that makes retailers use QRIS. Studies from (Liébana-Cabanillas et al., 2015; Theodora et al., 2019) also proves the same results where the Perceived Security factor does not influence the use of the QR code payment method. From that result, we can comply that the merchant did not consider the security factors of using QRIS. The central bank itself directly managed this technology, and the providers themselves were required to have high-security standards by the central bank.

Then, Relative Advantage gives a weak positive to the Behavioral Intention to Use QRIS. This shows that the advantages of using this method are the things that make retailers choose to use QRIS in their work or business. The advantages described in the study (Abebe and Lessa, 2020) related to economic benefits, low costs, reduced inconvenience, time and effort savings, and benefits make retailers use this payment method. The advantages of using QRIS, such as only needing to display one QR code without recording transaction difficulties, worrying about change, allowing the employee to focus on work, products, and services, shortening queues, promotion tools, and increasing financial benefits, are relative advantages, especially when compared to other methods. The results of this study also prove the research (Abebe and Lessa, 2020) which also discusses the Relative Advantage of digital payment adoption.

However, as the study researched this variable more into general digital payment, the QR part hasn't been covered properly. This shows that integrated QR payment has advantages compared to conventional QR payment or even other digital payment methods from a merchant perspective.

Next, Social Influence has no significant effect on Behavioral Intention to Use QRIS. This shows that the use of QRIS itself is not influenced by the social influence of retailers with other retailers or with people around retailers. Based on the given framework (Venkatesh et al., 2003), subjective norms are part of Social Influence; therefore, it can be told that subjective norms are not much different from Social Influence. Studies from (Imani and Anggono, 2020; Theodora et al., 2019) used subjective norms in their research and had similar results where subjective norms or social influence did not significantly affect the effect of Intention to Use. However, research (Liébana-Cabanillas et al., 2015) said that Subjective norms greatly influenced intention to Use. From these differences in results, it can be said that different factors influence the use of QR codes in digital payments from merchant perspectives. Study (Imani and Anggono, 2020; Theodora et al., 2019) have retailer respondents; meanwhile study (Liébana-Cabanillas et al., 2015) from the consumer's perspective. Therefore, further research is needed on this matter to prove its variable effect.

Finally, Trust has a weak positive effect on Behavioral Intention to Use QRIS. This shows that retailers in Indonesia believe in the guarantees provided by the government and the payment system service providers, so they want to use QRIS technology as a payment method for their work or business. This study proves the research (Abebe and Lessa, 2020) regarding the adoption of digital payments by retailers where trust is a factor that affects Intention

to Use. However, the research results (Imani and Anggono, 2020) state that trust has no significant effect on Intention to Use. With this difference in results, it can be said that further research is needed on the trustworthiness of digital payments using this QR code. Based on the result, we can also comply that, for digital payment, government regulations that give guarantees were among the reasons that merchants want to adopt QR code payment.

To sum it all up, Relative Advantage and Perceived Compatibility have the largest positive influence on retailers to accept QRIS. The business compatibility and its advantages compared to other digital payments are the main factors for retailers to adopt and use this technology. The guarantees from the government and the capability of financial institutions build retailers' trust for further use. Lastly, the resources, knowledge, procedure, and personal support regarding this technology are easy to access and obtain to facilitate digital payment activities and create a small behavior to use QRIS.

## 5.2. Implication for Research

Cashless ecosystems will be a trend in both Indonesia and Southeast Asia. The integration of QR codes to make payments is an innovation that can facilitate and benefit transaction activities from the consumer, retailers, and even the country itself. However, further improvements are needed so that this cashless ecosystem can occur. First, more even improvements in technology infrastructure are required, such as internet networks, stable electricity, and hardware availability so that transactions can be made.

Technological innovations that are not so dependent on infrastructure, especially internet connection, can also be developed so that cashless transactions



can still occur. An innovation that could make a device to safely perform transaction internally from the device and then update to the internet latter on would suffice. This could be the answer, especially for countries or regions that lack infrastructures. With technology that does not rely strongly on infrastructures such as internet and electricity, non-cash transactions can still be done; this can prepare retailers to face the integration of QR code payments between countries where which will help retailers, especially those in tourism areas to be able to make transactions more freely.

Second, with the results of this study, both the government and payment system service providers can focus on reaching small, medium, and micro-businesses by providing relative advantages and compatibility according to their type of business. An advantage that allows merchants to increase sales, perform supply management and business procurements, expand business, apply for credit or loan, business insurance or investment through the system could be applied further to increase QRIS users or digital merchants. A compatibility of features or products with any type of businesses also can be made more personalized in accordance with QRIS. Therefore, new users can more quickly implement this payment method since it is beneficial and compatible with their business industry for reach a cashless ecosystem.

Third, for both the government and payment system service providers, it is necessary to prepare policies and systems related to currency conversion. These policies and system would allow any type of currency to be used for conducting transactions, which allows anyone especially from overseas to perform transaction easily. A collaboration with overseas banks and providers also needed to perform this kind of features, therefore digital payment integration

could be implemented. A real time cryptocurrency enhance also might need to be considered, in order for users and merchants could perform transactions. The preparation should be completed before the integration QR codes between countries occurs especially in ASEAN region in 2025 so that merchant would implement QRIS quicker with its new relative advantage to accept any kind of payment methods.

Lastly, for future research, as this research only performs a quantitative method in Jakarta, a mixed-method with a qualitative would provide richer results whereas interviews to merchants conducted. Another quantitative method in more rural area was also needed to proof the findings. Similar research also needed to be conducted outside Indonesia especially in ASEAN region, whether on rural area or big city to determine the difference. With another research in the region, it was believed that would help payment integration and merchants' adoptions.

This study used two base models, and not all of the variables were used, no found variable strongly affects behavioral intention to use. Further exploration that affects intention to adopt QRIS was needed, especially for relative advantages, as the new variable provided in this research. Other acceptance theory model also needs to be researched to enhance the result. Future works also need to consider the limitations in this study as explained on the next sections, where many other things can enhance the findings.

### 5.3. Limitations

This research has some limitations; as the size of the respondent is relatively small and collected in only one country, the findings cannot be generalized to other regions. For future research, a cross-cultural study can provide a more extensive scope of insight into retailers or consumer behavior in using

or adopting QR code technology as a way to a transaction. MTAM and QRPAM are the model's base and displayed that only consist of 69.4% of factors affecting behavioral intention to use QRIS. Therefore, other technological factors need to be checked outside of this research, such as personal innovativeness, individual mobility, price value, optimism, habit, etc. Mediating factors can also be researched further, providing better insight into the intention to use QRIS. This research also didn't consider the COVID-19 pandemic as one of the factors for retailers to adopt QRIS, which can be researched further. Lastly, one can look into payment system service providers and government perspectives to complete the views of consumers, retailers, and the financial institution.

## VI. Conclusion

With the aim of a cashless economy, Indonesia has started its move by integrating all payment system service provider QR codes into a single QR code, named QRIS. Along with the new goal of across-border QR integration in Southeast Asia, retailers need to be prepared to welcome tourist consumers using this technology for a transaction. As QRIS provides a quick and secure transaction, its relative advantage positively influences retailers to use this technology. QRIS compatibility with the businesses also has a

positive influence on the intention to; whereas the business needs and lifestyle to make fast, secure, consistent, and user-friendly transactions, payment methods using QRIS are considered suitable by retailers to perform a transaction.

The trust from retailers in QRIS also has a positive impact on its use, as QRIS backed up directly by the government, and the payment system service providers are trustworthy and capable of securing transactions, data, and personal information; these things can be the reason of the acceptance of this technology. On another note, QRIS adoption is also influenced by its facilitating conditions, the need for resources to perform payments, and retailers' trust in government regulation and digital payment providers' capability. As this study investigates factors that influence intention to use QRIS, this study provides empirical evidence that retailers in Indonesia, from medium, small to micro-businesses, are ready to accept QRIS as a new integrated QR payment system at an unprecedented rate, despite Indonesia's lack of infrastructure. It is predicted that if this digital payment method is implemented on a large scale and cross-border integration is achieved in the near future, it will boost both businesses and the South East Asia economy. Lastly, this study also provides empirical evidence of retailers' adoption of QR code-based digital payment; therefore, this study can be a reference for other countries to develop a cashless ecosystem.

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<Appendix> Measurement Items

Construct	Item	Wording	Reference
Mobile Usefulness	MU1	Using QRIS in making transactions can increase my productivity and performance in my work compared to when using other means of payment.	Chen et al., 2019; de Luna et al., 2019; Jiang et al., 2021; Liébana-Cabanillas et al., 2015; Oliveira et al., 2016; Schierz et al., 2010; Venkatesh et al., 2003; Yan et al., 2021; Zhang, 2010
	MU2	Using QRIS in transactions can increase the effectiveness of my work, reduce the time and process in transacting, and reduce queues to make transactions compared to when using other means of payment.	
	MU3	Using QRIS in transactions makes handling finance (receiving money and giving change) in transaction activities, and transaction management or bookkeeping easier than before using QRIS.	
	MU4	Overall, I find that using QRIS is profitable, and useful on transaction activities and transaction bookkeeping at my job.	
	MU5	In my opinion, making transactions using QRIS is practical, simple and accessible to complete transactions compared to other means of payment.	
Mobile Ease of Use	MEOU1	As a retailer, learning and making transactions using QRIS is easy for me.	de Luna et al., 2019; Liébana-Cabanillas et al., 2015; Nor et al., 2008; Oliveira et al., 2016; Schierz et al., 2010; Venkatesh et al., 2003; Yan et al., 2021; Zhang, 2010
	MEOU2	Using QRIS in making transactions is easy to understand, clear, and understand for me	
	MEOU3	Easy for me to be proficient in using QRIS in making transactions	
	MEOU4	It is easy for me to follow the steps needed when making transactions using QRIS.	
	MEOU5	Using QRIS in making transactions tends to be faster than other payment methods (cash, debit / credit, etc.)	
Social Influence	SI1	Others who influence my behavior (family/friends/bosses/public figures/etc), advise me to use QRIS in making transactions	Chen et al., 2019; Nor et al., 2008; Oliveira et al., 2016; Rulyfayrizqi et al., 2019; Visa, 2019; Zhang, 2010
	SI2	Others I consider important (family/friends/bosses/public figures/etc.) advise me to use QRIS in making transactions	
	SI3	Others I value his opinions (family/friends/bosses/public figures/etc.) advised me to use QRIS in making transactions.	
	SI4	I use QRIS in making transactions because I am asked to use it by my coworkers or employers at my job.	
Facilitating Conditions	FC1	My business or where I work has the resources (Mobile Phone, Internet, etc.) needed to use QRIS in making transactions.	Nor et al., 2008; Nur and Panggabean, 2021; Oliveira et al., 2016; Rabaai, 2021; Rabaai and ALMaati, 2021; Rulyfayrizqi et al., 2019; Venkatesh et al., 2003; Wei et al., 2021
	FC2	I have sufficient knowledge to conduct transaction activities using QRIS.	
	FC3	Performing transaction activities using QRIS is compatible or in accordance with other systems I use and with all aspects of my work.	
	FC4	I believe I can make transactions using QRIS because someone else has taught me to use it or because I already have a QRIS usage guide.	

## &lt;Appendix&gt; Measurement Items (Cont.)

Construct	Item	Wording	Reference
Trust	TR1	I believe in the information (amount of money, payment purpose) provided at the time of conducting transaction activities using QRIS	Nor et al., 2008; Nur and Panggabean, 2021; Rabaa'i, 2021; Rulyfayrizqi et al., 2019; Zhang, 2010; Zhao and Bacao, 2021
	TR2	I believe that using QRIS in making transactions is safe to use.	
	TR3	I think QRIS technology can be trusted to carry out the transaction process.	
	TR4	I believe in the QRIS technology launched by Bank Indonesia to conduct transaction activities at any time.	
	TR5	I am confident that making transactions using QRIS is regulated in the Act and has sufficient technological standards to protect the process of my transaction activities.	
Perceived Security	PS1	In my opinion by using QRIS, the risk of a third party or unauthorized party interfering with or supervising the transaction process is low.	de Luna et al., 2019; Jiaxin Zhang et al., 2019; Liébana-Cabanillas et al., 2015; Oliveira et al., 2016; Rabaa'i, and ALMaati, 2021; Rulyfayrizqi et al., 2019; Schierz et al., 2010; Wang et al., 2010; Zhao and Bacao, 2021
	PS2	The risk of misuse of sensitive information (personal information, business information, transaction activity information, credit card data, bank account data) is low when conducting transaction activities using QRIS	
	PS3	In my opinion, QRIS is safe and comfortable in conducting transaction activities in my business.	
	PS4	I am aware that there is a security and policy statement regarding QRIS	
Perceived Compatibility	PC1	In my opinion, using QRIS in making transactions matches the way I work.	Chen et al., 2019; Jiang et al., 2021; Liébana-Cabanillas et al., 2015; Nor et al., 2008; Oliveira et al., 2016; Rabaa'i and ALMaati, 2021; Schierz et al., 2010
	PC2	I prefer to use QRIS in making transactions with my customers compared to other payment methods (cash, credit/debit)	
	PC3	Payment method using QRIS in making transactions in line with my business	
	PC4	I use QRIS consistently in making sales transactions of products or services	
Relative Advantage	RA1	I know that by using QRIS, I can display only 1 QR code and accept payments of any type of digital payment from my customers without any difficulty recording transactions and the risk of money not being accepted.	Abebe and Lessa, 2020; Chen et al., 2019; Moghavvemi et al., 2021; Nor et al., 2008; Setiawan and Mahyuni, 2020a; Setiyono, 2021; Sihaloho et al., 2020
	RA2	I think payment methods use QRIS, reduce my discomfort in thinking about change, record sales as well as daily revenue and display many QR codes from various payment system service providers (Shopee, GOJEK, OVO, and others).	
	RA3	In my opinion with the payment method using QRIS, transactions become more efficient, fast, and practical so that I can focus on work, products, and services for my customers.	
	RA4	I think payment methods using QRIS can reduce the risk of counterfeit money and the risk of theft.	



<Appendix> Measurement Items (Cont.)

Construct	Item	Wording	Reference
	RA5	In my opinion by using the QRIS payment method can shorten the queue, become a means of promotion, and increase revenue or sales in my business.	
	RA6	Although there is a <i>Merchant Discount Rate</i> (MDR) or fees in making transactions using QRIS, I consider the transaction price quite low and still provide benefits for my business or work.	
	RA7	Overall, I find that doing transaction activities using QRIS provides an advantage for me and my efforts.	
Behavioural Intention to Use QRIS	BI1	I intend to use the QRIS payment method in making transactions in my business or work in the future.	Chen et al., 2019; Jiang et al., 2021; Liébana-Cabanillas et al., 2015; Oliveira et al., 2016; Schierz et al., 2010; Venkatesh et al., 2003; Yan et al., 2021
	BI2	I hope I will use the QRIS payment method in making transactions for my business or work.	
	BI3	I plan to frequently use QRIS payment methods in making transactions on my business or work.	

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