Factors that influence adoption intention towards QR code payment at merchants in Indonesia

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Abstract. This study aims to determine the influence of independent variables, including Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Government Support, and Quality of Internet Connection, on the dependent variable, Adoption Intention. The object of this research is the QRIS (Quick Response Code Indonesia Standard) payment system, a type of payment using QR codes applicable in Indonesia, created by Bank Indonesia. This study uses primary data from questionnaires distributed using non-probability sampling techniques to owners or decision-makers of merchants whose operating for at least one year and have been using QRIS for a minimum of six months in Indonesia. Conducted with a quantitative approach, this research employs the Partial Least Square - Structural Equation Modeling (PLS-SEM) testing method. Based on 162 respondents, the results indicate that Performance Expectancy, Facilitating Conditions, and Quality of Internet Connection positively and significantly influence Adoption Intention. Meanwhile, Effort Expectancy, Social Influence, and Government Support show a positive but not statistically significant influence on Adoption Intention.

Keywords: Adoption Intention, Indonesia, Merchant, QR Code Payment

Introduction

Many developing countries are on the edge of a major digital transformation due to advances in automation, networks, and the internet (Dieu et al., 2023). Technology has affected various fields in human life and the business landscape, one of which is in the financial sector related to financial transactions and payment methods, better known as financial technology or fintech (Trianto et al., 2023). The development of fintech in recent times has also impacted the decline in conventional financial service transactions. This has significantly influenced institutional interventions in the banking and non-banking financial services industry, emphasizing the importance of digital payment adoption among customers as a result (Trianto et al., 2023; Agbo, 2024). Furthermore, the adoption of digital mobile payments by merchants is also important, apart from the emphasis on the adoption of mobile payments by consumers, as the adoption of digital mobile payment transaction services by merchants facilitates the use of mobile payment methods by consumers.

The change in the use of digital financial services to replace conventional financial services is a phenomenon that has occurred in Indonesia in recent years, where based on the results of the Visa Consumer Payment Attitudes Study in 2023, there has been an increase in the use of digital finance among Indonesians, with the highest percentage of use being 92%, along with a decrease in the use of cash to 80% from 84% in 2022 (Saputra, 2024). In addition, Perry Warjiyo as Governor of Bank Indonesia (BI) also revealed that the value of electronic transactions in Indonesia has increased by 10.50% annually, reaching Rp. 39.21 trillion in 2023, where the main driver in the increase in national digital transactions is the mobile payment method that utilizes QR codes in transactions known as QRIS (Quick Response Code Indonesia Standard).

QRIS, a unification of payment types using QR codes from various Payment System Service Providers (PJSP), was developed by the payment system industry and Bank Indonesia to create a transaction process with QR codes that is easier, faster, and safer. Furthermore, the QRIS payment system, which experienced a rapid growth of 84.5% (yoy) to IDR 18.01 trillion in Indonesia in 2023 Nugroho (2023), and has begun to be used in 2019, is now also being developed by Bank Indonesia in become a payment system that can be used between countries, as an innovation that aims to encourage the optimization of banking services, so that the national economy can recover soon and the BSPI (Indonesian Payment System Blueprint) can be realized in 2025 (Gouw, 2021). However, although the national use of QRIS has increased significantly every year, along with the increasing adoption of the QRIS payment method by merchants in Indonesia, and will be further developed by Bank Indonesia in the future, the use of this payment method is still not evenly distributed in various regions in Indonesia, where 71.6% of QRIS users are from Java, while the use of this payment method in other regions in Indonesia can be considered very little use compared to Java (Kompas.id, 2023). Thus, research related to factors that influence the intention to adopt the QRIS payment method by merchants as a driver of the use of the QRIS payment method in Indonesian society is an important topic to encourage digital financial inclusion in Indonesia.

Building on recent literature Srivastava et al. (2025), this study offers a novel contribution by specifically examining the determinants of merchant intention to adopt the QRIS payment system in Indonesia. Unlike prior research that primarily focused on consumer behavior, our investigation uniquely addresses how merchant adoption can act as a catalyst for broader digital financial inclusion (Hung et al., 2024; Mishra et al., 2022; Srivastava et al., 2025). By exploring regional disparities and the underlying factors that influence merchant decisions, this study aims to fill a significant gap in the literature and provide actionable insights for policymakers and financial institutions seeking to optimize digital payment strategies.

Literature Review

This study uses the Unified Theory of Acceptance and Use of Technology II which is a research model related to technology adoption developed to capture user intentions and user behavior toward information technology (Nandru et al., 2023). Adoption intention itself can be interpreted as the user's tendency to use or accept a certain technology on an ongoing basis (Munikrishnan et al., 2022; Maryam et al., 2022). Based on research by Trianto et al. (2023), several variables can be used in measuring the factors that influence this adoption intention, namely performance expectancy, effort expectancy, social influence, facilitating conditions, government support, and quality of internet connection.

For instance, Moghavvemi et al. (2021) applied UTAUT to investigate merchant adoption of mobile payment systems. Their findings indicate that core UTAUT constructs—namely, performance expectancy, effort expectancy, social influence, and facilitating conditions—are significant predictors of merchants' willingness to adopt digital payment technologies. Similarly, Raj et al. (2023) extended the UTAUT framework to examine cashless payment adoption in retail settings during the COVID-19 pandemic, revealing that beyond the traditional determinants, factors such as the ease of integration with existing business systems and supportive government policies play crucial roles in shaping merchants' adoption decisions.

Performance expectancy is the level of user confidence that using the technology will be able to help them work more effectively (Nandru et al., 2023). Based on Dieu et al. (2023), mobile payment methods will have an impact on simplifying the activities that merchants need to do in serving financial transactions or payment activities, as well as increasing processing speed and transaction accuracy, which

is one of the benefits of mobile payment adoption intention that merchants pay attention to. Thus, the hypotheses developed are:

H1: Performance expectancy has a positive effect on the intention of merchants to adopt QR code payment.

Effort expectancy is defined as the level of ease in learning and using technology components (Munikrishnan et al., 2022). Ease of use of technology is a significant determinant of user attitude towards various digital financial systems Nandru et al. (2023), where merchants will have a desire to adopt mobile payments if there is a perception that the related system can be used easily and leads to ease of doing business activities. Thus, the hypotheses developed are:

H2: Effort expectancy has a positive effect on the intention of merchants to adopt QR code payment.

Social influence is defined as the extent to which users understand that people closest to them believe that users need to use certain technologies (Trianto et al., 2023). This social influence affects the behavior of others through compliance in adjusting beliefs, as well as adjusting beliefs based on social status and subjective norms Trianto et al. (2023), so that external influences from individuals around merchants can influence the decision to adopt a particular technology. Thus, the hypotheses developed are:

H3: Social influence has a positive effect on the intention of merchants to adopt QR code payment.

Facilitating conditions are user perceptions regarding the resources and support available to perform a behavior (Trianto et al., 2023). Trianto et al. (2023) also explain that individuals may not adopt mobile banking, unless they have certain facilitating conditions, such as financial resources, the skills needed to work with related applications, and access to the mobile internet. Thus, the hypothesis developed is:

H4: Facilitating conditions have a positive effect on the intention of merchants to adopt QR code payments.

Based on Xiao et al. (2023), government support is defined as a series of steps taken by the government to facilitate the development of digital platforms to optimize resource distribution and increase social benefits. Government support, which is the central pillar of fintech development and plays a role in developing a favorable ecosystem for the fintech sector, also plays a role in providing cheap and fast internet access, and other policy support will increase merchants' interest in adopting mobile payments (Trianto et al., 2023). Thus, the hypothesis developed is:

H5: Government support has a positive effect on the intention of merchants to adopt QR code payment.

Quality of internet connection is a user perspective regarding the quality of internet connection infrastructure, related to the speed and ease of accessing the internet network (Pratomo & Handayani, 2023; Trianto et al., 2023). As the use of mobile payments cannot be used properly without good internet, merchant interest in adopting mobile payments will decrease along with the difficulty of successful transactions with the mobile payment method. Thus, the hypothesis developed is:

H6: Quality of internet connection has a positive effect on the intention of merchants to adopt QR code payment.

Research Methodology

The type of research conducted is quantitative research, where research is conducted using numerical data to test and measure hypotheses related to the relationship between independent and dependent variables, through statistical analysis tools (Zikmund et al., 2012). Furthermore, this research is also categorized in the quantitative research group, as a causal research type, where this research is

intended to examine the causal relationship of the independent variable variables to the dependent variable used in this study.

This research uses primary data, or research data that is directly sourced or obtained from the first source, collected by data collectors, where the data is still raw data, which has not been processed by other parties or third parties before. Furthermore, primary data through this questionnaire is collected by distributing questionnaires online to target respondents who meet the criteria as target respondents in research related to QRIS adoption intention, namely owners or decision makers in retail, restaurant, cafe, and other service business categories in Indonesia, which are developing or have been operating for more than one year, and have adopted the QRIS payment method for at least six months.

In this study, the analytical technique used is Partial Least Square-Structural Equation Modeling (PLS-SEM) which is a non-parametric approach to increase the variance of the endogenous or dependent variables used, as well as a technique that is widely used in exploratory research because of its adaptability in estimating parameters with measurement model adjustments (Ojo et al., 2023; Chan et al., 2022; Trianto et al., 2023). PLS-SEM, also referred to as PLS path modeling, is SEM modeling introduced as "causal-predictive", which focuses on explaining variance in the dependent variable of the model. PLS path modeling consists of two elements, namely the structural model or inner model, which is a model that displays the relationship between constructs; and the measurement model or outer model, which is a model that displays the relationship between constructs and their underlying indicators (Hair Jr. et al., 2021).

Findings

Results

Based on data processing from 162 respondents or samples that have been collected, the following are the results of data processing and research findings.

Description of Research Data

Table 1. Respondent Data Description

No.	Characteristics	Number (Person)	Percentage (%)
1	Gender		
	Male	74	45,7%
	Female	88	54,3%
2	Age		
	17 - 27 years	95	58,6%
	28 - 43 years old	52	32,1%
	44 - 59 years	15	9,3%
3	Last Education		
	Elementary School / Equivalent	1	0,6%
	Junior High School / Equivalent	1	0,6%
	High School / Vocational / Equivalent	56	34,6%
	Diploma	19	11,7%
	Bachelor	74	45,7%
	Master	11	6,8%
4	Domicile (City/District)		

No.	Characteristics	Number (Person)	Percentage (%)
	Bandung	1	0,6%
	Banyuwangi	3	1,9%
	Bekasi	1	0,6%
	Caruban	1	0,6%
	Gresik	3	1,9%
	Jakarta	2	1,2%
	West Jakarta	1	0,6%
	Jogja	4	2,5%
	Jombang	1	0,6%
	Kediri	4	2,5%
	Holy	2	1,2%
	Madiun	19	11,7%
	Magetan	4	2,5%
	Malang	4	2,5%
	Manado	1	0,6%
	Mataram	1	0,6%
	Medan	1	0,6%
	Mojokerto	1	0,6%
	West Nusa Tenggara	1	0,6%
	Pangkalanbun	1	0,6%
	Pasuruan	1	0,6%
	Ponorogo	2	1,2%
	Pontianak	2	1,2%
	Probolinggo	4	2,5%
	Semarang	4	2,5%
	Sidoarjo	13	8%
	Situbondo	1	0,6%
	Surabaya	74	45,7%
	Tangerang	2	1,2%
	Tasikmalaya	1	0,6%
	Tretes	2	1,2%
5	Business Type		
	Services	40	24,7%
	Trade	78	48,1%
	Food and beverage industry	44	27,2%
6	Length of Establishment		
	1 year - 5 years	97	60%
	6 years - 10 years	30	18,5%
	11 years - 15 years	11	6,8%
	16 years - 20 years	5	3,1%
	21 years - 25 years	9	5,5%
	26 years - 30 years	3	1,8%
	31 years - 35 years	5	3,1%

No.	Characteristics	Number (Person)	Percentage (%)
	36 years - 40 years	1	0,6%
	> 40 years	1	0,6%
7	Length of Business Using QRIS		
	6 months - 1 year	84	51,9%
	1 year - 3 years	53	32,7%
	> 3 years	25	15,4%
8	Total Business Income per Year		
	< Rp. 60.000.000,-	52	32,1%
	Rp. 60.000.000,- to Rp. 250.000.000,-	52	32,1%
	Rp. 250.000.000,- to Rp. 500.000.000,-	36	22,2%
	Rp. 500,000,000,- to Rp. 5,000,000,000,-	17	10,5%
	> Rp. 5,000,000,000,-	5	3,1%

Source: Processing of questionnaire data using SPSS

Based on the results of processing the respondent data description in Table 1, all 162 respondents have met the criteria as owners or decision makers in businesses that have been established for at least one year in Indonesia and have used QRIS as a payment method in their business for at least six months. The majority of these respondents are female with a percentage of 54.3% of the total number of respondents or samples, and the other 45.7% are male. Furthermore, the sample was dominated by respondents with an age range of 17 - 27 years old at 58.6%, followed by respondents with an age range of 28 - 43 years old at 32.1%. In addition, the majority of respondents also have the latest education level, namely undergraduate with a percentage of 45.7%, and high school / vocational/equivalent with a percentage of 34.6%. Respondents have a domicile that is mostly spread across Java Island, with the largest domicile of respondents being in Surabaya with 45.7% of respondents.

Most respondents run businesses in the trade sector with a percentage of 48.1%, and the majority of businesses run by respondents are 1 year old at 17.3%, followed by 2 years old at 14.2%. Based on the length of QRIS use in businesses run by respondents, 51.9% of them have used QRIS for 6 months to 1 year, followed by 1 year to 3 years as much as 32.7%, and the remaining 15.4% have used QRIS for more than 3 years. The businesses run by these respondents, the majority have revenues of less than Rp. 60,000,000, - and Rp. 60,000,000, - to Rp. 250,000,000, - each of which has a percentage of 32.1%.

Table 2. Fintech Utilization Respondents

No.	Fintech Utilization	Answer			
		Yes		No	
		N	%	N	%
1	Have a bank account	161	99,4	1	0,6
2	Have a bank card	146	90,1	16	9,9
3	Have ever transacted using a bank card	151	93,2	11	6,8

4	Have ever transacted using an e-wallet	161	99,4	1	0,6
5	Have you ever heard of barcode or QRIS e-payment transactions?	162	100	0	0
6	Never integrated a payment system using barcodes or QRIS e-payment in the business being run	162	100	0	0
7	The government has supported the use of fintech in business operations	111	68,5	51	31,5

Source: Processing of questionnaire data using SPSS

The use of QRIS in businesses run by respondents is also related to the utilization of fintech by respondents, where 99.4% of them have bank accounts, 90.1% have bank cards, 93.2% have transacted using bank cards, and 99.4% have transacted using e-wallets. Furthermore, all respondents have heard of and integrated barcode payment systems or QRIS in their businesses, but only 68.5% of them have felt supported by the government regarding the use of financial technology in their businesses.

Measurement Model Test Results

In the measurement model test, testing is carried out to ensure that the research constructs are measured with sufficient accuracy and that the structural model can assess the strength of the explanation of this research model, using SmartPLS 4 software. This measurement is based on the factor loading value to assess the validity of each indicator; and Cronbach's alpha, AVE (Average Variance Extracted), and CR (Construct Reliability) to assess the reliability of each variable used in the study. Table 3 shows an evaluation of the results of testing the measurement model from all respondent data.

Table 3. Measurement Model Test Results

Variables	Factor Loading	Cronbach's Alpha	AVE	CR
Performance Expectancy		0,765	0,587	0,850
PE2	0,820			
PE3	0,761			
PE4	0,767			
PE5	0,712			
Effort Expectancy		0,739	0,560	0,835
EE1	0,755			
EE2	0,790			
EE3	0,725			
EE4	0,721			
Social Influence		0,715	0,631	0,837
SI2	0,821			
SI3	0,796			
SI4	0,765			
Facilitating Conditions		0,721	0,642	0,843
FC2	0,778			
FC3	0,834			
FC4	0,791			

Variables	Factor Loading	Cronbach's Alpha	AVE	CR
Government Support		0,827	0,658	0,884
GS1	0,714			
GS3	0,848			
GS4	0,834			
GS5	0,841			
Quality of Internet Connection		0,704	0,628	0,835
QI2	0,793			
QI4	0,787			
QI5	0,797			
Adoption Intention		0,757	0,578	0,846
AI2	0,746			
AI3	0,753			
AI4	0,749			
AI5	0,792			

Source: Results of data processing with SmartPLS 4.0

Table 1 above shows the factor loading of each indicator that measures the variables in this study, after selecting the validity of indicators with a factor loading value of less than 0.5 and declared invalid. Based on this table, four indicators measure performance expectancy, four indicators measure effort expectancy, three indicators measure social influence, three indicators measure facilitating conditions, four indicators measure government support, three indicators measure the quality of internet connection, and four indicators measure adoption intention, which has met the criteria for factor loading ≥ 0.7, which can be declared valid and can be used to measure each variable in this research model.

In addition, table 1 also shows the results of reliability testing on each variable, which is based on Cronbach's alpha, AVE, and CR values. A variable can be declared reliable if it has a Cronbach's alpha value greater than 0.7 or Cronbach's alpha ≥ 0.7; AVE value greater than 0.5 or AVE ≥ 0.5; and CR value greater than 0.7 or CR ≥ 0.7. Based on this table, each variable has a Cronbach's alpha value ≥ 0.7; AVE ≥ 0.5; and CR ≥ 0.7. Thus, all measured variables can be declared reliable and can be used in structural model testing. Furthermore, the research model structure from the measurement model testing results is shown in Figure 1.
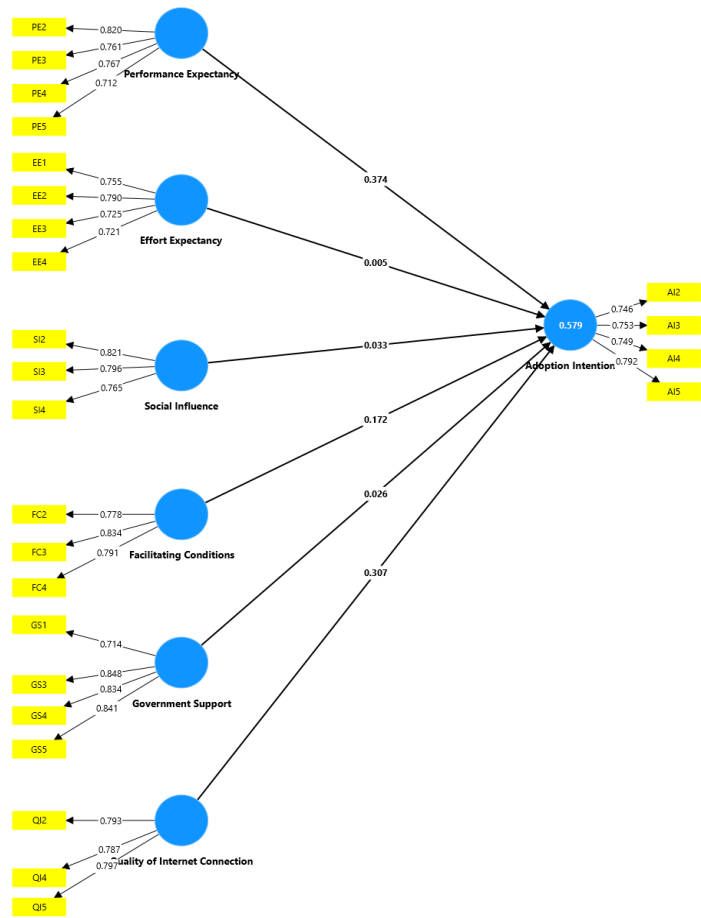
Figure 1. Model Test Results Measurement Model

Structural Model Test Results

After testing the measurement model, the next stage is to test the structural model, which aims to test the meaning and significance of the theoretical structural relationship between the research variables used in the research model. This test was carried out using SmartPLS 4 software, and based on the results of the bootstrap analysis in this test, research hypothesis testing can be carried out. The assessment of hypothesis testing in this study is based on several assessments, namely the estimated value or original sample, t-statistic, and p-value, which are shown in Table 4.

Table 4. Hypothesis Test Results

Hypothesis	Original Sample	T-Statistics	P-Values	Ket

H1 (+)	Performance Expectancy → Adoption Intention	0,374	4,423	0,000	Supported
H2 (+)	Effort Expectancy → Adoption Intention	0,005	0,049	0,961	Not Supported
H3 (+)	Social Influence → Adoption Intention	0,033	0,398	0,691	Not Supported
H4 (+)	Facilitating Conditions → Adoption Intention	0,172	2,020	0,043	Supported
H5 (+)	Government Support → Adoption Intention	0,026	0,356	0,722	Not Supported
H6 (+)	Quality of Internet Connection → Adoption Intention	0,307	3,499	0,000	Supported

Source: Results of data processing with SmartPLS 4.0
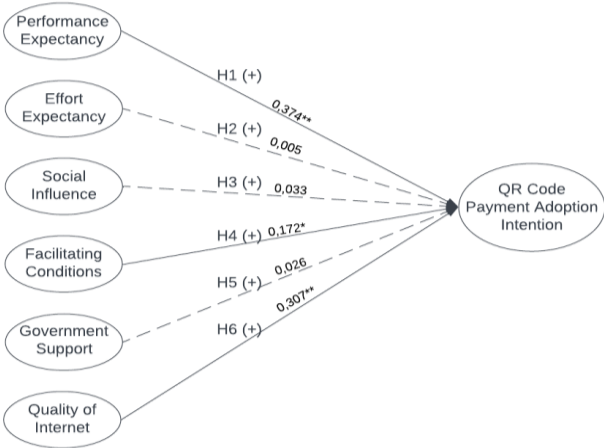
Description:
The number indicates the size of the original sample value or the strength of the effect
Dashed lines indicate unsupported hypotheses
A straight line indicates a supported hypothesis
* = significance with p-value≤ 0.05
** = significance with p-value≤ 0.01

Figure 2. Model of Hypothesis Testing Results

Table 2 shows the test results of the six hypotheses in this study. Hypotheses can be declared supported if they meet the criteria, namely having a positive original sample value, t-statistics value greater than 1.96, and p-values less than 0.05, as each variable relationship is hypothesized to have a positive relationship and using an error rate of 5%. Based on the test results in Table 2, it is found that three hypotheses are supported, namely hypothesis 1, hypothesis 4, and hypothesis 6, as they have positive original sample values, t-statistics≥ 1.96, and p-value≤ 0.05. Meanwhile, the other three hypotheses, namely hypothesis 2, hypothesis 3, and hypothesis 5 are declared unsupported, as despite having a positive original sample value, the three hypotheses have t-statistics≤ 1.96, and p-values≥ 0.05. Furthermore, the research model structure from the results of this hypothesis testing is shown in Figure 2.

Discussion

Hypothesis 1 performance expectancy has a positive effect on the intention of merchants to adopt QRIS in Indonesia is stated to be supported or accepted. The results of this study also support the results of research conducted by Nandru et al. (2023), namely performance expectancy has a positive effect on adoption intention. The results of this test have implications, namely that merchants are more likely to adopt QRIS as an e-payment method in their business when merchants feel that the method is useful in daily transactions, for example when they feel they get benefits, both in terms of time savings and increased transaction or financial accuracy (Nandru et al., 2023; Dieu et al., 2023).

Hypothesis 2 effort expectancy has a positive effect on the intention of merchants to adopt QRIS in Indonesia is not supported or rejected. The results of this study support the results of research conducted by Trianto et al. (2023), namely effort expectancy has no significant positive effect on adoption intention. These results can provide implications that effort expectancy does not have a strong influence on the adoption intention of merchants in Indonesia, which is estimated because the majority of QRIS modes found in MSMEs are merchants presenting static type modes, or with the display of one QRIS sticker or print-out, where the entire transaction process is carried out by the customer, so that effort expectancy does not affect the merchant.

Furthermore, although it can also be found the use of QRIS with a more dynamic mode with the use of devices, with its integration in the cashier system or EDC or related bank devices, makes the procedures or processes that merchants need to do to process transactions almost the same or similar to other payment methods accepted by merchants so that a feeling of 'usual' or 'used to' can arise in merchants, which makes effort expectancy in the use of QRIS, not too significant an impact on merchant intention to adopt QRIS. This is also similar to research conducted by Munikrishnan et al. (2022), which states that effort expectancy is only relevant in the early stages of adopting a new system and becomes less significant due to continuous or prolonged use, where respondents in this study have adopted QRIS for more than six months, so effort expectancy is no longer expected to be the main factor for merchants to adopt QRIS.

Hypothesis 3 social influence has a positive effect on the intention of merchants to adopt QRIS in Indonesia is not supported or rejected. The results of this study support the results of research conducted by Trianto et al. (2023) and Nandru et al. (2023), namely social influence has no significant positive effect on adoption intention. This result can imply that social influence does not have a strong influence on the adoption intention of merchants in Indonesia, which is estimated because there are still many businesses that have not used QRIS as a payment method around merchants, as from MSME businesses reaching around 66 million, there are only 30.4 merchants who have adopted QRIS, or around 46% of the number of MSME businesses (Prodjo, 2024; Indonesian Payment System Association, 2024). Furthermore, QRIS is also still only one of the payment alternatives in many business places, where many merchants are less active or do not make QRIS the main choice in making transactions, because the social environment still uses other payment methods, such as cash, debit cards, transfers, and others (Indonesian Payment System Association, 2024). Thus, there is no strong social pressure or social influence for merchants to adopt QRIS.

In addition, social influence derived from opinions and recommendations of people around also cannot be a strong factor in encouraging the adoption of technology, because it relates to transaction information on businesses or businesses, so merchants will be more selective in their decisions, as the success or success of using QRIS in other people or businesses does not provide a guarantee of success or success in the businesses run by related merchants. Furthermore, with a collective cultural background in Indonesian society, social behavior around can be seen as real information, so social influence is more accepted as guidance than pressure, compared to individualist cultures that are more sensitive to social

behavior around them, so it can be seen as an attempt to influence or social pressure that will affect the merchant's decision (Wu & Liu, 2022).

Hypothesis 4 facilitating conditions have a positive effect on the intention of merchants to adopt QRIS in Indonesia is stated to be supported or accepted. The results of this study support the results of research conducted by Trianto et al. (2023) and Al-Sabaawi et al. (2020), namely facilitating conditions have a positive effect on adoption intention. Thus, the results of this test have implications, namely, merchants are more likely to adopt QRIS as an e-payment method in their business when merchants have met certain facilitating conditions, both the resources, knowledge, and skills needed to handle payment methods using QRIS in their business (Trianto et al., 2023; Al-Sabaawi et al., 2020).

Hypothesis 5 government support has a positive effect on the intention of merchants to adopt QRIS in Indonesia is not supported or rejected. The results of this study support the results of similar research conducted by Indriyani et al. (2022), namely government support does not significantly have a positive effect on adoption intention. This result implies that although 68.5% of respondents feel that the government has supported the use of financial technology in the business they run, the test results show that the merchant's perception of government support for fintech is not strong enough to influence the intention to adopt QRIS in the business they run. This could be due to government policies that are less visible or perceived, or less directly relevant to merchants' daily operational needs.

As, based on the search conducted, the government encourages the use of QRIS by providing several facilities and incentives, such as increasing the QRIS transaction limit from Rp. 5,000,000, - to Rp. 10,000,000, - per transaction, and the development of QRIS features continues to be carried out in collaboration with the Indonesian Payment System Association (ASPI) and related industries (Ramadhan, 2023). Support for increasing the transaction limit can be considered less felt by the majority of respondents, as the majority of respondents in this study have businesses with an MSME scale and the majority of respondents have a total income per year of less than Rp. 250,000,000,- with an average nominal QRIS transaction/merchant/month ranging from Rp. 827,000,- to Rp. 1,170,000,- (Indonesian Payment System Association, 2024).

Hypothesis 6 quality of internet connection has a positive effect on the intention of merchants to adopt QRIS in Indonesia is supported or accepted. The results of this study support the results of similar research conducted by Pratomo & Handayani (2023), namely quality of internet connection has a positive effect on adoption intention. Thus, the results of this test have implications, namely that merchants are more likely to adopt QRIS as an e-payment method in their business when there is a good quality internet connection to support the success of transactions and the implementation of the QRIS payment system (Trianto et al., 2023).

Overall, the synthesis of these findings reveals that merchant adoption of QRIS in Indonesia is primarily driven by factors that underscore its practical benefits and the strength of its supporting digital infrastructure. In particular, performance expectancy, facilitating conditions, and the quality of internet connection are significant enablers for adoption. Merchants perceive QRIS as beneficial in terms of time savings and increased transaction accuracy, while adequate resources and a robust digital environment further bolster their willingness to integrate this payment system into daily operations. In contrast, ease of use, social influence, and government support exhibit a diminished role once the technology becomes embedded in routine practices. This refined understanding, grounded in the UTAUT framework, highlights the importance of targeting performance-related benefits and infrastructural support to enhance QRIS adoption and advance Indonesia's digital payment landscape.

In addition, in encouraging MSMEs to be 'digitally literate' by using QRIS as a means of payment, there are three government strategies implemented until 2023, namely improving internet network infrastructure, maximizing digital literacy programs, and direct training for MSMEs Supriyatna and Fauzi

(2021), tend not to be the main factor for respondents in adopting QRIS in their business due to the characteristics of respondents, namely domiciled in Java Island, which already had a fairly good internet network even before the creation of QRIS, as people in Java Island contributed 41.75 of the 73.3% of internet users throughout Indonesia (CNN Indonesia, 2021), as well as digital literacy programs and direct training that are not relevant to the majority of respondents because they have transacted with e-payments.

Conclusions

This study shows that adoption intention towards QRIS on merchants in Indonesia is influenced by performance expectancy, where merchants are more likely to adopt QRIS when they feel the transaction method is useful in daily transactions; facilitating conditions, where merchants are more likely to adopt QRIS in their business when certain facilitating conditions are met; and quality of internet connection, as merchants are more likely to adopt QRIS when there is a good quality internet connection to support the success of the transaction or implementation of the QRIS payment system. Furthermore, effort expectancy, social influence, and government support were identified as not having a significant influence on adoption intention towards QRIS for merchants in Indonesia.

This is expected because most QRIS modes used by MSMEs are static, with the customer handling the entire transaction process, which minimizes the role of effort expectancy. Even when QRIS is used in a more dynamic mode, the procedures are similar to other payment methods, fostering familiarity and reducing the perceived effort over time. Additionally, since many surrounding businesses still do not use QRIS and it remains just one of several payment options, there is little social pressure for merchants to adopt it. In Indonesia's collective cultural context, social influence tends to serve as guidance rather than coercion. Moreover, although 68.5% of respondents feel supported by government fintech initiatives, this support is perceived as less directly relevant to their daily operations, thereby exerting little influence on their intention to adopt QRIS.

Future researchers can also conduct research with more diverse demographics and geographies of respondents, as in this study there are limitations in data collection, where data collection only comes from the author's social scope. This results in the descriptive characteristics of respondents being centered on one or two categories only, such as the age characteristics of respondents, the majority of whom are 17 to 27 years old or are Generation Z who are open to and familiar with the use of technology, especially financial technology. Thus, it is expected that with more diverse respondents from the general public, the results of future research will better reflect the conditions and perceptions that encourage merchants in Indonesia to integrate this type of financial technology into their businesses.

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