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Analysis of the factors of intention to use QRIS for MSMEs in Semarang City's traditional market

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Abstract

Quick Response Indonesian Standard (QRIS) is the standardization of QR codes as a technology for payment systems established by Bank Indonesia on January 1, 2020. This standardization was formed to provide an easier and more efficient cashless payment system, especially for MSMEs. This study targets to analyze factors, namely product knowledge, perceived usefulness, perceived ease of use, and perceived risk of the intention of using QRIS in Traditional Market MSMEs in Semarang City. The model in this study was developed from the Technology Acceptance Model (TAM) framework and adapted to the context of MSMEs in Indonesia. This research uses an associative quantitative approach. The population in this study was traders in seven traditional markets in the Semarang City area. As empirical data was collected through a questionnaire involving 105 respondents from traders in the traditional market of Semarang City, then analyzed with SEM-PLS analysis techniques with SmartPLS software. The results showed that product knowledge, perceived usefulness, and perceived ease of use positively and significantly affected the intention of using QRIS. Then, perceived risk negatively and significantly affects the intention of using QRIS.

Keywords: QRIS, Technology Acceptance Model, Intention to Use, Traditional Market.

Introduction

Information technology has a massive influence on almost every aspect of human life. It is proven by the sophistication of technology that has facilitated the use of current facilities and infrastructure in nearly all countries, as well as Indonesia (Hardiky *et al.*, 2021). The expansion of information technology is characterized by the digital era's access and the rising number of internet users. Based on data from the Association of Indonesian Internet Service Providers (APJII), in Q2 2020, entire internet users in Indonesia reached 196.7 million, with a penetration of 73.3% of the entire population of about 266.9 million. Until now, it continues to increase. Even though the most popular media used to connect to the internet is smartphones, which is 95.4% (Nastiti *et al.*, 2021). Based on this, technological innovation must also support advances in the economic and financial fields to simplify and speed up consumers' products and services through a payment system.

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The Financial Services Authority (OJK) said that the improvement of digital financial innovation could be supported by the potential of Indonesia, where MSMEs (Micro, Small, and Medium Enterprises) constitute 99% of around 59 million companies in Indonesia. Besides, the Ministry of Cooperatives and SMEs stated that the current role of MSMEs is vital in building Indonesia's economic stability. It is proven that when the Covid-19 pandemic hit Indonesia, MSMEs could still stand firm as large businesses began to fall. Among the advantages of MSMEs is being able to produce consumer goods or services close to the community and tend not to use imported raw materials (Mahyuni & Setiawan, 2021).

Although MSMEs are considered to have many advantages, some limitations are also often faced and even become obstacles that make it challenging to develop and have competitiveness. Among these limitations is the low ability and knowledge of human resources in the use of technology, so MSMEs must understand and be sensitive to current technological developments to support the development of their business (Hutagalung *et al.*, 2021). In this regard, the government, through the Ministry of Cooperatives and SMEs, is currently starting to promote the MSME digitization program because it is believed that digital transformation is essential to the progress of MSMEs.

Therefore, it is necessary to have a system that can be integrated with the various payment instruments and channels nationally and ensure that all the systems can be well integrated. So, Bank Indonesia creates a standardization of QR code payments, namely QRIS (Quick Response Indonesian Standard). QRIS is a standard QR Code for payments through e-wallet applications or mobile banking that was inaugurated on January 1, 2020, to facilitate digital payments in Indonesia, primarily to support the development of MSMEs (Chohan *et al.*, 2022).

Bank of Indonesia Central Java Province continues to massively expand the use of QRIS as a digital payment method. With the collaboration between Bank Indonesia and PJSP (Payment System Service Providers) until now, QRIS users from MSMEs in Central Java have reached more than 800 thousand. In contrast, the city of Semarang has reached 400 thousand or 50% of the total users, excluding MSMEs in traditional markets (semarang.bisnis.com, 2022). The high use of QRIS in MSMEs in Semarang City indicates the high level of technology adoption reflected by the behavioural intentions of these MSMEs as users of digital payment services.

The development of digitalization in various sectors and the adoption of information technology, such as banking e-channels, e-wallets, and online shopping applications, are increasingly attracting the attention of researchers to be studied more deeply, especially some of the determining factors for the intention of using these technology services. Several researchers have previously discussed the determinants of the intention to use technology in various countries and most of these studies have used Technology Acceptance Model (TAM). For example, Alalwan *et al.* (2018) identified performance expectancy, effort expectancy, hedonic motivation, price value, and perceived risk as determinants of the intention of using internet banking in Jordan. As for Vietnam, Le *et al.* (2022) reported that some determining factors include perceived usefulness, perceived ease of use, user innovativeness, and government support. While in Nigeria, Ezeh & Nwankwo (2018) mentioned that the determining factors are perceived ease of use, perceived financial cost, and amount of information. Then in Turkey, Altin Gumussoy *et al.* (2018) found that perceived usefulness, perceived ease of use, and perceived risk are determining factors of use intention. Furthermore, the intention to use e-wallets and online

shopping applications has also been widely researched, including Chuang *et al.* (2016), Kasilingam (2020), Madan & Yadav (2018), Mahfuroh & Wicaksono (2020), Ming & Jais (2022), and Pillai *et al.* (2020).

Meanwhile, existing literature on adopting digital payments is still limited, especially about QRIS as a digital payment facility in Indonesia. Where with the QRIS payment technology is a tangible manifestation of the government's participation in increasing non-cash transactions and digitizing MSMEs. The conclusions of research affiliated with to use of QRIS for consumers that have been achieved by Ningsih *et al.* (2021) and Saputri (2020) show that consumers are interested in using QRIS based on considerations of perceived usefulness, perceived ease of use, and perceived risk. Then, from the seller's side, specifically for MSMEs, it was discussed by Mahyuni & Setiawan (2021) that understanding of QRIS, perceived usefulness and perceived ease of use be critical factors in determining the intention to use it. However, this is not in line with the results of research from Silaen *et al.* (2021) which stated that perceived usefulness and perceived ease of use did not have a significant effect on the use of QRIS. As well as Ardiana *et al.* (2021) also stated that perceived ease of use does not have a significant effect on the use of QRIS.

Based on the results of these very varied studies, it is hoped that the findings of this study will contribute to literature regarding the intention of using QRIS in traditional market MSMEs, which is still rarely the focus of research, especially in Indonesia. Moreover, this study developed the theory of the Technology Acceptance Model by adding variables of product knowledge and risk perception, which are essential in explaining the phenomenon of behaviour that occurs in today's society. This modification is considered necessary to increase the relevance of the latest research and analyze four related variables. Namely, product knowledge, perceived usefulness,

perceived ease of use, also perceived risk is directly related to intention to use QRIS in traditional market MSMEs in Semarang City. Thus, this study matches with the government's policy and Bank of Indonesia to stimulate non-cash transactions, better familiar as the National Non-Cash Movement (GNNT), and the development of MSME digitalization programs.

Quick Response Indonesian Standard (QRIS)

QRIS is a payment QR Code standard for the Indonesian payment system established by Bank Indonesia and the Indonesian Payment System Association (ASPI) in early 2020. As Bank Indonesia regulations in PADG No.21/18/2019 concerning the Implementation of QRIS international standards, it states that every QR Code-based Payment System Service Provider (PJSP) is required to use QRIS, where only one code can serve various types of payments. That is necessary to prepare for technological innovations and developments in payment channels using QR Codes that can cause new portions in the payment system industry (Mayanti, 2020; Nastiti *et al.*, 2021). Furthermore, to increase the acceptance of national non-cash payments that are more efficient and cheaper, accelerate financial inclusion in Indonesia, and encourage the progress of MSMEs, which impacts national economic growth (Hutagalung *et al.*, 2021).

Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) has become a famous theoretical foundation for learning about the adoption of new information technologies and find it very useful to study adoption in various contexts connected to information technology (Altin Gumussoy *et al.*, 2018; Chohan *et al.*, 2022; Chuang *et al.*, 2016; Le *et al.*, 2022). Davis first put forward TAM in 1989, as this theory explains that users

of the technology will make rational decisions regarding the use of the technology. Perceived usefulness or expediency and perceived ease of use are factors to be considered to make this rational decision, which is considered to be the determinant of the attitude and behaviour of the user (Kasilingam, 2020). That can mean that users will form a good attitude toward new technologies and adopt or use them when they believe they are beneficial and easy to use. In addition to these two factors, TAM theory can also develop a model by adding a factor of product knowledge and risk perception as external variables (Altin Gumussoy *et al.*, 2018; Ezeh & Nwankwo, 2018; Patel & Patel, 2018).

Intention to Use

The number of QRIS users on MSMEs in Semarang City can also indicate the high intention to use QRIS. It can be known that the intention or intention of behaviour is an impulse, desire, or intention of a person to carry out specific behaviours (Simeru & Tanamal, 2020). According to Davis (1989) intention can be defined as the degree of how strong a person's desire to do a sure thing is. Intention to use QRIS is defined as the level of a person's desire to use QRIS services as a means of payment. Based on this explanation, the intention to use QRIS in MSMEs is a desire of MSMEs to use QRIS services as a digital payment tool in their business. There are several indicators of the intention of use, specifically want to use, consistently try to use, and continue in the future (Jogiyanto, 2008).

Product Knowledge

Various factors undoubtedly influence the intention of MSMEs to use QRIS. Among these factors, one of them is product knowledge. Product knowledge is information from potential users related to a product and service. Therefore, all the information he obtained will be an initial

consideration before deciding to use it (Arifiyanto & Kholidah, 2021). Similarly, experts agree that the level of information a person obtains greatly affects the desire to use it, without exception in the reception of specific technologies. Because they will always be aware of and understand the new product before its use, a high level of a person's understanding of a product or service can be the main factor in determining the intention of its use (Ezeh & Nwankwo, 2018). Some indicators measuring product knowledge include knowledge of attributes, benefits, and product satisfaction values (Sari *et al.*, 2021).

A person's knowledge of a product is fundamental because it can provide a role in making decisions. If a person has much knowledge about an object, that person will usually be more careful and meticulous in choosing or using it (Sari *et al.*, 2021). Therefore, before deciding to use QRIS, MSMEs will usually first consider what will be obtained from its use. That indicates that knowledge of QRIS significantly affects the intention of its use. As stated by Mahyuni & Setiawan (2021), product knowledge has a positive and significant effect on intention of using QRIS on MSMEs in Bali, where a higher level of understanding and knowledge of QRIS significantly affects the intention of its use. Moreover, some of the previous researchers, including Arifiyanto & Kholidah (2021), Ezeh & Nwankwo (2018), and Sari *et al.* (2021), also stated the same thing that product knowledge positively and significant effect on intention of using. So that the specified hypothesis is:

H$_1$: Product knowledge positively and significantly affects intention to use.

Perceived Usefulness

Perceived usefulness also plays a crucial role. Davis (1989) mentions that perceived usefulness can influence an individual's intention to adopt certain

technologies. Perceived usefulness is the level at which a person believes using a system or technology can increase productivity and work performance. Among the benefits that are felt is to offer flexibility and comfort for its users (Patel & Patel, 2018). As Jogiyanto (2008) argued, perceived usefulness is the degree to which an individual assumes that adopting technology will develop his work achievement. Thus, if a person thinks technology can bring benefits, he will use it, and vice versa. Among the indicators of perceived usefulness are accelerating work, improving work performance, increasing productivity and effectiveness, simplifying work, and being practical.

Previous studies have confirmed that perceived usefulness significantly affects intention to use. When a person feels benefited by the presence of a particular product or service, he will most likely use it. Similarly, in the use of technology, the perceived advantages and uses are essential factors that can stimulate the use of the technology (Kasilingam, 2020). It is also stated by Altin Gumussoy *et al.* (2018), Le *et al.* (2022), Mahyuni & Setiawan (2021), Ming & Jais (2022), and Pillai *et al.* (2020). They mentioned that the perception of expediency has a positive and significant effect on the intention of use. The higher perceived usefulness felt by a person can trigger the intention of its use. Therefore, the hypothesis used is:

H2: Perceived usefulness positively and significantly affects intention to use.

Perceived Ease of Use

Perceived ease of use also has a less critical role in influencing the intention to use QRIS for MSMEs. Perceived ease of use is the extent to which a person believes using certain technologies will facilitate their activities. Thus, a person will be willing to accept technologies that he can easily understand and use (Kasilingam, 2020; Patel & Patel, 2018). For this reason, it is also felt by MSMEs, who are more inclined to use

QRIS if they consider it as a technology that is user-friendly, easy to operate, and less troublesome operation. In other words, MSMEs think using QRIS in payment transactions will make it easier than paying in cash. The indicator's scope is easy to learn, easy to control, straightforward and easy to understand, flexible, easy to be skilled, and easy to use (Jogiyanto, 2008).

A digital payment device in the form of QRIS allows MSMEs to complete transactions efficiently and quickly (Mahyuni & Setiawan, 2021). The convenience in question can also be in the form of convenience in the process of learning how to apply it. Accordingly, one does not need to study its use much time. It identifies that the more ease of use of technology, the higher the potentiality of being allowed by users (Altin Gumussoy *et al.*, 2018; Le *et al.*, 2022). Harryanto *et al.* (2018) mentioned that perceived ease of use could have a positive and significant impact on intention to use and that the more effortless operation of internet banking will attract customers to use internet banking. As well, the decisions of a study conducted by Ezeh & Nwankwo (2018), Le *et al.* (2022), Mahyuni & Setiawan (2021), Ningsih *et al.* (2021), and Pillai *et al.* (2020) also stated that the higher the perception of ease that a person feels, the higher the intention to use it. Thus, the hypothesis obtained is:

H3: Perceived ease of use positively and significantly affects intention to use.

Perceived Risk

Meanwhile, the biggest challenge in encouraging MSMEs to use QRIS is reducing the security risks to the technology. Perceived risk is a perception of uncertainty and undesirable consequences for using products or services. The perception of risk in digital payments has many dimensions of risk. However, the main risks are transaction security and user information privacy

issues (Ningsih *et al.*, 2021). Security and privacy risks that concern users of payment services are related to identity theft and misuse of financial information, phishing or hacking, where criminals succeed obtain user information also operate financial transactions (Kasilingam, 2020). Ming & Jais (2022) mentioned that perceived risk refers to the perception of everything that impacts losses and consequences from using certain services. Additionally, Madan & Yadav (2018) define perceived risk as all risks related to financial, social, and product users feel when making online transactions. Thus, indicators of risk perception include security, credibility, and privacy.

Perceived risk dramatically affects the level of user trust, which also impacts the intention to use it. The smaller an individual's perceived risk of a product, the greater level of trust and intention to use it, and vice versa. As suggested by Alalwan *et al.* (2018), perceived risk has a negative and significant impact on intention of adopting internet banking, where the high perception of a person's risk can hinder the intention of its use. So banks must be more massive in convincing and providing education to their users regarding security using online channels and various actions that can be taken in overcoming suspicious things to the emergence of hacking of their accounts. Kasilingam (2020) mentioned that perceived risk negatively but an insignificant connection to use chatbots for shopping, the high-risk users feel for information security and privacy. Some other analysts, similar as Altin Gumussoy *et al.* (2018), Japar *et al.* (2020), Le *et al.* (2022), Saputri (2020), and Sari *et al.* (2021), also identified that perceived risk has a negative and significant impact on usage intentions. So, the hypothesis used is:

H₄: Perceived risk negatively and significantly affects intention to use.

Method

The research approach used is a quantitative approach, with an associative type of research. Associative research aims to find the relationship between two or more variables. In this study, the independent variables used included Product Knowledge (PP), Perceived Usefulness (PKF), Perceived Ease of Use (PKM), and Perceived Risk (PR). While the dependent variable used is Intention to Use QRIS (IN).

The population in this study is traditional market traders in the Semarang City area, which is included in the city market category. Based on data from the Central Statistics Agency of Central Java, nine traditional markets are categorized as city markets in the Semarang City area. The researchers will conduct research in seven traditional markets that are still active today, including Johar Market, Yaik Market, Rejomulyo Market, Dargo Market, Bulu Market, Peterongan Market, and Johar Shopping Center. The sampling technique chosen is simple random sampling. According to Hair *et al.* (2016), the minimum number of representative samples is five times the number of constructs (indicators). As with 21 variable indicators, 105 samples were produced from traders in the traditional market of Semarang City, which was divided into seven market locations.

The technique in collecting data in this study was to distribute questionnaires containing open and closed questions applying a five point Likert scale for its measurement. The questionnaires are distributed to MSMEs by adopting google forms. At the same time, the data analysis technique in this study is in the form of a technique Structural Equation Model (SEM) with Partial Last Square (PLS). SEM -PLS is the most appropriate technique to be used in testing various studies, both in the form of complex models directly or indirectly related to the evaluation of multivariate structures (Ghozali, 2014). Then this research was analyzed with SmartPLS software. For 21 indicators of statements in this study can be seen in Table 1.

Table 1. Indicator Statement

Indicator	Item	Statement	Reference
Product Knowledge	PP1	I know that QRIS is a digital barcode.	Mahyuni & Setiawan (2021)
	PP2	I know that QRIS is a digital payment tool.	
	PP3	I know that QRIS has an automatic transaction recording system.	
Perceived Usefulness	PKF1	I think QRIS is useful for me.	Kasilingam (2020) & Le *et al.* (2022)
	PKF2	Using QRIS can help me complete payment transactions quickly.	
	PKF3	Using QRIS can improve my sales performance and productivity.	
	PKF4	Using QRIS can provide alternative payment methods.	
	PKF5	Using QRIS can reduce physical contact, thus avoiding contracting the virus.	
	PKF6	Overall, I think using QRIS is very profitable.	
Perceived Ease of Use	PKM1	Learning to operate QRIS was easy for me.	Mahyuni & Setiawan (2021) and Kasilingam (2020)
	PKM2	I think the use of QRIS is easy to control.	
	PKM3	Using QRIS does not require a complicated process.	
	PKM4	QRIS barcode only needs to be pasted at the cashier.	
	PKM5	It is easy for me to become skilled in adopting QRIS.	
	PKM6	Overall, I think QRIS is very easy to use.	
Perceived Risk	PR1	The security system on QRIS may not be robust to secure my account.	Alalwan *et al.* (2018), Kasilingam (2020) & Le *et al.* (2022)
	PR2	QRIS may not work correctly and may cause problems in financial transactions.	
	PR3	Overall, I think QRIS still poses a risk to sales transactions.	
Intention to Use	IN1	My intention to use QRIS is very high.	Altin Gumussoy *et al.* (2018) & Le *et al.* (2022)
	IN2	I will consistently use QRIS in the future.	
	IN3	I would recommend those other fellow merchants to use QRIS.	

Result

After the questionnaire results were collected from 105 respondents, the data needed to be tested for the validity and reliability of the construct. This validity test is used to measure the validity of a questionnaire. An instrument is valid if it has an outer loading value > 0.7 (Ghozali, 2014). Then, if some invalid items are found, they must be deleted and cannot be counted in the data analysis process.

Based on the results of the validity test seen in Table 2, it was found that there was an item that did not meet the requirements, namely PKM4. Therefore, the researcher discards the item and retests the remaining items to be declared valid. It is

generated that all items have an outer loading value > 0.7 so that all such constructs can be considered valid. Furthermore, researchers conduct reliability tests to measure whether the instruments used can reveal accurate information in the field and obtain reliable information (Ghozali, 2014).

As shown in Table 3, the AVE value for each variable is above 0.5 and according to the standard. Then the values of Cronbach's Alpha and Composite reliability in each variable have produced a number above 0.7, so all constructs are declared reliable. The results of the hypothesis test of the influence between variables can be seen in Table 4.

Table 2. Validity Test

Indicator	Item	Outer Loading	Result
Product Knowledge	PP1	0.971	Valid
	PP2	0.983	Valid
	PP3	0.975	Valid
Perceived Usefulness	PKF1	0.893	Valid
	PKF2	0.883	Valid
	PKF3	0.798	Valid
	PKF4	0.894	Valid
	PKF5	0.866	Valid
	PKF6	0.791	Valid
Perceived Ease of Use	PKM1	0.914	Valid
	PKM2	0.865	Valid
	PKM3	0.904	Valid
	PKM5	0.916	Valid
	PKM6	0.893	Valid
Perceived Risk	PR1	0.951	Valid
	PR2	0.981	Valid
	PR3	0.972	Valid
Intention to Use	IN1	0.921	Valid
	IN2	0.898	Valid
	IN3	0.840	Valid

Source: own elaboration in SmartPLS (2022).

Table 3. Testing AVE, Cronbach's Alpha, and Composite Reliability

Variable	Cronbach's alpha	rho_A	Composite reliability	AVE	Result
Product Knowledge	0.976	0.976	0.984	0.953	Reliable
Perceived Usefulness	0.926	0.929	0.942	0.732	Reliable
Perceived Ease of Use	0.940	0.943	0.954	0.808	Reliable
Perceived Risk	0.966	0.969	0.978	0.937	Reliable
Intention to Use	0.864	0.876	0.917	0.786	Reliable

Source: own elaboration in SmartPLS (2022).

Table 4 shows that the influence of product knowledge on usage intentions is significant, namely the resulting t-statistic = 3.145 and p-value = 0.002. This is because the t-statistical value > 1.96 and the p-value value < 0.05. The path coefficient value = 0.215 also shows a positive result, so it can be stated that hypothesis 1 is approved. Furthermore, the impact of perceived usefulness on intention to use is significant. That is, it produced a t-statistic = 4.538 and p-value = 0.000. Where the path coefficient value = 0.401, which states a positive result, it can be interpreted that hypothesis 2 is approved. As for the impact of perceived ease of use on intention to use, it produces a value of t-statistic = 2.279 and p-value = 0.023,

Table 4. Hypothesis Test

Hypothesis	Variable Relationship	Estimate			Result
		Path Coefficient	t-statistic	p-value	
H1	PP → IN	0.215	3.145	0.002	Accepted
H2	PKF → IN	0.401	4.538	0.000	Accepted
H3	PKM → IN	0.195	2.279	0.023	Accepted
H4	PR → IN	-0.230	3.804	0.000	Accepted

Source: own elaboration in SmartPLS (2022).

indicating a significant influence with the value of the path coefficient = 0.195, which leads to a positive value, so hypothesis 3 is approved. While the influence of perceived risk on intention to use resulted in a t-statistical value = 3.804 and p-value = 0.000, showing a significant influence with the path coefficient value = -0.230 negative value, it is stated that hypothesis 4 is also approved.

The coefficient of determination is intended to express the magnitude of the variation Y that can be explained by variable X of the established equation, which also indicates the degree of closeness of the relationship between the variables. As the results are shown in Table 5.

Table 5. Coeficient Determination

Variable	R-Square
Intention to Use	0.767

Source: own elaboration in SmartPLS (2022).

Table 5 shows the coefficient determination results that measure the suitability of the applied model or the magnitude of the degree of closeness of the relationship between the selected variables. The value of the coefficient determination is from nol to one. If a value is generated close to one, the independent variable provides the main part of the information required to judge the dependent variable (Ghozali, 2014). Based on table 5 above, an R-Square value of 0.767 or 76.7% was generated. The coefficient of determination test defines independent variables provide 76.7% of intention to use. It shows these variables significantly role for traditional market MSMEs in Semarang City in using QRIS.

Discussion

First, this study's findings suggest a positive and significant influence between product knowledge and intention to use. The high level of a person's understanding of a product or service can be a crucial factor in determining the intention of its use, where someone will always try to understand a new product before using it (Ezeh & Nwankwo, 2018). Likewise, MSMEs will first consider what will be obtained from its use before deciding to use the QRIS. A person's knowledge of an object plays a vital role in decision-making. Namely, the more knowledge they have, the more careful a person will be in determining their decisions, especially in determining the use or adoption of technology. In addition, an individual with high knowledge of the product will have a better memory of recognition, analysis, and logical abilities than someone knowledgeable. The survey results show that MSMEs are interested in using QRIS because they have sufficient knowledge related to attributes, benefits, and also satisfaction values for the QRIS technology. Where knowledge of the benefits of QRIS is the most dominant indicator in determining its use. So, product knowledge owned by MSMEs related to QRIS will play a role in influencing the intention of using QRIS.

The results of this study support several previous studies that have been carried out by Arifiyanto & Kholidah (2021), Ezeh & Nwankwo (2018), and Sari *et al.* (2021), which stated that product knowledge has a positive and significant effect on the intention to use.

Second, perceived usefulness has a positive and significant effect on the intention to use, according to this study. This finding fits with the conclusions of research that have conducted by Altin Gumussoy *et al.* (2018), Le *et al.* (2022), Mahyuni & Setiawan (2021), Ming & Jais (2022), Pillai *et al.* (2020), and Kasilingam (2020). Perceived usefulness is an essential factor affecting MSMEs' intention to use QRIS. An individual's assessment of the quality of a product or service, especially related to technology, will largely determine its usefulness. Namely, if these MSMEs do not consider QRIS better and superior to cash payments, then merchants will not consider digital payment technology helpful. Thus, MSMEs are interested in using QRIS because they feel the benefits that are in accordance with the criteria for the effectiveness of its usefulness to help complete buying and selling transactions. In addition, merchants also realize that QRIS can help complete payment transactions quickly, can improve sales performance and productivity, and become an alternative payment method that is appropriate to reduce physical contact and get used to cashless.

Third, the results of this study prove that perceived ease of use positively and significantly impact intention to use. This result follows the findings of Ezeh & Nwankwo (2018), Le *et al.* (2022), Mahyuni & Setiawan (2021), Ningsih *et al.* (2021), Pillai *et al.* (2020), and Harryanto *et al.* (2018), namely the higher the level of perceived ease that a person feels can increase the intention of its use. Perceived ease of use is also crucial in influencing the intention to use QRIS for MSMEs. Based on the surveys, MSMEs need to know that

QRIS is easy to use. Like MSMEs, they are more inclined to use QRIS because they consider it a technology that is user friendly, easy to operate, easy to control, and not too complicated to operate. The indicator that dominates its use the most is the ease factor in learning its operation, so it is very easy for traders to become skilled in using QRIS. Therefore, MSMEs think using QRIS in payment transactions will make it easier than paying in cash.

Lastly, this research found that perceived risk negatively and significantly influences the intention to use. Perceived risk is considered an obstacle in creating a person's intention to use a product or service, especially certain technologies. Perceived risk can affect user trust, impacting the intention to use it. The greater a person's perceived risk of technology, the smaller the level of intention to use it, and vice versa. To the results of the survey that has been conducted, in general, MSMEs still feel concerns about the security system on QRIS, which is not strong enough to protect personal accounts and can even cause problems in financial transactions. In addition, they think that the use of QRIS still poses risks in payment transactions, so it is still the main factor that can prevent merchants from using it. The decision of this study was sustained by Altin Gumussoy *et al.* (2018), Japar *et al.* (2020), Le *et al.* (2022), Saputri (2020), Sari *et al.* (2021), and Alalwan *et al.* (2018). They confirmed that perceived risk significantly negatively affected the intention to use.

Conclusion

This study has defined several factors influencing the intention of using QRIS for traditional market MSMEs in Semarang City. Based on the tests, statistical results support the conceptual model by predicting 76.7% of the variance in the intention of use. It shows that product knowledge, perceived usefulness, perceived ease of use, and perceived risk have a

significant role for traditional market MSMEs in Semarang City using QRIS, where perceived usefulness is the most dominating factor. These results emphasize that the higher the level of product knowledge, perceived usefulness, and perceived ease of use felt by MSMEs, the higher their intention to use QRIS. Meantime, the higher the perceived risk felt by MSMEs can reduce their intention to use QRIS. It is because MSMEs still feel concerns about the security system on QRIS, which is not strong enough to protect personal accounts and can even cause problems in their financial transactions.

This research has implications for MSMEs or Bank and non-bank financial institutions that will or are developing and using QRIS to take the right policies related to digital payments. By understanding the factors that shape the intentions of MSMEs in using QRIS, a more effective strategy is expected to be formulated to use QRIS by MSMEs further. For MSMEs in traditional markets as QRIS users, they should go deeper into the QRIS usage system so that it can be used for digital payments and avoid various risks related to QRIS account security. Furthermore, it is hoped that the QRIS organizers can provide massive education to MSMEs to understand QRIS as a whole better. Moreover, being able to focus more on improving the privacy of user information can help in reducing risks and lead to the intention to use it.

Researchers realize that the results of this study are far from perfect. For further research, it is hoped that it can add other external factors to the intention of using QRIS. Additionally, researchers can add some samples to the study in the city market and more thoroughly in the traditional regional market. With these samples, whether digital payments with QRIS can be applied thoroughly to MSMEs in traditional markets will be increasingly seen. It is hoped that the results found will be much better.

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