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The Influence of Payment System with Quick Response Code Indonesia Standard [QRIS] Based on Technology Accepted Model [TAM] Toward MSMEs Performance

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ABSTRACT: The study aims to see the effect of QR code payment adoption on the financial performance of MSMEs in Bekasi City, as well as to identify factors and indicators that influence MSMEs in adopting QR Codes. The research method is quantitative with Partial Least Squares Structural Equation Modeling (PLS-SEM) analysis techniques. The results of the study show that technology factors, namely Perceived Usefulness, Perceived Ease of Us, Relative Advantage have a positive and significant effect on QR adoption, organizational factors, namely Top Management Support, have a positive and significant effect on QR adoption, environmental factors, namely competitive pressure, are not significant on QR adoption, and QR Adoption has a positive and significant effect on Financial Performance in MSMEs in Bekasi City. These findings suggest that technological readiness and internal organizational support play a crucial role in the adoption of digital payment technologies. This research contributes to a better understanding of digital transformation in MSMEs and offers recommendations for stakeholders to enhance financial performance through the strategic implementation of QR-based payment systems.

KEYWORDS: Adoption QR, Financial Performance, (TOE) Framework, SEM, Smart-pls 4.0

INTRODUCTION

The development of technology in the digitalization era has brought significant impacts in various aspects. Technological advances contribute to the growth of the digital economy. The rapid development of the technology industry forces people to be more familiar with digital financial transaction activities, one of which is when making payment gateway transactions (Nur Sarfiah et al., 2019). From transactions that were originally carried out with cash, there has now been rapid development with the existence of digitally integrated payment methods, such as the use of QR codes, which provide convenience for individuals in making transactions. Rapid developments in the technology industry sector encourage people to become more familiar with digital financial transaction activities (Financial Technology / Fintech). (Saputri, 2020)

Based on the official website of the Ministry of Communication and Information (Kominfo), it is explained that digital transformation is an important thing to implement in Indonesia in improving the performance and productivity of MSMEs.

Micro, Small and Medium Enterprises or called MSMEs in Indonesia have an important and strategic role in the sustainability of economic movements in Indonesia. This is due to the existence of a large number of industries in each economic sector, great potential in creating jobs, and the dominant contribution of MSMEs to the formation of Gross Domestic Product (GDP) (Nur Sarfiah et al., 2019).

In addition, one indicator of the success of a region or area is in terms of the economy (Wilfarda et al., 2021). Economic growth can be measured through an increase in the number of entrepreneurs, which usually starts from micro and small businesses and then develops into large businesses (Fahrudin & Lailatul Isnaini, 2023). MSMEs are spread in large numbers throughout Indonesia, so they play a good role in creating jobs. In addition to the potential possessed by MSMEs, there are several advantages, such as technological innovation that can be easily applied, orientation to local resources to optimally utilize potential and strengthen independence, ability to create a significant number of jobs, flexibility in adjusting quickly to market conditions (Wardhani et al., 2023).

With the development of Quick Response (QR) Code payment technology for MSMEs today, of course, it makes it easier for

consumers to pay to businesses, but there are rates for businesses in each transaction determined by Bank Indonesia. With deductions in every transaction, as a business actor must think about it. The development of QRIS is directed to support financial inclusion, including empowering MSMEs, and supporting the acceleration of national economic recovery (Wardhani et al., 2023). Through the use of QRIS, it is hoped that it can significantly affect the increase in productivity of MSMEs in Indonesia, both in terms of transactions and nominal sales, profits and cost efficiency (Sulistyaningsih & Hanggraeni, 2021). Payment gateaway-based Fintech MSMEs that use QRIS during transactions have a significant positive effect on MSME financial performance (Octavina & Rita, 2021).

In assessing the extent to which a technology is accepted by users, one approach used is the Technology Acceptance Model (TAM). TAM can be used to predict and explain how someone accepts information technology. This model is influenced by two main factors, namely Perceived Usefulness (user perceptions of the benefits of technology) and Perceived Ease of Use (ease of using technology) (Davis, 1980).TAM, introduced by Davis, is considered a very effective model in explaining new technology acceptance behavior, especially in the context of digital technology adoption (Najib & Fahma, 2020).

In the acceptance of QRIS adoption, in addition to the Perceived Usefulness and Perceived Ease of Use variables, there are other variables that can affect the use of QRIS and the financial performance of MSMEs. These variables are Relative Advantage, Top Management Support, and Competitive Pressure which are models of Technology-Organization-Environment (TOE). This TOE Framework model is a concept of technology acceptance at the firm level, which investigates three main influences on the potential for technology acceptance or adoption of technological innovation. Factors that influence the adoption of Quick Response are; Technology, Organizational, Environmental.

LITERATURE REVIEW AND HYPOTHESIS

Technology Acceptance Model

The Technology Acceptance Model (TAM) is a theory that is often used for research in the acceptance of a technology. The Technology Acceptance Model (TAM) belief is a theory that can be used as the basis for the development of empirical studies regarding the readiness to use new technology. Until now, the Technology Acceptance Model (TAM) theory is considered the most relevant theory in predicting the desire and readiness to adopt a technology. TAM can provide predictions of a person's acceptance of information technology. The theory developed by Davis is based on the Theory of Reasoned Action (TRA), which suggests that social behavior is motivated by attitudes and intentions to perform. (Davis, 1980)

However, this basic TAM model can be modified according to the purpose or interests of a study but does not leave the basic form (framework) of TAM. The TAM framework is the user's perception of the ease of using technology (Perceived Ease of Use), the user's perception of the usefulness / usefulness of technology (Perceived Usefulness), the user's attitude / behavior towards using technology (Behavioral Intention To Use), and actual usage (Actual System Usage) (Davis, 1980).

TOE Framework

Tomatzky and Fleischer (1990) introduced a model that addresses the relationship between technology, organization, and environment, known as the Technology-Organization-Environment (TOE) Framework. This model is a concept of technology acceptance, which investigates three main influences on the potential acceptance of technology or the adoption of technological innovations, namely the technological factors themselves, organizational structure, and environmental conditions around the company. (Louis G. Tornatzky & Mitchell Fleischer, 1990)

The TOE framework is an organizational-level theory that explains that three different elements of the firm context influence adoption decisions. The three elements are technological context, organizational context, and environmental context. All three are considered to influence technological innovation (Baker, 2012). The three key contexts of the TOE framework are technological context, organizational context, and environmental context. The technological context includes the current technology as well as the suitability of the latest technological innovations relevant to the organization. The organizational context is related to the dimensions and scope of the organization. The environmental context refers to the area in which the company operates in carrying out its business activities (Handayani & Mahendrawathi, 2019).

There are several reasons why the TOE framework was chosen as the theoretical foundation supporting this research. First, the TOE framework is very suitable for understanding the adoption process in the context of MSMEs. Second, TOE has a clear theoretical basis and consistent empirical support. Third, TOE is in line with other organizational-level Information Technology Innovation theories, which strengthens and enhances the reliability of this framework. Fourth, TOE is considered a comprehensive framework, so it can be widely applied to understand information technology adoption. Fifth, the three contexts in TOE (technology, organization, and environment) provide advantages over other adoption models, as TOE provides a thorough insight

into the factors that influence information technology adoption decisions (Handayani & Mahendrawathi, 2019).

QR Code

QR Code systems have gained popularity due to their ability to be read quickly and have greater storage capacity when compared to standard barcodes. A QR Code, or Quick Response, is a type of matrix barcode that can be interpreted by a specialized QR code reader or mobile phone through a high-resolution camera. The sophistication of QR codes is high because the scanned data is displayed vertically and horizontally according to programming instructions. QR Code can also store more information compared to barcodes, and uses the Reed-Solomon Code algorithm to reduce the possibility of errors. (Roni Habibi et al., 2020)

QRIS is a code-based payment system standard developed by Bank Indonesia and ASPI in 2019. QRIS is a combined representation of various types of Payment System Service Providers (PJSPs), using one single QR code, as explained by Bank Indonesia in 2020. In its implementation, QRIS sets two types of fees charged to merchants, namely MDR (Merchant Discount Rate) fees and settlement fees. The MDR fee, with an amount of 0.7%, is a fee borne by the merchant and imposed by the organizer. On the other hand, the settlement fee is a fee for disbursing funds to the merchant's account, according to the information disclosed in the QRIS document in 2020. QRIS, or the Indonesian QR standard, is an integrated digital payment solution that facilitates transactions using QR codes from various digital wallets and financial institutions, as described by Bank Indonesia in 2023.

Financial Perfomance

The performance of an organization, such as MSMEs, refers to the extent to which they achieve their pre-set goals. Assessing MSME performance often involves evaluating marketing, financial, and human resource performance. Common indicators for assessing MSME performance include significant sales growth, increased number of customers, achievement of sales targets, expansion of marketing reach, and increased profits (Darmanto et al., 2019). Financial performance evaluation is a way to measure the financial health of a company by looking at its ability to generate profits. Stable financial performance can attract investors to invest in the company, so maintaining financial stability is one of the top priorities for companies. (Putri & Sungkono, 2023)

The financial performance of a company is closely related to the overall assessment of the company's health. Healthy companies usually have good performance, both in terms of finance and management. Every profit-oriented company will certainly always pay attention to their financial performance, because this is very important to maintain public trust and financial institutions in raising funds (Rengganis et al., 2020). Analyzing the financial performance of MSMEs can also help business people formulate financial goals, gain an understanding of their business performance, and recognize opportunities to increase revenue (Putri & Sungkono, 2023).

Small and Medium Enterprises (SMEs)

The development and growth of MSMEs in Indonesia continues to be positive from year to year. Almost every administration emphasizes the importance of MSME empowerment, with the government paying serious attention to this sector. The reason is that MSMEs act as a major provider of labor, especially as large enterprises tend to focus more on the use of technology rather than human labor. MSMEs have an important role as stabilizers and dynamizers in the Indonesian economy. As a developing country, Indonesia recognizes the need to pay attention to MSMEs as this sector has better performance in generating productive labor, increasing productivity, and can exist amidst large enterprises. MSMEs also support large enterprises by providing raw materials, spare parts, and other support. In addition, MSMEs spearhead the distribution and sale of products from large businesses to consumers (Nur Sarfiah et al., 2019).

Effect of Perceived Usefulness on QR Adoption

Behavioral Intention according to (Davis, 1980) Behavioral intention to continue using a technology is influenced by perceptions of its usefulness and ease of use, according to the Technology Acceptance Model (TAM). (Davis, 1980) states that Perceived usefulness provides a decision for someone to utilize technology-based applications, and is influenced by the belief that this technology will make work easier. Perceived usefulness describes how the company's perception can improve the usefulness and performance of its technology, and shows that the perceived usefulness of technology has a significant influence on individual adoption and use (Najib & Fahma, 2020). In the characteristics of QRIS, perceived usefulness can be interpreted as “Universal,” that is, QRIS is able to accept payments from any application that uses QR codes. In addition, QRIS is considered “Easy” because users only need to scan and click pay (Wardhani et al., 2023). Users and businesses are considered easy to apply QRIS for payment methods. Therefore, the hypothesis is formulated as follows:

H1: Percived Usefulness has a positive effect on QR Adoption by MSMEs in Bekasi City.

Effect of Perceived Ease of Us on QR Adoption

Davis states that Perceived ease of use is a perception that is formed when someone decides to use technology, taking into account whether the technology is difficult and requires great effort in its application (Davis, 1980). This variable affects a person's tendency to use or not use technology- based applications. Technology products that are easy to use can improve work quality and provide benefits to users (Wardhani et al., 2023). For MSMEs, perceived ease of use means that they adopt digital technology because they feel that the technology offers convenience, comfort, and usability that can make their work easier (Najib & Fahma, 2020). For merchants, the easy registration process and how to transact with QRIS which is clear and quickly understood make them more interested in using QRIS. Therefore, the hypothesis is formulated as follows:

H2: Percived Ease of Us has a positive effect on QR Adoption by MSMEs in Bekasi City

Effect of Relative Advantages on QR Adoption

In the context of technology, the term includes both internal and external technologies, involving both equipment and processes. It also includes both current and legacy technologies that have relevance to the organization (Rogers, 1995). When the perceived benefits of using Information Technology are greater, the positive impact on the adoption of Information Technology by users also increases. Information Technology can also be a determining factor in assessing the extent to which technology adoption is considered compatible with the organization's pre-existing values, beliefs, habits, and experiences. This can have a positive impact on an organization. Therefore, the hypothesis is formulated as follows:

H3: Relative Advantages have a positive effect on QR Adoption by MSMEs in Bekasi City

Effect of Top Management Support on QR Adoption

Organization involves the act of organizing an entity to understand the needs of the organization, allowing it to keep up with advances in technology and science, which in turn is expected to improve performance. Top Management Support can provide decisions, support the vision/mission, provide motivation, determine the direction of movement of the company, and provide other supporting facilities. Based on this, the hypothesis is formulated as follows:

H4: Top Management Support has a positive effect on QR Adoption by MSMEs in Bekasi City

Effect of Competitive Pressure on QR Adoption

The environmental context is related to the industry sector, competitive regulations, and regulatory issues that refer to industry considerations and support from the government. The role and utilization of Information Technology in an organization can be influenced by the actions of the organization's management. Organizational management can also create competitive pressures from competitors that influence the adoption and utilization of Information Technology, with the aim of competing more effectively in serving consumers. Thus, the hypothesis is formulated as follows:

H5: Competitive Pressure has a positive effect on QR Adoption by MSMEs in Bekasi City

The Effect of QR Adoption on MSME Financial Performance

In addition to identifying the adoption of QRIS in MSMEs, this study also examines its impact on Financial Performance in MSMEs. Research related to QRIS adoption and its effect on MSME performance is still very limited. Research on mobile payment services shows positive results and has an impact on the performance of SMEs. The application of mobile payment services can reduce cash transaction processing costs, increase sales, speed up the purchase process, and enable payments to anyone and anywhere (Kwabena et al., 2019), And research on payments using QRIS concluded in the results of his research that the application of QRIS through payment services using the DANA application by MSMEs has a positive impact on their business income in Kraksaan District (Fahrudin & Lailatul Isnaini, 2023).And also research on Behavioral Intention, namely the use of QRIS has an effect on Financial Performance (Wardhani et al., 2023).Behavioral Intention to use the framework of the Technology Acceptance Model (TAM) on Actual System Use, Behavioral Intention to use in this study is the adoption of Quick Response on Financial Performance. Therefore, the researcher formulates the following hypothesis:

H6: QR adoption has a positive effect on Financial Performance by MSMEs in Bekasi City

RESEARCH METHODOLOGY

This research According to (Sugiyono, 2018) the sample is part of the overall population and has the same characteristics as the population. Overall population and has the same characteristics as the population. In other words, a sample is a method used in research to take part of the population to be studied. In this study, the sampling method used was Non-probability sampling with Purposive sampling technique. Sampling with Purposive sampling technique. (Sugiyono, 2018) explains that Non-probability sampling is a sampling technique in which not all members of the population have the same opportunity to be selected as

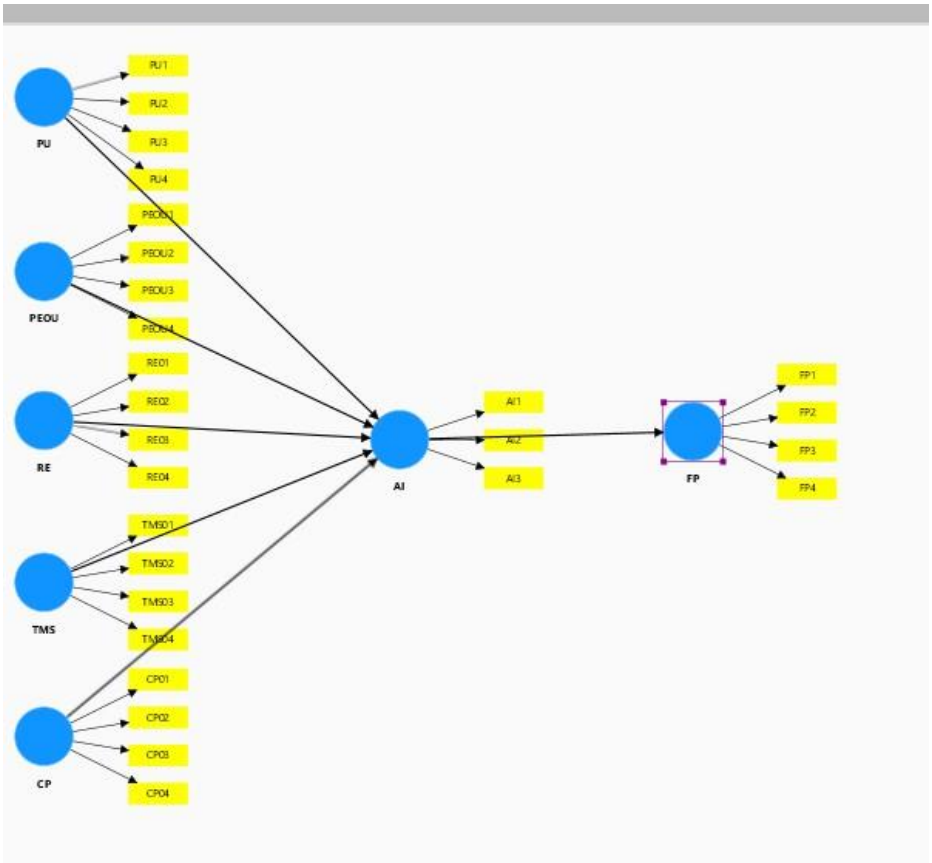
the sample. Population have the same opportunity to be selected as a sample. Meanwhile, Purposive sampling, according to (Sugiyono, 2018) is a sampling technique based on certain considerations in accordance with the criteria set, to determine the number of samples to be studied.

The population in this study are Bekasi City MSMEs that have used Quick Response Code as a payment method. Based on information obtained from the opendata.jabarprov.go.id website, Bekasi City MSMEs have always increased every year. Based on this information, it is known that the total population of Bekasi City MSMEs in 2023 is 309116 MSMEs.

In the context of quantitative methods, surveys are the most commonly used method. Surveys use questionnaires as a data collection tool that will later be processed into relevant information. The questionnaire was created with Google Forms which was distributed offline, namely by interacting directly with respondents in order to get accurate targets. In the study, a Likert scale of 1 to 4 was used. The number 1 indicates that the respondent strongly disagrees with the statement, while the number 4 indicates strongly agrees. The use of a scale of 1 to 4 aims to make respondents more directed in determining their perceptions and not hesitate (Lijan P. Sinambela & Sarton Sinambela, 2021).

RESULTS AND DISCUSSION

Analysis Framework Using SmartPLS



Results of Outer Model

1. *Loading Factor*

Table 1 loading factor test results

	Factor Loading (>0,7)
AI1	0,890
AI2	0,792
AI3	0,892
CP01	0,893

CP02	-
CP03	0,809
CP04	0,813
FP1	0,929
FP2	-
FP3	0,804
FP4	0,843
PEOU1	0,841
PEOU2	0,800
PEOU3	-
PEOU4	0,925
PU1	0,874
PU2	-
PU3	-
PU4	0,925
RE01	0,897
RE02	-
RE03	-
RE04	0,895
TMS01	0,926
TMS02	-
TMS03	0,820
TMS04	0,856

These results with 19 indicators are declared valid, because they have a factor loading value of more than 0.7. Therefore, the data can be continued for research.

2. *Cronbach Alpha (CA) and Composite Realibilty (CR) test*

Table 2 CA & CR Test

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)
AI	0,787	0,794	0,876
CP	0,789	0,788	0,877
FP	0,841	0,844	0,904
PEOU	0,817	0,819	0,892
PU	0,704	0,704	0,871
RE	0,754	0,754	0,891
TMS	0,836	0,838	0,902

The Cronbach's Alpha and Composite Reliability values must exceed 0.7. If the result is more than 0.7, this indicates that the research construct is internally acceptable and has an adequate level of reliability. The table above shows that the Cronbach's Alpha and Composite Reliability values are accepted and have a good level of reliability, because each variable has a value above

0.7.

3. *Average Variance Extracted (AVE)*

Table 3 AVE Test

	Factor Loading (>0,7)	Average variance extracted (AVE)
AI1	0,890	0,702
AI2	0,792	
AI3	0,892	
CP01	0,893	0,705
CP03	0,809	
CP04	0,813	
FP1	0,929	0,760
FP3	0,804	
FP4	0,843	
PEOU1	0,841	0,734
PEOU2	0,800	
PEOU4	0,925	
PU1	0,874	0,771
PU4	0,925	
RE01	0,897	0,803
RE04	0,895	
TMS01	0,926	0,754
TMS03	0,820	
TMS04	0,856	

It can be seen from the table above that all AVE values of each variable have a value greater than 0.5. So, it can be said that all variables are eligible for use and there are no problems in the AVE test.

4. *Discriminant Validity (Fornell-Lacker's Criterion & Cross Loading) Fornell-Lacker's CriterionTesting*

Table 4 Fornell-lacker's test

	AI	CP	FP	PEOU	PU	RE	TMS
AI	0,838						
CP	0,744	0,839					
FP	0,828	0,730	0,872				
PEOU	0,816	0,739	0,843	0,857			
PU	0,749	0,807	0,745	0,668	0,878		
RE	0,707	0,804	0,659	0,620	0,798	0,896	
TMS	0,771	0,691	0,817	0,856	0,653	0,539	0,868

Testing of the Fornell-Lacker's criterion is done by comparing the square root value of the AVE of each latent variable. Fornell-Larcker has a condition that the correlation between the variable and itself must be higher than the correlation of the variable with other variables. The results of this second run are successful, because the correlation between variables with their own variables is greater than with other variables.

Cross Loading Test

Table 5 Cross Loading Test

	AI	CP	FP	PEOU	PU	RE	TMS
AI1	0,890	0,580	0,796	0,737	0,628	0,553	0,694
AI2	0,792	0,682	0,682	0,661	0,619	0,623	0,641
AI3	0,829	0,614	0,588	0,648	0,639	0,608	0,596
CP01	0,589	0,893	0,597	0,550	0,727	0,728	0,510
CP03	0,656	0,809	0,660	0,682	0,629	0,583	0,646
CP04	0,619	0,813	0,574	0,616	0,677	0,716	0,572
FP1	0,731	0,638	0,929	0,759	0,610	0,557	0,743
FP3	0,764	0,637	0,840	0,742	0,709	0,599	0,727
FP4	0,661	0,633	0,843	0,698	0,622	0,566	0,658
PEOU1	0,686	0,566	0,713	0,841	0,475	0,482	0,738
PEOU2	0,686	0,709	0,698	0,800	0,701	0,646	0,647
PEOU4	0,724	0,624	0,753	0,925	0,541	0,470	0,811
PU1	0,648	0,697	0,663	0,609	0,874	0,628	0,590
PU4	0,667	0,721	0,646	0,564	0,882	0,772	0,558
RE01	0,636	0,700	0,603	0,518	0,768	0,897	0,451
RE04	0,630	0,741	0,578	0,594	0,662	0,895	0,515
TMS01	0,658	0,591	0,714	0,785	0,527	0,377	0,926
TMS03	0,636	0,637	0,643	0,651	0,609	0,537	0,820
TMS04	0,707	0,573	0,764	0,785	0,565	0,490	0,856

The results of the Cross Loading are good, each indicator of a construct is greater than the other constructs. In this study, the discriminant validity test is seen from the cross loading value and the fornell-larcker criterion value. Where the criteria used for cross loading and fornell-larcker criterion are that the correlation value of the variable with the indicator is greater than the other variables so that it can be said to be valid and the expected cross loading value is greater than 0.70.

Inner Test Results

1. R Square

Table 6 R Square

R Square			
	R-square	**R-square adjusted**	**Keterangan**
AI	**0,761**	**0,751**	**Strong**
FP	**0,685**	**0,683**	**Moderate**

The R Square value, which ranges from 0 to 1, reflects the strength of the model in explaining variations in the data; the higher the R Square value, the better the model is at predicting and explaining changes in the dependent variable. The relationship is considered weak if the R square value is less than or equal to 0.25, considered moderate if the value is 0.50, and considered strong if the R square value ranges from 0.75 to 1.

The results of the R square for AI or Quick Response adoption are strong because it has an R square value of 0.751, which means it is above 0.75, and FP or Financial Performance is considered moderate because it has an R square value of 0.685, which means it is below 0.75 but above 0.25.

2. F-square (the effect size)

Table 7 F Square

	F Square	Keterangan
PU -> AI	0,047	Small
PEOU ->AI	0,140	Moderate
RE -> AI	0,047	Small
TMS -> AI	0,042	Small
CP -> AI	0,000	No Effect
AI -> FP	2,176	Large

In the results above, Perceived Ease of Use has a moderate effect on AI or Quick Response adoption because it has a value around 0.15. Furthermore, Perceived Usefulness, Top Management Support, Relative Advantage have a small effect on AI or Quick Response adoption because they have a value around 0.02. While Competitive Pressure, does not have any effect on Quick Response adoption because it has a value below 0.002. After that, for AI or adoption Quick Response on FP or Financial Performance has a large effect.

3. Q^2 *(predictive relevance)*

The provisions of this test if the value of Q2> 0 means that the model has predictive relevance so that the value has been well reconstructed. Conversely, if Q2 < 0 means that the model does not have predictive relevance. Predictive relevance is calculated using the formula Q2 = 1 - (1-R12) (1- R22) (1-RP2), The results of the calculation as per the formula are: Q2 = 1 - (1-0,751)(1-0,683) =

0,921. The results of the calculation of the value of Predictive Relevance in this study are 0.921 or 92.1%. This shows that the model in this study has been constructed and has good predictive relevance.

Path Coefficient

Hypothesis Results

Table 8 Path Coefficient

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Keterangan
AI -> FP	0,828	0,823	0,042	19,603	0,000	Diterima
CP -> AI	-0,012	-0,01	0,092	0,132	0,895	Ditolak
PEOU -> AI	0,389	0,385	0,092	4,243	0,000	Diterima
PU -> AI	0,205	0,206	0,087	2,362	0,018	Diterima
RE -> AI	0,202	0,201	0,080	2,517	0,012	Diterima
TMS -> AI	0,203	0,204	0,086	2,360	0,018	Diterima

1. *Hypotehesis testing (Bootstrapping)*

The results of hypothesis testing show that of the six hypotheses tested, five hypotheses are accepted and one hypothesis is rejected. The first, second, third, fourth, and sixth hypotheses, which respectively test the effect of Perceived Usefulness, Perceived Ease of Use, Relative Advantage, and Top Management Support on Adoption Intention as well as the effect of Adoption Intention on Financial Performance, are proven significant with t-statistic values above 1.96 and p-values below 0.05. In contrast, the fifth

hypothesis that examines the effect of Competitive Pressure on Adoption Intention is rejected because the t-statistic value is below 1.96 and the p-value is above 0.05, indicating that Competitive Pressure has no significant effect and even has a negative effect on Adoption Intention in the use of QRIS.

2. *T-Statistic (Bootstrapping)*

The T test using the bootstrapping method with a one-tailed test and a significance level of 5% shows that most of the hypotheses tested are valid. Perceived Usefulness, Perceived Ease of Use, Relative Advantage, Top Management Support, and Adoption Intention on Financial Performance have t-test values of 2.362, 4.243, 2.517, 2.360, and 19.603, respectively, all of which are greater than 1.96. In contrast, Competitive Pressure on Adoption Intention has a t-test value of 0.132, which is smaller than 1.96, so it is declared invalid. This shows that all factors, except Competitive Pressure, have a significant effect on Adoption Intention and Financial Performance in using QRIS.

Perceived Usefulness (PU) has a significant positive effect on Adoption Intention (AI) in using QRIS (H1)

The model evaluation results above show that the relationship between perceived usefulness and adoption intention is significant, with a t-statistic value of 2.362 which is greater than 1.96 and a p- value of 0.018 which is smaller than 0.05. This relationship also has a positive effect of 0.828, as indicated by the original sample value. This finding is in line with the theory (Davis, 1980) which states that the decision to use a technology application is influenced by the usefulness of the application. The findings of this study are also in line with findings related to digital payments that the perceived usefulness of technology significantly influences a person to adopt and use this technology (Najib & Fahma, 2020) and research related to QR Codes in MSMEs also shows a positive effect that the perceived usefulness of technology affects behavioral intention (Wardhani et al., 2020) and research related to mobile payment, 2023) and research related to mobile payments also shows a positive effect that the usefulness of technology has an effect on merchants to adopt the use of digital payments (Altwairesh & Aloud, 2021) In the context of using QRIS, the results show that microbusiness owners are now starting to see digital payment technology as an easy and practical alternative. In addition, the use of QRIS eliminates the need for merchants to provide change. By supporting the digitalization program in Indonesia, the convenience offered by this technology can increase the interest of micro business owners to use QRIS.

Perceived Ease of Us (PEOU) has a significant positive effect on Adoption Intention (AI) in using QRIS (H2)

The model evaluation results indicate that the relationship between perceived ease of use and adoption intention is significant, as evidenced by a t-statistic of 4.243, which exceeds the threshold of 1.96, and a p-value of 0.000, which is below 0.05. This relationship demonstrates a positive influence of 0.389, as indicated by the original sample value. These findings align with Davis's theory, which posits that perceived ease of use arises when an individual considers the adoption of technology while also assessing its complexity and the effort required for implementation (Davis, 1980). Furthermore, this study corroborates previous findings related to digital payment adoption among SMEs, suggesting that these businesses embrace digital technology due to its perceived ease, convenience, and utility in streamlining operations (Najib & Fahma, 2020). Specifically, in the context of QRIS, the research indicates that micro- business owners are inclined to adopt this payment system due to its ease of use. The straightforward registration process and the clear, easily comprehensible transaction methods can significantly enhance micro-enterprises' intentions to utilize QRIS.

Relative Advantages (RE) has a significant positive effect on Adoption Intention (AI) in using QRIS (H3)

The results of the model evaluation show that the relationship between Relative Advantage and Adoption Intention shows a significant value seen from the t-statistic value of 2.517> 1.96 and a p-value of 0.012 <0.05, and has a positive effect of 0.202 as indicated by the original sample value. This is in line with the theory (Louis G. Tornatzky & Mitchell Fleischer, 1990) explaining that technological innovation, especially adopting and implementing technology in three different contexts: technology, organization, and environment becomes a decision making, and also the Diffusion of Innovation theory (Rogers, 1995) emphasizes the positive relationship between Relative Advantage and mobile payment adoption, especially in improving performance and time efficiency. These results are in line with the findings related to SME traders in Surakarta City who perceive high relative advantage to be able to improve their business performance through effectiveness and time efficiency, which encourages the continued adoption of mobile payments in their operations. This conclusion emphasizes the importance of perceived benefits in driving the adoption of QRIS payment technology among SMEs.

Top Management Support (TMS) has a significant positive effect on Adoption Intention (AI) in using QRIS (H4)

The results of the model evaluation show that the relationship between Top Management Support and Adoption Intention shows a significant value seen from the t-statistic value of 2.360> 1.96 and a p-value of 0.018 <0.05, and has a positive effect of 0.203 as indicated by the original sample value. The results of this study are in line with research (Urumsah et al., 2022) that company leaders

or top management have an important role in providing the support and facilities needed to adopt Fintech. Also, in line with (Priyanto et al., 2020) that the greater the support from top management, the more the adoption of e-marketing by culinary SMEs in Bogor City will increase. This is because support from top management is a major factor in driving e-marketing adoption, and all activities carried out by SMEs are directed and regulated by top management. This conclusion emphasizes that Top Management Support can support the vision/mission, provide motivation, determine the direction of movement of the company, and provide other supporting facilities. They also have the authority to make the right decisions and provide ideas that contribute to the successful adoption of QRIS in SMEs.

Competitive Pressure (CP) has a significant positive effect on Adoption Intention (AI) in using QRIS (H5)

The results of the model evaluation show that the Competitive Pressure relationship with Adoption Intention shows an insignificant value seen from the t-statistic value of 0.132 < 1.96 and a p-value of 0.895> 0.05, and a negative -0.012 indicated by the original sample value. This research is not in line with what was conveyed by previous researchers (Priyanto et al., 2020) regarding the adoption of E-Marketing in SMEs in Bogor City, but in line with research (Gui et al., 2020) related to Cloud Computing adoption using the TOE Framework in MSMEs in Indonesia the results of the hypothesis with the Competitive Pressure variable are not significant. The conclusion from the hypothesis results shows that in MSMEs in Bekasi City, competitive environmental factors do not improve performance, and environmental pressure also does not influence organizations to adopt new technologies.

Adoption Intention (AI) has a significant positive effect on Financial Perfomance (FP) in using QRIS (H6)

The results of the model evaluation show that the relationship between adoption intention in using QRIS and financial performance shows a significant value seen from the t-statistic value of 19.603> 1.96 and a p-value of 0.000 <0.05, and a positive effect of 0.828 as indicated by the original sample value. The results show that hypothesis six is accepted. These results are in line with research related to mobile payment services that show positive results and have an effect on the performance of SMEs which can reduce cash transaction processing costs, increase sales, speed up the purchasing process and enable payments to anyone and anywhere (Kwabena et al., 2019). And also in line with research related to behavioral intention in the use of QRIS has a significant positive effect on Financial Performance (Wardhani et al., 2023). The research findings are also in line with research related to the influence of technology, organization and environment on QRIS adoption which can improve the performance of MSMEs (Sulistyaningsih & Hanggraeni, 2021).

In this study, the adoption intention of the payment QR code, namely QRIS, can have an influence on the financial performance of MSMEs of 0.828. The effect of using QRIS on the financial performance of MSMEs focuses on 4 things, namely the use of sales records which are easier and more accurate because they have combined manual and computerized or digital records, increased number and value of transactions, sales turnover, and business cash flow.

IMPLICATION AND LIMITATION

Implication

The implications of this research explain how the findings obtained can be applied to influence decision-making, deepen understanding of a phenomenon, and direct future research. As such, the implications add value to the research results by demonstrating the relevance and practical application of the findings, as well as their contribution to knowledge and practice in the field concerned. Based on the research results, the implementation of QRIS has significant potential to influence and positively impact the financial performance of micro, small and medium enterprises (MSMEs). In this context, financial performance is closely related to an increase in the number and value of transactions, sales turnover, better cash flow, and more accurate sales recording. This finding shows that micro businesses are increasingly inclined to adopt digital payment technology, given the practical and easy-to-use nature of QRIS. This not only facilitates the transaction process, but also increases the efficiency of business operations, which in turn can boost their business growth and sustainability. As such, QRIS implementation can be considered a strategic move that not only improves financial performance, but also strengthens the position of micro businesses in an increasingly competitive market.

Limitation of the Study and Future Research

This study utilizes TAM and TOE theories with variables such as perceived usefulness, perceived ease of use, relative advantage, top management support, competitive pressure, adoption intention, and financial performance. It is possible that other factors beyond the TAM and TOE constructs, such as promo benefits and moderating variables such as age or gender, may also influence the results, but have not been examined in this study. Therefore, it is recommended to further explore other variables that may be relevant. In addition, the analysis of financial performance in this study is limited to the ease and accuracy of recording sales, as well as increasing the number and value of transactions, sales turnover, and cash flow. Future research is

expected to analyze in more detail the portion of payment transactions using QRIS every day and involve visits and in-depth interviews with MSMEs to obtain more optimal research results.

CONCLUSION AND SUGGESTION

Conclusion

Based on the research analysis of the effect of Quick Response Code (QR) adoption on the financial performance of MSMEs in Indonesia, it can be concluded that QRIS adoption has a significant effect on the financial performance of micro enterprises. This influence is evident in several key aspects, including increased transaction volume and value, sales turnover, cash flow, as well as sales recording accuracy. The research findings show that perceived usefulness has a significant positive role in QR adoption, with a T-statistic of 2.362 and a P-value of 0.018, as well as an original sample value of 0.127. This suggests that when micro businesses find QRIS useful, they are more likely to adopt it. In addition, perceived ease of use has a stronger positive impact on QR adoption, with a T-statistic of 4.243 and P- value of 0.000, along with an original sample value of 0.389. This finding emphasizes the importance of user-friendly technology in driving adoption.

Furthermore, the concept of relative advantage also has a significant effect on QR adoption, as indicated by a T-statistic of 2.517 and a P-value of 0.012, with an original sample value of 0.202. This indicates that when micro businesses realize the advantages of using QRIS over traditional payment methods, they are more likely to adopt it. Similarly, support from top management also has a significant positive effect on QR adoption, with a T-statistic of 2.360 and P-value of 0.018, supported by an original sample value of 0.203, highlighting the role of leadership in facilitating technology adoption. In contrast, competitive pressure was found to have a negative impact on QR adoption, as reflected in a T-statistic of 0.132 and P-value of 0.895, with an original sample value of -0.012. This suggests that high levels of competitive pressure may deter micro businesses from adopting QRIS. Finally, this study shows that QR adoption has a significant positive effect on financial performance, with a T-statistic of 19.603 and P-value of 0.000, and an original sample value of 0.828. This indicates that adopting a QRIS not only improves the operational efficiency of micro businesses, but also contributes to their overall financial success.

Suggestion

From the results of the analysis and conclusions above, there are several suggestions that can be given to various related parties. First, for policy makers and regulators, it is recommended to continue to work together in conducting socialization and digital literacy regarding the use of QRIS as a payment method, so as to improve the financial performance of MSMEs, especially for micro business actors. Information regarding fees charged to business owners also needs to be conveyed in every socialization, as well as providing promo transaction fees that can increase the intention to use QRIS. In addition, regulators and QRIS drivers, together with telecommunications companies, are expected to expand networks and strengthen signals to support micro businesses in conducting digital transactions.

Second, for academics, this research still has shortcomings that need further research. The author hopes that this research can interest future researchers to pay attention to several aspects, such as increasing the number of respondents throughout Indonesia specifically per province and district in order to see the intention to use QRIS in more detail. Research also needs to continue the study of insignificant variables, such as competitive pressure, and expand MSME performance indicators by looking not only from the financial side, but also from overall business performance, including marketing and human resource aspects. In addition, expanding other variables such as promotion that can affect the intention to use QRIS in Indonesia, especially among micro businesses, is also highly recommended.

Finally, for MSME players, self-development and increasing digital literacy are very important. In the digital era and rapid technological advances, the application of digital payment methods has proven to provide significant benefits in improving business performance, especially in terms of financial performance.

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