

Investigating the Factors that Motivate MSME owners in South Tangerang to use QRIS

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ABSTRACT

The focus of this research is the identification and evaluation of factors that influence the use of QRIS as a digital payment tool technology for transactions. MSMEs, especially in South Tangerang, who use QRIS as a digital payment tool are the respondents involved in this research. The research method used in this research is a quantitative research method and the type of research used in this research is descriptive. The population taken is located in the MSMEs in the South Tangerang area, precisely in Pasar Delapan which has 100 restaurants. The Result of the research are Knowledge influences Attitude Toward Using QRIS, Trust has no effect on Attitude Toward Using QRIS, Perceived Ease of Use influences Attitude Toward Using QRIS, Perceived Usefulness has no effect on Attitude Toward Using QRIS, Attitude Toward Using QRIS has no effect on Actual system use of QRIS, Knowledge influences the Actual system use of QRIS, Trust influences the Actual system use of QRIS, Perceived Ease of Use influences the Actual system use of QRIS, Perceived Usefulness has no influences the Actual system use of QRIS, Knowledge and Attitude Toward Using QRIS has no effect on Actual system use of QRIS, Trust and Attitude Toward Using QRIS has no effect on Actual system use of QRIS, Perceived Ease of Use and Attitude Toward Using QRIS has no effect on Actual system use of QRIS and Perceived Usefulness and Attitude Toward Using QRIS has no effect on Actual system use of QRIS

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1. INTRODUCTION

MSMEs (Micro, Small, and Medium Enterprises) play a crucial role in Indonesia's economy, acting as a key sector and stabilizer due to their high workforce involvement and contribution to societal welfare [1]. According to Primiana, MSMEs drive economic movements, and Kwartono Adi defines them as businesses with annual profits not exceeding 200 million rupiahs [1]. Based on

Law Number 20 of 2008, MSMEs are categorized into micro, small, and medium enterprises [1]. Historically, MSMEs demonstrated resilience during the 1997–1998 monetary crisis and continued to thrive, with the Central Statistics Agency reporting a workforce of 107 million in 2012 [2].

That same year, Bank Indonesia found that MSMEs comprised 99.9% of Indonesia's 56.5 million business units, highlighting their economic dominance [2].

Oka Adnyana's research emphasizes MSMEs' ability to withstand global recessions due to their local nature, making them less susceptible to international economic shifts. Meanwhile, Jonathan Mitchell, in Bappenas' 2019 report, stressed the importance of modernizing MSMEs through innovation and digitalization to enhance their global market presence. The increasing role of digitalization in society is thus a key factor in advancing Indonesia's economic growth [3].

Digital payments utilize wireless communication technology and electronic devices to enhance the convenience of accessing products and services [4]. This innovation, driven by Artificial Intelligence and Information Technology, revolutionizes financial transactions by enabling non-cash payments that are practical and efficient, accessible via mobile phones without time or location restrictions [5]. The advancement of digital devices and mobile technology further facilitates digital payment adoption, yet its effectiveness depends on meeting user needs and providing clear benefits [4]. The widespread use of digital payments spans various sectors, including industry, tourism, hospitality, healthcare, and more, significantly impacting user satisfaction and driving transaction growth [4].

The Technology Acceptance Model (TAM) is commonly used to analyze digital transaction adoption from the perspective of perceived benefits and ease of use [4]. One of the most prominent digital innovations in financial services is Financial Technology (Fintech), which integrates financial services with digital technology to transform traditional financial models into automated processes [5].

The emergence of Fintech in the era of Industrial Revolution 4.0 aims to enhance technological development in the financial sector and improve user access to financial services [5]. According to [5], the Fintech ecosystem in Indonesia has been categorized based on data from CNBC Indonesia.

Regarding the Distribution of the Fintech Ecosystem in Indonesia, it can be seen that in Indonesia the category with the most users is the digital payment category with a

percentage of 39% of the total distribution of the fintech business ecosystem in Indonesia [5] followed by Lending which has the second largest number of users with a percentage of 24% [5].

In Indonesia, there is a digital payment facility provided by Bank Indonesia called Quick Response Code Indonesian Standard or commonly called QRIS (pronounced KRIS) (Databoks, 2023). The emergence of QRIS using a QR Code brings together several types of QR from various Payment System Service Providers (PJSP) (Bank Indonesia, 2016).

According to data from Winpay (2024), the percentage of merchants using QRIS categorized by business size in 2024 shows that large companies dominate QRIS adoption, accounting for 65% of the total. Medium-sized companies follow with a 20% share, while small businesses (UKM) represent 9% of users. Meanwhile, micro, small, and medium enterprises (UMKM) form the smallest part, with only 6% of the total merchants utilizing QRIS. This distribution shows that larger enterprises are the primary adopters of QRIS, while smaller businesses have a lower adoption rate.

Despite the increasing adoption of QRIS, especially among larger enterprises, smaller businesses face several challenges in implementing this digital payment system. Issues such as technical difficulties, lack of digital literacy, high transaction fees, unstable internet connections, and limited customer awareness can hinder the smooth adoption of QRIS. These barriers make it difficult for small and micro businesses to fully leverage the benefits of cashless transactions, potentially limiting their competitiveness in the digital economy.

The Chairman of the Indonesian Small Retailers Association (Perpeksi), Wahid, emphasized the need for greater awareness and education for small retail business owners regarding QRIS usage. Currently, many store owners still lack a clear understanding of how to use the system. "Small shop owners and MSMEs need more education because many still do not understand how to use QRIS properly,"

Wahid stated. He shared an example where some of the association's members tried to use QRIS but mistakenly downloaded the wrong version, making it unusable. According to Wahid, many small business owners are still unfamiliar with the correct way to use QRIS, highlighting the need for better guidance and training. This shows there is a lack of knowledge to merchant that unable to use QRIS [6]

Enhancing digital transaction security through QRIS is a crucial priority. As the number of QRIS users continues to grow, cybercriminals may exploit security loopholes within digital payment systems. Fraud risks, such as QR code manipulation or data theft, can be particularly detrimental to MSME owners who may not be fully aware of how to safeguard their transactions. Additionally, QRIS carries significant risks due to the ease of fraud if merchants are not careful in verifying customer payments. Such incidents are quite common, as digital technology is highly susceptible to manipulation. To address this issue, Bank Indonesia and relevant authorities must strengthen regulations and improve QRIS security measures. Additionally, increasing awareness and education on secure digital transaction practices is essential to ensure that both MSME owners and consumers are protected from potential threats. This shows that there is a lack of merchant's trust in QRIS.

A coffee shop business owner in Batamcenter, Batamkota, acknowledged that using the QRIS payment system has both advantages and drawbacks. The main benefit is that it allows customers to pay easily without cash and supports various digital payment methods like mobile banking and e-wallets. However, the main challenge arises when customers face poor network connectivity, often causing transactions to fail and requiring multiple attempts to go through. In some cases, even when a payment appears successful, the funds do not reach the merchant's account, creating significant issues. A similar experience was reported by MSME vendors at a bazaar in Batam, who noted that while failed transactions are not frequent, they still occur occasionally,

potentially harming businesses that have transitioned to digital payments for customer convenience.

Bank Indonesia (BI) introduced a 0.3% service fee for QRIS transactions starting July 1, 2023, applicable to MSME merchants but not chargeable to buyers. Previously, the Merchant Discount Rate (MDR) for QRIS was set at 0% until June 30, 2023. Senior analyst Ronny P. Sasmita warned that this fee might discourage merchants from using QRIS due to additional costs, which could, in turn, reduce consumer adoption. If merchants stop offering QRIS payments, customers will have no choice but to abandon the system. BI Executive Director Erwin Haryono explained that the fee aims to cover investment and operational costs incurred by QRIS service providers. However, critics argue that this policy could deter users and slow the transition to digital and cashless payments, especially for MSMEs already burdened by operational expenses.

Compared to earlier studies, this research introduces a more comprehensive model by positioning Attitude Toward Using (ATU) as a mediating variable between Knowledge, Trust, and Perceiveness (a combination of perceived ease of use and perceived usefulness) toward the adoption of QRIS. While prior research has shown that these individual factors can influence the intention or actual use of QRIS, most have not examined how these variables interact through users' attitudes. Furthermore, this study focuses specifically on MSME merchants in the South Tangerang area, a context that remains underexplored in existing literature. This research is significant because it offers a deeper understanding of user behavior by analyzing how knowledge, trust, and perceiveness shape attitudes, which in turn influence adoption decisions. These insights can help stakeholders such as Bank Indonesia, digital payment service providers, and local governments to develop more targeted and effective strategies to increase QRIS adoption among MSMEs.

2. LITERATURE REVIEW

2.1 *Technology Acceptance Model (TAM)*

The Technology Acceptance Model (TAM), developed by Davis in 1989, is a framework used to explain how individuals accept and use technology, based on two main factors: perceived usefulness and perceived ease of use. The Technology Acceptance Model (TAM), commonly known as a model for understanding how users accept technology, is a framework used to predict user acceptance and adoption of latest technologies according to Widanengsih [30]. Kusumadewi et al. [31] said that it is widely used in studies related to digital payments, mobile banking, and other technologies because it effectively predicts user behavior. In this research, TAM is applied using the Attitude Toward Using (ATU) approach to assess the acceptance and attitudes of MSME merchants around South Tangerang toward using QRIS.

2.2 *Actual system use*

Actual use refers to how often and how intensively an individual uses a system, as described by Irawati and Suharono [7]. According to Andy et al. [33], actual use is measured based on repeated use, more frequent interactions, and the amount of time spent engaging with a technology. It reflects the real condition of system utilization, typically assessed through the duration and frequency of technology use. In this research, actual use will be analyzed through indicators such as usage frequency, the effect of user experience on trust, and the occurrence of technical issues, based on A. Jati [8].

2.3 *Attitude toward using*

Attitude Toward Using (ATU), as described by Davis (1989) according to Affifatusholihah [13], refers to a person's positive or negative feelings about using a system. We use this variable because it helps explain how users' thoughts, emotions, and behaviors influence their intention to adopt technology (Kotler & Armstrong, 2014). According to Kusumadewi et al. [31], Attitude Toward Using serves as a mediating factor between Perceived Ease of Use and Perceived Usefulness in influencing a user's Behavioral

Intention to Use a technology. This variable is important because it helps measure the real impact of user interest and behavior on QRIS usage. According to Schiffman & Kanuk (2008), as cited in Pratama and Bastian (2017) and later referenced by Setyawati [32], the indicators of attitude toward using include three main components: the cognitive component, the affective component, and the conative part. These elements reflect a person's thoughts or beliefs (cognitive), feelings or emotions (affective), and behavioral intentions or actions (conative) toward using a product or technology.

2.4 *Knowledge*

Knowledge, according to Kusumadmo [9], is the combination of information, skills, and motivation that individuals use in decision-making. This variable is important in e-payment systems like QRIS because users with higher knowledge are more likely to understand the system and use it confidently [2]. According to Khairunnisa & Hendratmi [21] one of the knowledges is product knowledge that refers to a comprehensive understanding that includes awareness of product categories and brands, familiarity with terminology, and insight into product attributes. It also involves beliefs about a product's ability to deliver utility or benefits. Consumers tend to prioritize products they perceive as useful, which influences their purchasing decisions. In the context of sharia-compliant products, trust can emerge when the product aligns with Islamic principles.

In this research, knowledge will be measured through users' ability to know, understand, apply, and evaluate QRIS before deciding to use it. Based on the relationship between knowledge and attitude toward using QRIS, we hypothesize that MSME merchants with higher knowledge of QRIS will have a more positive attitude toward using the system, as their understanding, emotional response, and behavioral tendencies are expected to align with their confidence in applying and evaluating the technology.

2.5 Hypothesis

According to Jati [8], QRIS has a significant chance of boosting Surabaya MSMEs' adoption of technology. They clarified that the perception of QRIS's ease of use and usefulness affects user sentiments. This aligns with earlier research by Khairunnisa and Hendratmi [21], which found that product knowledge significantly influences consumer attitudes, thereby supporting the proposed research hypothesis. Although computer proficiency has no direct bearing on these opinions, MSMEs' attitudes improve as they gain a greater understanding of QRIS, demonstrating that knowledge fosters a more positive outlook.

H1: Knowledge has a positive influence on Attitude Toward Using

Perceived trust positively influences the intention to use, according to Mamesah et al.[10]. Users are more likely to select a service like QRIS as their preferred payment option when they believe it to be reliable based on their experience. Previous studies have concluded that trust plays a crucial role as a form of social control in virtual environments, where its significance surpasses that in physical settings. Trust is especially vital in encouraging individuals to engage with mobile payment services, which involve financial transactions according to Prasetya and etari [18]. These findings are consistent with the research by Safira et al. [29], which showed that a higher level of individual trust in digital payment systems positively influences the intention to use them.

H2: Trust has a positive and significant influence on Attitude Toward Using

[11] Syah et al. explained that perceived usefulness, ease of use, and attitude can influence the intention to use QRIS. Previous studies by Setiawan & Setyawati [19] and Zein et al. [28] support the findings of this research, concluding that perceived ease of use is a key factor that significantly affects users' attitudes toward adoption. When a new technology is seen as user-friendly and does not demand much time or effort, users are more inclined to accept and utilize it. This positive attitude grows when users feel

supported by clear guidance and socialization about QRIS.

H3: Perceiveness has a positive and significant influence on Attitude Toward Using

[12] Rahawati and Arfiansyah explained that MSMEs in Surakarta have good knowledge about using QRIS. Many choose QRIS because it's easier than using cash. Support from Bank Indonesia and other partners helps MSMEs learn more, and QRIS also helps them track their business income better. This aligns with earlier research that defines literacy as the combination of awareness, knowledge, skills, attitudes, and behaviors needed to make informed decisions and support personal well-being, which closely relates to the concept of knowledge. Histori [22] found that individuals with higher levels of literacy are more inclined to use digital payment applications, as they have a deeper understanding of the advantages and risks involved and prefer to stay well-informed about such services.

H4: There is positive and significant influence between Knowledge of QRIS on Actual use in the MSME industry in the South Tangerang area.

[13] Affifatusholihah explained that in their research the variables of attitude towards advertising, perceived usefulness, and perceived ease of use had a direct effect on the intention to use QRIS by 64%, with the remaining factors not being considered in this research. This study also aligns with the findings of Rupa et al. [27], who reported positive outcomes. Their research suggests that when users view QRIS as a payment method that speeds up transactions and is cost-effective, they are more inclined to adopt it as their main payment choice.

H5: There is positive and significant influence between Attitude toward using on Actual use in the MSME industry in the South Tangerang area.

[14] Damayanti found that trust and security both have a significant effect on interest in using QRIS. When users feel QRIS is safe and reliable, their interest in using it increases. This is important for Halal MSMEs in Medan, as QRIS helps make transactions easier, faster, and more secure. According to Saintz [23], key factors influencing the adoption of electronic payment systems

include user experience, trust in the system, and the perceived value of transactions. These findings are also supported by Safira et al. [29], who noted that the greater the level of trust users have in digital payments, the more likely they are to use such systems in practice.

H6: There is positive and significant influence between Trust on Actual use in the MSME industry in the South Tangerang area.

[15] Rahimi found that perceived usefulness and ease of use influence both the intention and actual use of QRIS. They found that ease of use has a strong impact on how often MSMEs actually use QRIS. This means if users believe QRIS is easy to use, they will keep using it regularly—but if they don't, they likely won't use it at all. Therefore, ease of use plays a vital role in the actual adoption of QRIS, particularly in enhancing transaction speed. This finding aligns with the study by Bordoloi et al. [26] on consumer attitudes toward digital payments, as well as previous research by Ramadhan et al. [24], which found that perceived ease of use significantly impacts the actual use of the BNI mobile banking application. Additionally, these results are consistent with the positive findings reported by Zein et al. [28].

H7: There is positive and significant influence between Perceiveness on Actual use in the MSME industry in the South Tangerang area.

[8] Jati found that QRIS has strong potential to boost technology use among MSMEs in Surabaya. User attitudes are shaped by how easy and useful QRIS is perceived, and a positive attitude can increase interest in using it, even if users aren't skilled with computers. Meanwhile, Rahmawati and Arfiansyah [12] found that MSMEs in Surakarta already have good knowledge about QRIS and prefer it because it's easier than cash. Support from Bank Indonesia and others also helps them learn more, and QRIS helps track their business income.

H8: Knowledge of QRIS has a positive influence on Actual use through Attitude toward using in the MSME industry in the South Tangerang area

[10] Mamesah found that trust has a strong and positive effect on a user's intention to use QRIS. If users feel QRIS is trustworthy, they are more likely to choose it. Similarly,

Damayanti [14] found that both trust and security play a key role in increasing interest in using QRIS. For Halal MSMEs in Medan, feeling safe and confident with QRIS helps boost their interest in using it as a digital payment tool.

H9: Trust has a positive influence on Actual system use of QRIS through Attitude toward using in the MSME industry in the South Tangerang area.

[16] Reswari found that how useful, easy to use, and how people feel about QRIS can affect its actual use, with a positive attitude helping people continue using it, especially when it makes payments easier. Similarly, Syah [11] showed that when users have a positive attitude and find QRIS easy to use, they are more likely to adopt and keep using it over time.

H10: Perceiveness has a positive influence on Actual system use of QRIS through Attitude toward using in the MSME industry in the South Tangerang area.

3. METHODS

3.1 Types of Research

The research method used in this research is a quantitative research method and the type of research used in this research is descriptive. The quantitative approach was chosen to provide a clear, statistical analysis of the factors influencing the adoption of QRIS payment services. By collecting numerical data, the study can objectively measure the extent to which various factors impact the adoption process. Descriptive research was selected as it allows for a detailed portrayal of the current situation or phenomenon without manipulating the variables. Apart from that, the time horizon used by researchers is cross-sectional, which according to [17] is data collection carried out in just one period of time during the research of a phenomenon. This approach was chosen to capture a snapshot of the current state of QRIS adoption, providing insights into the immediate factors influencing adoption within a specific timeframe.

3.2 Population and Sample

In this research, the population determined is the target population where this population has special characteristics that are adapted to the research objectives. The population taken is located in the MSMEs in the South Tangerang area, precisely in Pasar Delapan which has 100 restaurants (Foodierate, 2020).

In this research, the sample chosen was MSMEs located in South Tangerang, specifically at MSMEs around Alam Sutera. The sampling method used is non-probability sampling. The determining criteria is a minimum income of IDR 50,000,000 in a period of less than a year. Apart from that, another determinant is MSMEs which have been established from 2012 to 2022.

The sample used in this research is based on the sample to item ratio. According to Gorsuch (1983), Hatcher (2013), Suhr (2006), the sample to item ratio is used in research with the aim of determining a sample based on the number of items in a study where the ratio is 10:1 (Memon et al., 2020). In this research, there are 15 indicators or items so that the sample selected to meet the requirements is based on the sample to item ratio, namely with a minimum sample of 150 samples.

3.3 Data Analysis

The analytical method used by researchers in conducting this research is SEM-PLS (Structural Equation Modeling - Partial Least Square). SEM measures causality, while PLS measures the predictive model of the indicator (Rian, 2020). The outer model used is the validity test conducted at a significance level of 0.01 or 0.05, while the reliability test uses Cronbach alpha (α), with a value greater than 0.6 indicating reliability. The T test is used to determine the effect of the independent variable on the dependent variable. If the calculated t value > t table and significance < 0.05, H0 is rejected, indicating a significant effect. If the calculated t value < t table and significance > 0.05, H0 is accepted, indicating no significant effect. The coefficient of determination (R²) measures the strength

and direction of the relationship between variables. An R² value greater than 0.5 indicates a good fit, meaning the independent variable explains the dependent variable well.

4. RESULTS AND DISCUSSION

The sample consists of 161 respondents, all of whom are either owners or managers of MSMEs, representing 100% of the sample. Regarding the duration of operation, 29.2% of businesses have been operating for less than 5 years, 56.5% have been operating for 5 years, and 14.9% have been operating for more than 5 years. In terms of income level, 15.5% of businesses earn less than IDR 100,000,000, 57.1% earn between IDR 100,000,000 and IDR 500,000,000, and 27.3% earn more than IDR 500,000,000.

The research findings show that all indicators for each variable show validity as shown in figure 4.1, where the proof that the indicators are valid is the factor loading value > 0.7. In the KNL variable, there is the highest loading factor value in the KNL_Knw and KNL_Und indicators with a value of 0.905, namely knowing and understanding the use of QRIS as a digital payment tool. The loading factor value on the TRT variable is found in the TRT_Pis indicator with a value of 0.921, namely regarding the belief that QRIS has strong security regarding its users' personal information. The PEOU variable has the highest loading factor value found in the PEOU_Usi indicator, namely that QRIS is easy to understand with a value of 0.936. The PUS variable has the highest loading factor value found in the PUS_Eff indicator, namely that could improve their work effectivity with a value of 0.888. The ATU_Ac indicator which is owned by the ATU variable has the largest loading factor value, namely 0.933 regarding QRIS which is a very important payment tool in business. Apart from that, in the last variable, namely the AUO variable, the largest loading factor value is owned by the AUO_Lfu indicator with a value of 0.901, namely that MSME customers use QRIS more as a means of payment.

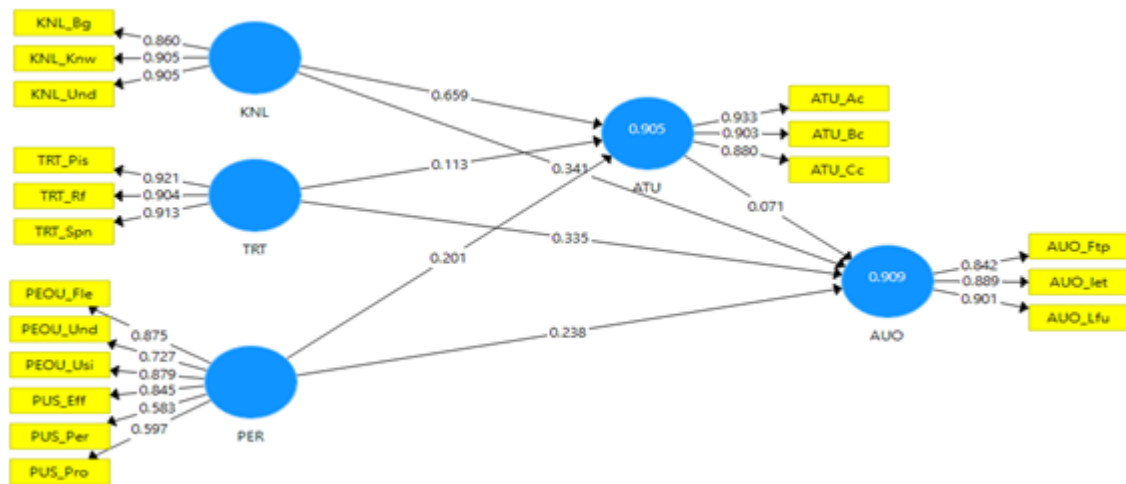


Figure 4.1 PLS Algorithm Result Model

In the validity test, a construct is said to be good and valid if the value for each Average Variance Extracted construct has a value > 0.7 . The reliability test assesses the measurement results in the indicator block of

the construct where the research construct becomes a suitable measuring tool if the Cronbach's Alpha value and the Composite Reliability value, RHO_CA and RHO_C, have a value of > 0.7 .

Construct	AVE	RHO_A	RHO_C	CA
Knowledge (KNL)	0,793	0,871	0,920	0,869
Trust (TRT)	0,833	0,899	0,937	0,899
Perceived Ease of Use (PEOU)	0,763	0,900	0,905	0,843
Perceived Usefulness (PUS)	0,679	1,064	0,864	0,812
Attitude Toward Using (ATU)	0,820	0,890	0,932	0,890
Actual System Use of (AUO)	0,771	0,854	0,910	0,851

Note:

- AVE = Average Variance Extracted
- RHO_A = Composite Reliability
- RHO_C = Composite Reliability
- C. A = Cronbach's Alpha

Based on results above, Cronbach's Alpha and Composite Reliability (RHO_C and RHO_A) where the values for these constructs have a value of > 0.7 , so this states that this research can be a suitable measuring tool. Apart from that, in table 4.3, the entire AVE value construct in this study has a value

of > 0.7 , which indicates that all constructs have met the criteria and are declared valid.

The steps taken after the modified model has met the outer mode criteria (validity and reliability), by testing the inner model (R-Square and F-Square).

Constructs	R-Square	R-Square adjusted
ATU	0,913	0,911
AUO	0,912	0,909

Based on the results above, the R-square value of the ATU (Attitude Toward Using QRIS) construct has a value of 0.913 (Substantial) and AUO (Actual system use of QRIS) has a value of 0.912 (Substantial).

In research, the F-Square value is used as a measurement of changes in the R-Square value when certain constructs are removed from the model. The F-Square value is divided into several parts, if it has a value of 0.02 it has a small effect, a value of 0.15 has a medium effect, and a value of 0.30 has a large effect (Herniyanti, 2023). The largest F-square value is 0.486, representing the influence of the KNL (Knowledge) construct

on ATU (Attitude Toward Using QRIS), indicating a large effect. The smallest F-square values are 0.003 and 0.006, representing the influence of the PUS (Perceived Usefulness) construct on ATU (Attitude Toward Using QRIS) and AUO (Actual System Use of QRIS), indicating very small effects.

In this research, a structural model evaluation was carried out with the aim of determining the strength of the relationship between variables. The research hypothesis can be accepted if the variable relationship is positively correlated and has a significant effect based on the path coefficient and T-test.

Hypothesis	Beta/OS	LL	UL	T	P	Decision
H1: KNL -> ATU	0,255	0,259	0,047	5,407	0,000	Supported
H2: TRT -> ATU	0,057	0,057	0,071	0,807	0,420	Rejected
H3: PEOU -> ATU	0,255	0,259	0,047	5,407	0,000	Supported
H4: PUS -> ATU	0,197	-0,024	-0,023	0,033	0,715	Rejected
H5: ATU -> AUO	0,017	0,019	0,092	0,183	0,855	Rejected
H6: KNL -> AUO	0,398	0,395	0,121	3,297	0,001	Supported
H7: TRT -> AUO	0,304	0,304	0,089	3,426	0,001	Supported
H8: PEOU -> AUO	0,244	0,242	0,057	4,304	0,000	Supported
H9: PUS -> AUO	0,036	0,040	0,036	0,986	0,325	Rejected
H10: KNL -> ATU -> AUO	0,012	0,013	0,064	0,182	0,856	Rejected
H11: TRT -> ATU -> AUO	0,001	0,001	0,008	0,118	0,906	Rejected
H12: PEOU -> ATU -> AUO	0,004	0,005	0,024	0,175	0,861	Rejected
H13: PUS -> ATU -> AUO	0,00	-0,001	0,004	0,107	0,915	Rejected

Note:

- OS = Original Sample
- LL = Lower Limit
- UL = Upper Limit

DISCUSSION

The Influence of Knowledge on Attitude Toward Using QRIS

The research results indicate that Knowledge has positive influences to

Attitude Toward Using QRIS. This is because respondents' understanding of QRIS leads to a greater desire to use it. As individuals' knowledge of QRIS increases, their attitudes toward using it become more positive. Adequate knowledge of QRIS helps users understand its benefits, ease of use, and security features.

This is in line with previous research by Khairunnisa & Hendratmi [21] which explains that product knowledge has a significant effect on consumer attitudes, indicating that the research hypothesis is accepted. However, this study does not align with the findings of Rupa et al [27]. This discrepancy may occur because, despite having knowledge about QRIS, individuals might perceive the technology as irrelevant or not suitable for their daily needs. If users do not experience direct benefits, their knowledge will not influence their attitude toward the decision to use QRIS.

The Influence of Trust on Attitude Toward Using QRIS

According to the research findings, Trust does not affect the Attitude Toward Using QRIS. This suggests that an individual's belief or trust does not significantly influence their desire to use QRIS.

Previous research concludes that trust in virtual environments, in particular, serves as a key element of social control, with its importance being greater than in physical environments. Specifically, trust is a critical factor that enables individuals to use mobile payment services directly related to financial transactions [18]. This study is also in line with the findings of Safira et al [29], as the level of individual trust in using digital payment systems increases the attitude intention to use them. As a result, individuals are more likely to conduct transactions more frequently, which may lead to more consumptive attitude.

The Influence of Perceived Ease of Use on Attitude Toward Using QRIS

The research results demonstrate that Perceived Ease of Use impacts the Attitude Toward Using QRIS. When users believe that QRIS is easy to use, it positively influences

their attitude and feelings toward using the technology.

Previous research conducted by Setiawan & Setyawati [19] and Zein et al [28] supports the findings in this research, which can be concluded that perceived ease of use is one of the factors that significantly influence attitude toward using. When new technology is perceived as easy to use and requires less time and effort, it is more likely to be accepted by user.

The Influence of Perceived Usefulness on Attitude Toward Using QRIS

Based on the research, it was found that Perceived Usefulness does not influence the Attitude Toward Using QRIS. Users may not always consider the perceived usefulness of QRIS as an important factor in shaping their attitude toward using it.

This finding contrasts with previous studies which discovered that Perceived Usefulness has a positive and significant impact on users' Attitude towards applications. The difference arises from the distinct research contexts. The results of this study suggest that a company, being aware of this, should not only focus on trust but also on the benefits of the attitude itself. Ultimately, this will help the company increase user engagement, as it influences the intentions of consumers [18].

The Influence of Attitude Toward Using QRIS on Actual System Use of QRIS

The research results indicate that Attitude Toward Using QRIS does not affect the Actual System Use of QRIS. Users tend to adopt QRIS based on their knowledge and perceived ease of use, rather than their attitude toward using it.

The results of this study do not align with previous research, as there is a difference in findings. While previous studies indicated that behaviors related to mobile payments are significantly and positively influenced by attitudes toward mobile payments, this study suggests otherwise [20]. In addition, this study also diverges from the findings of Rupa et al [27] which reported positive results. According to their study, if users perceive QRIS as a method that accelerates the transaction process without incurring high

costs, they are more likely to choose QRIS as their primary payment option.

The Influence of Knowledge on Actual System Use of QRIS

The research findings reveal that Knowledge influences the Actual System Use of QRIS. A better understanding of QRIS increases the confidence of MSME owners or managers in using the technology, including knowledge of QRIS procedures, transaction handling, and resolving any technical issues that may arise during the payment process.

This is consistent with previous research that defines literacy as the awareness, information, skills, attitudes, and behaviors necessary to make informed decisions and ultimately achieve individual well-being. This aligns with the concept of knowledge. According to Histori [22], the study suggests that individuals with a higher level of literacy are more likely to utilize digital payment application services, as they possess a better understanding of digital payments, including their benefits and risks, and prefer to be informed about them.

The Influence of Trust on Actual System Use of QRIS

The research results show that Trust influences the Actual System Use of QRIS. MSME managers who trust QRIS are more likely to use it directly in their transactions. According to previous research, a significant influence observed in this study is the sense of security and trust, particularly when people use electronic payment systems. The experience of using these systems serves as the foundation for future use. Trust in electronic payment systems encourages users to rely on them for both small and large transactions. According to Saintz [23], experience, trust in the electronic payment system, and the value of the transaction are crucial factors in the adoption of electronic payment systems. This study is also in line with the findings of Safira et al [29], This is because the higher the perceived trust in using digital payment, the greater the actual use of digital payment systems.

Influence of Perceived Ease of Use on Actual System Use of QRIS

According to the research, Perceived Ease of Use affects the actual use of QRIS. Users expect to perform various financial transactions quickly and easily in managing their MSMEs. Therefore, the ease of use is a crucial factor in the actual utilization of QRIS, especially in facilitating the speed of transactions. This result is in line with Bordoloi et al [26] about Consumer's Attitude towards Digital Payments and Ramadhan et al [24] previous research which stated that perceived ease of use influences actual usage of the BNI mobile banking application. In addition, this study is also consistent with the findings of Zein et al [28] which reported positive results.

Influence of Perceived Usefulness on Actual System Use of QRIS

The research findings suggest that Perceived Usefulness does not affect the actual use of QRIS. Even if users find QRIS useful, they may still prefer other established payment methods, such as debit/credit cards, direct e-wallets, or traditional payment methods, which may make them feel uncomfortable with adopting new technology. The results of this study are in line with previous research conducted by Bordoloi et al [26] about Consumer's Attitude towards Digital Payments and Ramadhan et al [24] which stated that perceived usefulness has a positive and significant effect on the actual usage of BNI mobile banking services.

Influence of Knowledge and Attitude Toward Using QRIS on Actual system use of QRIS

The research results indicate that neither Knowledge nor Attitude Toward Using QRIS influences the Actual System Use of QRIS. Despite MSME owners or managers having knowledge about QRIS, they may not require or prefer to use QRIS for all transactions with consumers in their daily operations.

Ardiyono et al [25] highlighted that QRIS has significant potential to boost technology adoption among MSME in Surabaya. Key factors influencing attitudes toward QRIS include its perceived ease of use and benefits. While computer skills do not

directly affect perceptions of QRIS, a positive attitude can increase MSME' interest in adopting the technology. Similarly, Rahmawati and Arfiansyah [12] found that MSME in Surakarta City are knowledgeable about QRIS and prefer it over cash payments due to its ease of use. Collaborations with Bank Indonesia and other companies have helped MSMEs learn more about QRIS, which has positively impacted their business operations and income assessment.

The Influence of Trust and Attitude Toward Using QRIS on Actual system use of QRIS

Based on the research findings, Trust and Attitude Toward Using QRIS do not affect the Actual System Use of QRIS. Although MSME owners or managers in the food and beverage sector may have confidence in QRIS, concerns related to security or privacy might prevent them from fully adopting QRIS for transactions with customers.

Mamesah et al [10] found a positive and significant influence of perceived trust on the intention to use QRIS. Users' trust in QRIS, based on their experiences, can increase their intention to adopt it as their preferred payment method. Similarly, Damayanti et al [14] concluded that both perceived trust and perceived security have a significant impact on users' interest in using QRIS, as it simplifies and speeds up transactions while ensuring security through Indonesian banking protections.

Influence of Perceived Ease of Use and Attitude Toward Using QRIS on Actual System Use of QRIS

The research results show that Perceived Ease of Use and Attitude Toward Using QRIS have no significant effect on the Actual System Use of QRIS. Despite recognizing that QRIS can facilitate transactions, users' discomfort or negative attitudes toward QRIS can hinder its actual use. In some cases, the use of QRIS may be influenced more by external factors such as merchant requirements, promotional offers, or regulations, rather than the user's attitude.

Reswari et al [16] found that perceived usefulness, perceived ease of use, and attitude toward using QRIS influence its

actual use. They noted that attitude mediates the effect of perceived ease of use, as MSMEs' positive attitude toward QRIS, driven by its perceived convenience, encourages continued adoption for payment transactions. Similarly, Syah et al [11] highlighted that attitude mediates the impact of perceived usefulness and ease of use on QRIS adoption. Users who find QRIS easy to use and have a positive attitude are more likely to consistently use it over time.

Influence of Perceived Usefulness and Attitude Toward Using QRIS on Actual System Use of QRIS

According to the research, Perceived Usefulness and Attitude Toward Using QRIS do not significantly influence the Actual System Use of QRIS. The perceived usefulness of QRIS and users' attitudes do not have a direct impact on its adoption. In some instances, the use of QRIS is driven by other factors, such as convenience, security, and external influences, rather than its perceived usefulness or the user's attitude.

In their research, Reswari et al [16] found that perceived usefulness, perceived ease of use, and attitude toward using QRIS can influence its actual usage. They highlighted that attitude mediates the impact of perceived usefulness on the actual use of QRIS, as the benefits perceived by MSMEs shape their attitude and increase QRIS adoption for payment transactions. Similarly, Syah et al [11] suggested that attitude mediates the effects of perceived usefulness and perceived ease of use on QRIS adoption. Users who recognize the benefits of QRIS and maintain a positive attitude are more likely to use it consistently over time.

5. CONCLUSION

Based on the results and discussion it can be concluded:

- 1) The variables Knowledge, Perceived Ease of Use, and Trust demonstrate a significant positive influence on both Attitude Toward Using QRIS and the Actual System Use of QRIS
- 2) The variables Trust, Perceived Usefulness, and Attitude Toward

Using QRIS do not have a significant effect on either Attitude Toward Using QRIS or Actual System Use of QRIS. Additionally, combinations such as Knowledge and Attitude, Trust and Attitude, Perceived Ease of Use and Attitude, as well as Perceived Usefulness and Attitude also show no significant influence on the actual use of the QRIS system

This study seeks to validate the evaluation of factors influencing the adoption of QRIS payment services in South Tangerang. It holds implications for the existing in the fintech sector by providing a more comprehensive understanding of how these factors impact adoption. This study contributes to the literature on QRIS adoption by showing that Knowledge, Perceived Ease of Use, and Trust significantly influence both Attitude Toward Using QRIS and Actual System Use. In contrast to prior studies, Perceived Usefulness and Attitude were found to have no significant effect on actual use. Unlike previous research suggesting that attitude mediates technology adoption, this study reveals that attitude is not a key driver in QRIS usage among MSMEs. Instead, practical knowledge and trust play a more crucial role. These findings offer new insights into technology acceptance, particularly for MSMEs, by challenging established assumptions and emphasizing the importance of user literacy and system credibility over perceived benefits.

The findings of this study of strategic importance for researchers in the field of payment technology adoption, as they aim to advance understanding of the effects of practices on the interest in adopting technology. This research examines the

adoption of technology among MSMEs (Micro, Small, and Medium Enterprises) utilizing QRIS payment services. Consequently, this study is of significant benefit to MSMEs and start-up businesses adopting QRIS, as it helps them understand consumer demand patterns. The findings of this study reveal that Knowledge, Trust, and Perceived Ease of Use have a significant impact on the adoption of QRIS among MSMEs. This implies that increasing MSME owners' knowledge through training and education programs can enhance their understanding and encourage usage. Additionally, building trust by ensuring the security and reliability of QRIS services is crucial, as trust directly influences actual use. Furthermore, simplifying the user interface and ensuring ease of use will positively affect both attitudes and system adoption. On the other hand, the findings show that Perceived Usefulness and Attitude alone do not significantly influence actual usage, suggesting that user perception of benefits must be reinforced with real, functional advantages. Therefore, MSMEs and fintech providers should focus on practical support, user experience, and trust-building strategies rather than solely attempting to influence attitudes. Furthermore, businesses can infer consumer behavior in financial technology. Entrepreneurs can explore the fintech market, gaining insights into how MSMEs respond to and adapt to technological changes in digital banking. In turn, businesses can formulate strategies to capture market share in the digital economy. However, this study is limited by its sample size. Therefore, we recommend that future research utilize a larger sample and enrich the research variables.

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