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MODIFICATION OF *TECHNOLOGY ACCEPTANCE MODEL* TO ANALYZE CONSUMER BEHAVIOR IN USING QRIS

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Abstract: *Digital technology has rapidly developed in recent years, affecting the culture and patterns of transactions. One of the innovations in digital payments is the emergence of the Quick Response Indonesian Standard (QRIS). However, massive QRIS education at all levels of society is not in line with the community's response, which still maintains traditional payment patterns, especially in the Soloraya area. This study aimed to analyze the factors influencing the adoption of QRIS (technology use). This approach was carried out using technology acceptance model modification theory. A sample of 100 people was obtained using a simple random sampling method in communities located in the former Surakarta (Soloraya) residency, namely Sragen, Sukoharjo, Karanganyar, Wonogiri, Klaten, Boyolali and Surakarta City Regencies. Data analysis techniques with partial least squares structural equation Modelling (PLS-SEM). The results show that all variables in the TAM modification construct consisting of perceived usefulness, perceived ease of use, perceived risk and perceived security influence the decision to use QRIS with intention as a mediating variable.*
Keywords : TAM, Intention, Decision, QRIS, PLS-SEM

INTRODUCTION

Indonesia's information and communication technology (ICT) sector is experiencing significant and rapid expansion. The rapid development of information technology has brought enormous benefits to human civilization. The ease of access and absence of space and time limitations make information technology an effective and efficient solution (Mulyani et al., 2019).

The banking world takes advantage of the development of information technology by introducing mobile-based services through wireless media, which is called mobile banking. Mobile banking services generally provide ways to facilitate banking using personal digital assistants and smartphone devices. M-banking service facilities offer convenient access to fast and real-time transactions (Maulana & Mailany, 2018). M-banking is a service banks offer their customers to make transactions to achieve effectiveness and efficiency.

In every activity we do, there is bound to be a problem that will come to us. Likewise in the banking world, in 2018, we heard of several criminal acts, especially cyber crimes committed using skimming methods (Oktavianto & Ariwibowo, 2020). This crime was committed by copying the code on the magnet section of our debit and credit cards (Oktavianto & Ariwibowo, 2020). Many banks have adopted mobile banking systems for their digital services. These services are one way to optimize the use of Information technology. One of its service developments is implementing the Quick Response Indonesian Standard (QRIS) as an innovation in the latest payment features by M-banking. QRIS is a QR code issued by Bank Indonesia (BI) and the Indonesian Payment System Association (ASPI) for payment transactions. Payment transactions can be completed quickly and easily using an account or accounts owned using QR Code technology (Febrianti et al., 2021).

QRIS was launched for the first time at the Bank Indonesia head office on August 17, 2019, to coincide with the independence day of the Republic of Indonesia, and was simultaneously carried out at Bank Indonesia's representative offices in the regions. As stipulated in the regulations, QRIS implementation must be used for all digital payment transactions in Indonesia starting January 1, 2020 (Saputri, 2020). Bank Indonesia noted that the number of QRIS (Quick Response Code Indonesian Standard) users in Indonesia increased by nearly 9 million accounts (Hidayat, 2021).

QRIS growth can encourage inclusive and efficient economic and financial digitalization for the Indonesian economy. QRIS can be used in all regions that already provide merchants. The development of QRIS is a joint intervention between authorities in areas, centers, industry, and society to accelerate the acceleration of economic and financial digitalization. As a form of effort to encourage economic digitalization, BI Surakarta held QRIS socialization roadshows in seven districts in Soloraya, namely in the Surakarta, Sukoharjo, Klaten, Karanganyar, Boyolali, Wonogiri, and Sragen Regencies (Trisnaningtyas, 2021).

In 2022, the QRIS's target for new users nationwide was 15 million. Soloraya is in the spotlight because cashless payments in Soloraya skyrocketed during the pandemic, and the limited activities (PSBB/ PPKM) carried out by the community using QRIS began to increase after the PSBB/PPKM (Antara & Pratiwi, 2022). The use of QRIS in Soloraya targets several sectors, not only shops, markets, places of worship to hospitals, and universities (Pratama, 2023). The share of QRIS merchants in Soloraya has increased, with the largest being Surakarta City at 32.65%, Sukoharjo at 19.19%, followed by Klaten at 14.07%, Karanganyar at 11.16%, Boyolali at 7.83%, and Wonogiri at 6.98% (Trisnaningtyas, 2021).

However, there is still a reasonably large gap between the various regions in Soloraya using QRIS payments. It can be seen that only the city of Surakarta looks technologically literate, especially regarding the use of QRIS. Other areas have obtained a user growth of less than 20%; therefore, it can be said that regional users have not been optimal in using QRIS. This is why QRIS has not been optimal for non-city targets. One reason for this is the lack of literacy regarding digital transactions, because it is alleged that Surakarta cities have a better level of digital literacy because there are millennials who are tech-savvy with a more significant number. Meanwhile, not many people in these regions have been educated regarding digital transactions using the QRIS. This can be seen in several shopping merchants still implementing the old pattern, namely the ATM debit system, compared to QRIS innovations (Pratama, 2023).

Consumer preferences in using QRIS in each transaction are based on characteristics or perceptions that encourage interest in transacting using QRIS (Permadi & Wilandari, 2021). Many factors are considered when using electronic transaction media or Mobile Banking service applications. This acceptance behavior can be measured using the theoretical TAM (Technology Acceptance model) to ascertain how high the user's acceptance of the technology is (Wardani, 2021).

The Technology Acceptance Model (TAM) has become popular and is used in various studies on adopting new information technologies. The TAM provides an overview of technology adoption decisions to clarify user behavior among different user groups (Kurniawan & Sukarno, 2021). The Technology Acceptance Model (TAM) shows that the desire to use technology systems is influenced by ease of use and usefulness. The TAM measures the benefits and ease of use of an individual's beliefs about using a new technology. Personal trust is a form of attitude towards and intention to use new technologies (Astuti et al., 2020). The extended TAM further develops the TAM theory by adding several variables.

Based on the results of previous studies, the researchers found deficiencies in several variables that are suspected to influence the use of electronic means of transactions. Research results by Ningsih et al (2021) show that the decision to use QRIS-based cryptocurrencies of UPI Y.A.I Jakarta students is simultaneously influenced by perceived ease of use and benefits of using (perceiced usefulness). Through concurrent testing, Saputri (2020) found that perceived ease of use, usefulness, trust, and risk variables influence consumers' preferences in using QRIS.

Differences were also found in the results of Sharma et al (2017), who concluded that the perception of ease of use had no significant effect on interest in using Mobile Banking. According to Permadi & Wilandari (2021), most respondents felt the convenience and benefits of QRIS. However, despite its ease and usefulness, respondents remain cautious and distrustful of using QRIS as it is considered risky and less secure because of its vulnerability to data theft and misuse. personal data.

Based on the description above, this study aims to empirically examine the factors that influence a person to use technology, in this case, QRIS transactions. The TAM modification approach was chosen because the TAM

model is simpler, making it more suitable for use in non-urban communities. For example, the UTAUT approach was considered inappropriate because some of the variable approaches in this model were not close to the problems in the field. As the dimensions of the conditions that facilitate merchants have not fully provided QRIS facilities in areas outside Surakarta City, it is quite difficult to use the UTAUT approach and its derivatives. Tam modification adds independent variables such as security and trust because, based on previous research, these variables have a hand in determining the use of technology.

THEORETICAL FRAMEWORK AND HYPOTHESES

Quick Response Code Indonesian Standard (QRIS)

The (QRIS) is a national code standard used to facilitate payments with the QR code system launched by Bank Indonesia and the Indonesian Payment System Association (ASPI) on 2019 (Bank Indonesia, 2020). The QR Code on QRIS is a barcode with a special algorithm that can be read by barcode readers or smartphones using a camera (Musyaffi & Kayati, 2020). The source of funds in QRIS transactions is deposits or payment instruments in the form of credit cards, debit cards, and electronic money using server-based storage media at institutions approved by Bank Indonesia. The QRIS transaction nominal is limited to a maximum of ten million rupiah per transaction or following the organizer's or issuer's provisions (Bank Indonesia, 2020).

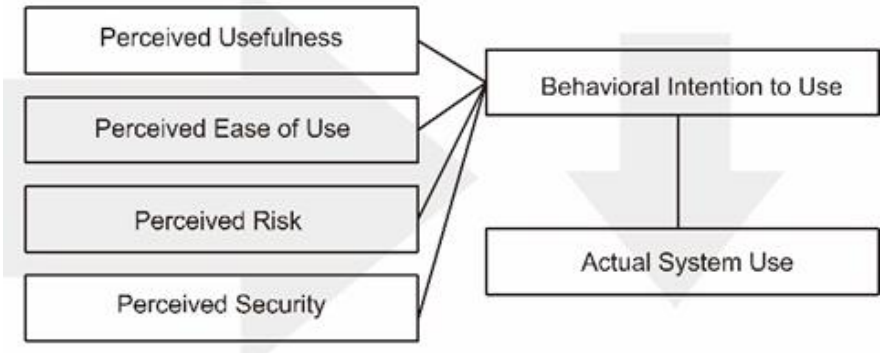
Bank Indonesia Regulation No. 21/18/PADG/2019 A QR code is a two-dimensional code with a three-square marker in the upper left, lower left and upper right corners. Code model has a black module in the form of square dots or pixels and can store alphanumeric data, characters and symbols that can be used to support contactless payment transactions by scanning (Saputri, 2020).

QRIS has universal, easy, profitable, and direct characteristics. QRIS can be used for any QR-CODE payment (Wahyudi & Yanthi, 2021). A QRIS is easy to use with one account and can be used for various payments and processed directly when transacting. Transactions using QRIS As for Payment System Service Providers (PJSP) have been approved by Bank Indonesia, namely Book Four Banks, BPD, Sharia Banks, Non-Banks, and other Banks registered as QRIS operators (Bank Indonesia, 2020).

Technology Acceptance Model (TAM)

Theory of TAM was first introduced by F. Davis, (1986). The TAM model design is an adaptation of the TRA, which is modeled specifically for the user acceptance of information systems. TAM theory can explain user attitudes or behaviors across various computational technologies and predict, explain, and identify why certain systems are acceptable. The purpose of the TAM study is to observe how external factors influence internal beliefs, attitudes, and intentions (F. D. Davis, 1986).

TAM Theory has two beliefs: perceived usefulness (PU) and perceived ease of use (PEOU). Several studies have found several variables related to attitude and use. TAM postulates that the use of an information system is determined by the interest in use (Behavior Intention to Use/BIU). In contrast, the interest in use itself is determined by one's attitude towards the use of a system (Attitude Towards Use / ATU) and perceived usefulness (PU) (F. Davis, 1986, 1989a). This study modifies TAM by adding risk and safety attributes because they are thought to play a role in forming intent and influencing use. This construct can be described as follows.



Graph 1. Modification TAM Construct

Source: data processed (2022)

Perceived usefulness is the perception of the level of expediency that users feel about a technology The benefits offered by a system will affect a person's perception, so its use will increase (F. Davis, 1986, 1989a). Confidence in practicality is a picture in which users believe that using a system will improve the effectiveness of a person's performance. Payment transactions using QRIS offer various benefits, such as being faster, time-saving, and increasing the effectiveness of one's performance. The benefits felt by consumers can affect the behavior of the system. The research that supports this hypothesis (Huddin & Masitoh, 2021; Rastini & Respati, 2021; Wahyudi & Yanthi, 2021; Wandira et al., 2022) shows that perceived usefulness affects the interest and use of a system.

H_1: Perceive of usefulness affects the intention and use of QRIS

Ease of use is the level of user expectations of the effort required to use the system (F. Davis, 1986, 1989a). Transactions through QRIS can be done easily because QRIS is already available at various merchants and payments can be made through crypto-based apps, e-wallets and mobile banking on the server. The perception of ease of use of electronic money will affect the attitude or behavior of users because the behavior of use reflects a person's feelings about a certain object. The perception of a person's ease will give rise to a positive relationship with the attitude of use. Research that supports this hypothesis (Huddin & Masitoh, 2021; Rastini & Respati, 2021; Wahyudi & Yanthi, 2021; Wandira et al., 2022) has shown that the perception ease of use has a significant positive influence on the use of technology.

H_2: Perceived ease of use affects the intention and use of QRIS

Digital transactions allegedly carry payment risks. Customer risk is seen in e-commerce transactions as greater than in retail store commerce because of the nature of e-commerce and impersonal distribution (Zhou et al., 2007). Perceived risk negatively affects consumers' intentions toward online transactions (Bhatnagar et al., 2000). Consumers' perceptions of online purchase risks are multidimensional. Lee & Huddleston, (2010) Transactions through QRIS can be done easily as QRIS is already available in various merchants and payments can be made through crypto-currency applications, e-wallets and mobile banking based on server. All these risks affect the customer's decision to digital transactions, so the likelihood of online transactions decreases due to the increased risk received. Thus, we propose the following hypotheses:

H_3 : Perceived risk affects the intention and use of QRIS

Security reflects the degree to which individuals control their personal information when interacting with mobile banking services. (Hong & Thong, 2013). When a customer has no control over personal information, this can increase security issues. Mobile users often report security issues when interacting with online products or services (Sutanto et al., 2013). In addition, as the level of security in mobile banking increases, customer trust and satisfaction are low, which may lead to a further decline in intention to use mobile banking.

H_4: Perceived security affects the intention and use of QRIS.

RESEARCH METHODS

Quantitative research was used in this study. Quantitative research is a systematic scientific study of phenomena and causal relationships (Sugiyono, 2017b). Quantitative research can be used to test hypotheses to understand the application of TAM Modification in analyzing the use of QRIS. The population of this study was the Soloraya community, consisting of Sragen, Karanganyar, Wonogiri, Klaten, Boyolali, Sukoharjo, and Surakarta City districts. According to the BPS data, the population of Soloraya in 2021 was 5,964,671 people. Thus, the sample obtained using the Slovin formula is as follows:

$n=N/(1+N\ (e)^2)$

$n=5964671/(1+\ 5964671\ (0,1)^2)$

n=99,99 = 100 Respondent

The data used in this study were primary. Primary data are collected by researchers through direct data retrieval, known as raw or raw data. Primary data were collected through a list of questions on a questionnaire filled out by the respondents (Sugiyono, 2017a). The questionnaire consists of a series of statements or questions determined based on indicators (Ghozali, 2016, 2013).

The sampling technique used in this research was purposive sampling. Sugiyono (2012) states purposive sampling is a technique for determining samples with certain considerations. The reason for using a purposive sampling technique is because not all samples have criteria that match the criteria studied, by determining considerations or criteria that must be met by the sample used in this research, namely 1) Soloraaya residents, 2) have financial technology applications (m-banking and e-wallet), 3) have transacted with QRIS, and 4) last used QRIS in the last month.

Table 1. Indicator Model

No	Variable	Definition	Indicators	Source
1.	Perceived Usefulness	The perceived usefulness is as a perception of the level of practicality that users feel in a technology.	- Faster - Improves performance effectiveness - Useful - Save time	(F. Davis, 1986, 1989b; Rahayu et al., 2017)
2.	Perceived Ease of Use	The perceived ease of use is the level of user expectations of the effort to use the system.	- Easy to learn - Easy to use - Easy to understand - Flexible	(F. Davis, 1986, 1989b; Rahayu et al., 2017)
3.	Perceived Risk	Perceived risk is a function of the uncertainty of the decisions made and the magnitude of the consequences of unsuccessful choices.	- Performance risk - Financial risk - Psychological risk - Social risk - Physical risk	(Dyki Bungang, 2010)
4	Perceived Security	Perceived risk is defined as the uncertainty faced by consumers when they cannot predict the consequences when making a purchase decision.	- Security guarantee - Data confidentiality	(Raman & Annamalai, 2011; Schiffman et al., 2012)
5.	Behavioral Intention	Interest in using is a person's desire to stick with a certain technology.	- Intent to use - Use anytime - Reusing	(F. Davis, 1986; F. D. Davis et al., 1989; Rahayu et al., 2017)
6.	Actual System Use/ Decision	Real use is the behavior or real condition of using an information system.	- Use - Duration of use	(F. Davis, 1986; F. D. Davis et al., 1989; Rahayu et al., 2017)

This study used an analysis method with a Structural Equation Modeling (SEM) equation model with a variant base, especially partial least squares (PLS) using the SmartPLS 3.0, data processing program. One type of SEM analysis is PLS, in this study PLS is as a soft modeling used to test the strength of weak data and explain whether there is a relationship between latent variables (Gozali & Latan, 2015; Latan & Noonan, 2017. The testing steps in SEM-PLS are: First, Evaluate Outer Model or Measurement Model. An outer model assessment analysis can show how manifest variables represent the latent variables to be measured. An evaluation of the outer model was conducted to assess validity and reliability.

Second, the inner model or structural model was evaluated. The evaluation analysis of the inner or structural model shows the approximate strength of the estimation between the latent or construct variables. In evaluating inner or structural models, partial least squares (PLS) can be seen from the values of R-Squares and Q2 Predictive Relevance. Third, hypothesis testing was carried out using simulations through SmartPLS 3.0, using the bootstrapping method on the sample. The test was carried out to minimize the problem of abnormalities in the research data variables (Gozali & Latan, 2015; Latan & Noonan, 2017).

RESULTS AND DISCUSSION

Result

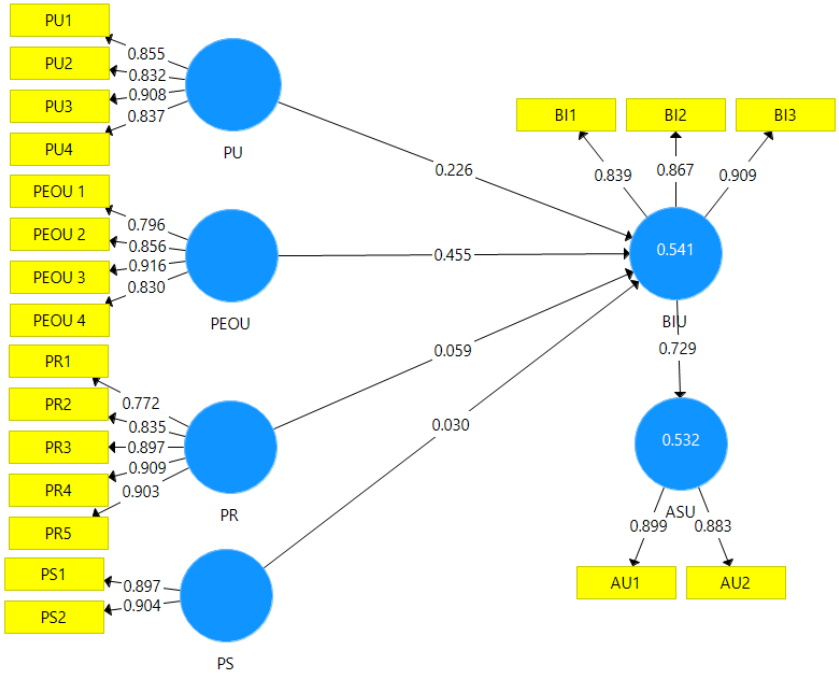
The initial stage of the study presents an overview of respondents' characteristics. Some characteristics described include sex, age, recent education, occupation, and regional origin. This overview can be written as follows.

Table 2. Respondent Demographic

Item	Quantity	Item	Quantity
Gender		**Age**	
Male	44	<18 Year	4
Female	66	18 – 25 Year	54
		25 – 50 Year	33
		>50 Year	9
Education		**Occupation**	
Elementary	3	PNS/TNI/POLRI	11
Junior High	12	Entrepreneur	28
Senior High	37	Employee	43
Undergraduate	25	Other	18
Postgraduate	23		
Income (Million Rp)		**Regency**	
< 1	2	Sukoharjo	15
1 – 3	21	Karanganyar	17
3 – 5	46	Sragen	12
> 5	31	Boyolali	15
		Klaten	16
		Wonogiri	14
		Kota Surakarta	11
QRIS Payment			
Mobile Banking	67		
E-Wallet	33		

Source: data processed (2022)

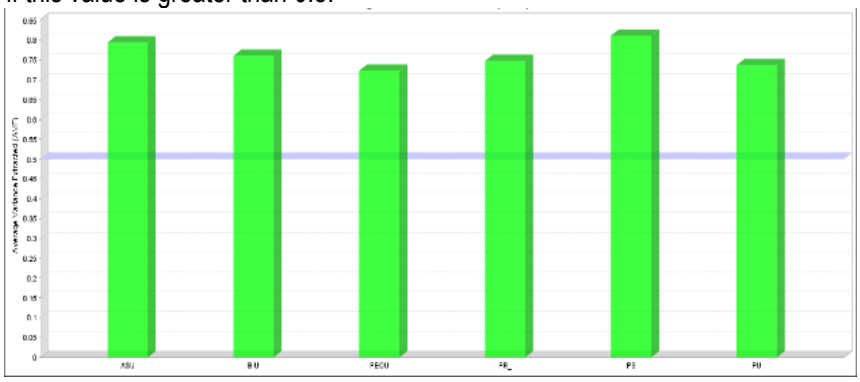
The model estimation in this study uses the PLS Algorithm on SmartPLS. A provision for testing the unidimensionality of each variable by examining convergent validity. The assessment of convergent validity is by looking at the loading factor value under the condition that it must be more than 0.7. Still, for the standardized loading factor value itself, if it is above 0.6, the reflective size of the indicator is said to be high if the correlation is more than 0.7, with the measured variable (Ghozali & Latan, 2015).



Graph 2. Loading Factor

Source: data processed (2022)

From the results of Graph 2 above, the load of each indicator is greater than 0.6, indicating that the construction is acceptable. In addition to being seen from the load factor, for convergence validity assessment it can be seen from the average extracted variance (AVE) value. In comparison, for the AVE measurement it is considered valid if this value is greater than 0.5.



Graph 3. Average Variance Extracted (AVE)

Source: data processed (2022)

Based on Graph 3, the Average Variance Extracted (AVE) > 0.5 means that the value meets the AVE requirements and is valid. The discriminant validity test, namely, the indicator value of cross-loading, must be higher than other indicators or can be seen from the cross-loading value for each variable > 0.70 (Ghozali Latan, 2015). The results of the discriminant validity test are as follows:

Table 3. Cross Loading

	ASU	BIU	PEOU	PR	PS	PU
ASU1	0.899	0.672	0.591	0.577	0.620	0.646
ASU2	0.883	0.627	0.484	0.481	0.474	0.460
BI1	0.716	0.839	0.701	0.672	0.687	0.691
BI2	0.565	0.867	0.564	0.575	0.482	0.524
BI3	0.603	0.909	0.598	0.59	0.495	0.515
PEOU1	0.489	0.493	0.796	0.76	0.596	0.617
PEOU2	0.46	0.628	0.856	0.816	0.727	0.707
PEOU3	0.546	0.679	0.916	0.897	0.747	0.788
PEOU4	0.562	0.632	0.893	0.868	0.642	0.662
PR1	0.506	0.503	0.802	0.772	0.594	0.609
PR2	0.466	0.624	0.865	0.835	0.731	0.704
PR3	0.546	0.679	0.816	0.897	0.747	0.788
PR4	0.527	0.628	0.842	0.909	0.655	0.658
PR5	0.532	0.615	0.832	0.903	0.656	0.659
PS1	0.6	0.575	0.695	0.672	0.897	0.835
PS2	0.512	0.595	0.748	0.742	0.904	0.832
PU1	0.559	0.566	0.682	0.656	0.814	0.855
PU2	0.493	0.58	0.736	0.734	0.813	0.832
PU3	0.543	0.603	0.744	0.700	0.788	0.908
PU4	0.55	0.559	0.649	0.633	0.639	0.837

Source: data processed (2022)

Based on Table 3, the results show that the value or correlation of the latent variable in the blocked indicator is greater than other variables, meaning that the latent construct results are better than other measures. Then, the value of cross-loading on one of the variables already shows a result greater than 0.70. This shows that there was no discriminant validity problem in the cross-loading analysis.

Reliability tests were used to demonstrate the instruments' consistency, accuracy, and correctness in the measurement construct. Reliability tests can be measured using two criteria, namely Cronbach's alpha and composite reliability with a value greater than 0.7, but a value between 0.6 and 0.7 is always accepted. take. (Ghozali & Latan, 2015).

Table 4. Reliability

	Cronbach's Alpha	Composite Reliability
ASU	0.741	0.885
BIU	0.844	0.905
PEOU	0.872	0.913
PR	0.915	0.937
PS	0.768	0.896
PU	0.881	0.918

Source: data processed (2022)

Based on Table 4, it can be seen that the calculation results of Cronbach's alpha and Composite Reliability measurement values are more than 0.7 and show that respondents are consistent in answering questions. Furthermore, it can be concluded that all constructs in this study have good reliability.

The value of R-Square can explain the effect of exogenous variables on endogenous variables; the value of R-Square must be greater than 0.50. The R-Square values of 0.75, 0.50 and 0.25 represent strong, moderate, and weak patterns, respectively (Ghozali & Latan, 2015).

Table 5. Determination Test

	R Square	R Square Adjusted
ASU	0.532	0.527
BIU	0.541	0.522

Source: data processed (2022)

Based on Table 5, the actual system use (ASU) value is 0.527, and the behavioral intention to use (BIU) value is 0.522, indicating that this study's results are in the moderate category. This means that all variables affected BIU by 52% and ASU by 52.2%.

After testing for convergence, discriminant validity and reliability, the next step is to test the hypothesis. The value of the inner model represented the degree of significance of the hypothesis test. A significance test was performed using the bootstrapping method. According to Latan and Ghazali (2015) hypothesis testing was carried out by examining the magnitude of t-statistics using a significance level of 5% = 1.96. The hypothesis is accepted if the t-statistic is greater than 1.96, and rejected if the t-statistic value is smaller than 1.96 (Rastini & Respati, 2021).

Table 6. Bootstrapping

	Hypothesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
PU -> BIU	H_1	0.226	0.222	0.225	4.904	0.031**
PEOU -> BIU	H_2	0.455	0.483	0.393	7.057	0.024**
PR -> BIU	H_3	- 0.059	0.033	0.370	11.158	0.007***
PS -> BIU	H_4	0.030	0.039	0.199	11.151	0.008***
BIU -> ASU	Mediating	0.729	0.736	0.057	12.849	0.000***

Source: data processed (2022)

Discussion

The results of the analysis of the influence of perceived usefulness (PU) on behavioral intention to use (BIU) resulted in a t-statistic of 4,904 > 1,984, with the original sample showing positive numbers. So, it can be concluded that perceived usefulness (PU) positively affects behavioral intention to use (BIU). Then the mediation between behavioral intention to use (BIU) to actual system use (ASU) shows a significant value so that the intention to use strengthens the decision of use in use so that the first hypothesis is accepted. Perceived Usefulness is a form of individual belief that the use of a particular system increases the effectiveness of its performance. The perception

of usability can describe the subjective probability of potential users that using a new technology system can be useful and provide reliable decision model predictions when using information systems (Musyaffi & Kayati, 2020). An attitude is a positive or negative attitude that a person feels when deciding to act towards something (F. Davis, 1986).

Users' trust can influence the use of a system through perceived expediency. The usefulness of these service features can encourage user enthusiasm for continuing to use them. The presence of a payment system with a sophisticated QR-Code-based feature called QRIS provides benefits to the public in the modern era. In particular, the people of Soloraya, as a millennial generation who play a role in technology development, using QRIS can help fast, safe, and easy transactions. The previous research that supports this is the Huddin & Masitoh (2021), Rastini & Respati (2021), Wahyudi & Yanthi (2021) and Wandira et al. (2022) which states that the perception of usability has a significant effect on the attitude of using Mobile Payment by analyzing that respondents feel the benefits when using Mobile Payment because it streamlines time, increases work effectiveness and encourages a positive attitude towards acceptance service.

The results of the analysis of the influence of perceived ease of use (PEOU) on behavior intention to use (BIU) resulted in a t-statistic of 7,057 > 1,984 with the original sample showing positive numbers. So, it can be concluded that perceived ease of use (PEOU) positively affects behavioral intention to use (BIU). Then the mediation between behavioral intention to use (BIU) and actual system use (ASU) shows a significant value so that the intention to use strengthens the decision to use in its full use, so the second hypothesis is accepted. According to (F. Davis, 1989a), the perception of convenience is a parameter that represents a user's belief that the use of technology is not complicated. Users' frequency of use and interaction with the system indicate that the system can be easily recognized, operated, and used by users (Rahayu et al., 2017). Then, The attitude of use is a positive or negative behavior that a person feels when deciding to act on something (F. Davis, 1989a).

QRIS payment transactions can be easily performed by scanning barcodes on platforms with QRIS service features. In mobile banking and e-wallets (e.g., Dana, OVO, LinkAja, GoPay), the QRIS feature can be directly accessed through an icon that reads QRIS. In addition to being easy to use for transactions, the QRIS service feature is easy to learn and the process is easy to understand; its use is very flexible and can be accessed anytime and anywhere so that users can feel the ease of witnessing. The previous studies that support the analysis are Huddin & Masitoh (2021), Rastini & Respati (2021), Wahyudi & Yanthi (2021) and Wandira et al. (2022) which show that the perception of convenience has a significant positive effect on the adoption of technology or the Mobile Payment application with the results of respondents' analysis easy to learn, understand and use a technology service.

The results of the analysis of the effect of perceived of risk (PR) on behavioral intention to use (BIU) yielded a t-statistic of 11,158 > 1.984, with the original sample showing a negative number. So, it can be concluded that perceived risk (PR) negatively affects behavioral intention to use (BIU). Then the mediation between behavioral intention to use (BIU) and actual system use (ASU) shows a significant value so that the intention to use weakens the decision to use in actual use, so the third hypothesis is accepted. These results indicate that partially perceived risk significantly negatively affects online shopping using a QRIS. This value also indicates the direction of a negative relationship, which means that the higher the risk in transactions using QRIS, the lower the public interest in using QRIS, which generally impacts decreasing the amount of use (actual system use). Payments using the QRIS model have low-risk potential because they are made in real time and are based on a password. Only vulnerabilities can arise from carelessness in maintaining the privacy of the technology used, for both mobile banking and e-wallets.

The results of this study support the findings of Lee & Huddleston (2010) who propose five dimensions of perceived risk in online shopping: privacy, time, performance, finance, and social risk. All of these risks influence consumers' decisions to shop online. If the potential risk can be minimized by user privacy, this will increase the security of use. Thus, the possibility of buying online increases because the risk received can be reduced. Therefore, perceived risk has a negative influence on online shopping intentions.

The analysis of the effect of perceived security (PS) on behavioral intention to use (BIU) yielded a t-statistic of 12,849 > 1.984, with the original sample showing a positive number. Thus, it can be concluded that perceived security (PS) positively affects behavioral intention to use (BIU). Then the mediation between behavioral intention to use (BIU) and actual system use (ASU) shows a significant value so that the intention to use strengthens the decision to use in actual use and the fourth hypothesis is accepted.

Based on the analysis results, QRIS users tend to have high security concerns. This is because the security method for the gadget is carried out in layers, starting from the password from the gadget to the QRIS service provider application. Apart from passwords, the security feature is authentication in the form of email notifications or notifications after transactions are made. From the point of view of service provider vendors, this is intended so that the application can provide good security features to increase satisfaction during the user experience. However, security holes still exist. Such as theft, they are hacking to phishing in the use of this technology. This finding supports the research conducted by Ashsifa (2020), who found that security perceptions play a role in technology use.

CONCLUSION

Technological progress is a necessity that cannot be denied its existence. The presence of payment innovation should impact changing the culture from traditional transactions to digital-based transactions. However, the problem faced is the readiness and adjustment of society in the face of disruptive changes. Such rapid progress is not balanced with optimal knowledge, literacy and inclusion will affect the low adoption of technology.

With the TAM modification approach, this study tries to conduct an empirical study on the factors that influence people in using QRIS as part of adopting digital-based payments. The perception of usefulness is an important aspect because technology ideally provides benefits in the form of effectiveness and efficiency in making transactions. The perception of ease of use also plays an important role, because an easy technology system has the potential of many users. In addition, risk and security factors are also considered important in luring people to use QRIS as a digital payment. The public wants digital transactions to be minimally risky by paying attention to the security factor as a guarantee that the system protects users.

The research results entitled Modification of the Technology Acceptance Model for Analyzing Consumer Behavior in Using QRIS can have significant practical impacts and benefits, especially in the context of payment technology and consumer behavior. The following are some of the practical impacts and benefits that may arise from this research.

Increased QRIS Adoption, this research can help increase the level of implementation of QRIS (Quick Response Code Indonesian Standard) by understanding the factors that influence consumer behavior in using this technology. The research results can be used to design more effective marketing and education strategies. User Experience Improvements, by modifying the Technology Acceptance Model, this research can provide better insight into the factors that influence user experience in using QRIS. This can contribute to improved user interface, security and comfort of use.

In this research, the recommendations are that the government needs to promote non-cash transactions among the public to ensure the acceptance of technology usage facilities. This should be accompanied by adequate infrastructure, such as the availability of network providers, scalability, increased bandwidth, and regulations for the international acceptance of QRIS. Furthermore, for micro, small, and medium enterprises (MSMEs), offering attractive promotions to QRIS users is advisable to attract the public to use it effectively. The weakness of this study is that the number of samples is still limited, variables that need to be improved into more complex UTAUT modeling with various adjustments and of course considering MSMEs as an impact of using QRIS.

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