

Evaluating User Continuance Intentions for QRIS Mobile Payments Services Using Information System Success Model and Expectation Confirmation Model

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ABSTRACT

QRIS services on mobile payment applications are one of Indonesia's most popular payment methods, and they allow transactions by scanning or displaying the QR code. This enables mobile-based payments to be easy and flexible anywhere and anytime. As it grows and benefits, some obstacles exist regarding users' desire to continue using it. Some users decided to stop using the QRIS service for mobile payments due to indications of potential risks associated with the service. This research aims to find out what variables support or influence the intention to continue using QRIS services for mobile payments using quantitative methods and the information system success model (ISSM) and expectation confirmation model (ECM) frameworks by adding perceived risk and trust variables. The data collection technique used in this study was a questionnaires survey using Google Forms and applying purposive sampling techniques. The survey targeted QRIS service users aged 17 to 65 who experienced transactions using mobile payments (e-wallets and mobile banking). The data was collected from 513 respondents and analyzed using the partial least squares structural equation model (PLS-SEM) by Smart-PLS 4 software tools. The findings were that 10 hypotheses were declared accepted and five hypotheses were rejected. Based on the accepted hypothesis, research shows that satisfaction and trust influence the intention to continue using QRIS services for mobile payments. Satisfaction is a key factor that supports or influences a user's decision to continue using or utilizing QRIS payment services. The findings of this research can be an essential consideration for developers and companies providing QRIS services in mobile payments.

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1. INTRODUCTION

Continuous technological advances have brought big changes in making digital payments. Along with the development of payment systems, innovation through the use of mobile payments has become one of the most popular payment methods (Dahlberg et al., 2015). Mobile payments have dominated market share in various developed and developing countries (Franque et al., 2021). The advanced payment was brought into a QR code consisting of an arrangement of black and white boxes that store information that the mobile phone camera can read (Gao et al., 2018). The use of QR codes in Indonesia has experienced further development by introducing the Quick Response Code Indonesia Standard (QRIS) as a standardization of QR-based payment systems (Bank Indonesia, 2021). There are three main types of mobile payment services: e-wallet, e-money, and mobile banking (Rohmawati et al., 2023). However, only e-wallets and mobile banking can use the QRIS feature (Witjaksono et al., 2021).

In the mobile payment application, there is a main advantage to using the QRIS feature, namely that users can make payment transactions easily via mobile devices anywhere and anytime (Pal et al., 2021). There are several users QRIS services are reluctant to reuse due to potential risks the security it has, such as QR codes can be used for spreading viruses through mobile devices, which can result in theft of funds in mobile payment applications (Gao et al., 2018). So, individuals need to know the factors influencing continuance intention in using QRIS in mobile payments (Alrawad et al., 2023). Özer et al. (2013) revealed that the quality of the services used influences long-term use. Besides that, information aspects and system quality can also be considered factors that impact long-term use. This is also proven by several researchers such as Ali and Raza (2017); Raman and Aashish (2021), and Zhou (2013) in mobile payment systems shows that the quality of service, information, and systems influence continuance intention.

Several prior studies have applied various theoretical frameworks to the continuance intention of mobile payments. Shao et al. (2019) utilized the theory of diffusion of innovations (DOI), leading to an extension of the information technology continuance (ITC) model (Chen & Li, 2016). According to research by Franque et al. (2021) and Humbani and Wiese (2019), the expectation confirmation model (ECM) is applied as a theoretical basis for understanding continuance intention in mobile payments. The choice of an ECM model is based on the fact that this model has been proven and verified in several other studies and has been widely used to describe post-adoption behavior in various service contexts, including mobile payments (Lee & Kwon, 2011).

Even though the popularity of mobile payments is growing rapidly, research on continuance intention toward services QRIS for mobile payments is still limited. Several previous research studies only focused on continuance intentions in the general use of mobile payments, with fewer studies concentrating on the continued use of specific service features, particularly within the realm of mobile payment (Cao et al., 2018; Franque et al., 2021; Shao et al., 2019). There is a gap in research utilizing the combination of ECM and ISSM in the context of QRIS services in mobile payments. The ISSM model was chosen due to technology adoption decisions, usage behavior, and customer satisfaction. This can be used to analyze technology use behavior at an early stage. The ECM model predicts aspects related to the continued use of the system or service (Wu & Wu, 2019).

Trust is an important factor in influencing continuance intention to use QRIS services for mobile payments. In this research, trust is crucial in encouraging future transaction processes and developing long-term relationships (Zhang et al., 2019). In addition, perceived risk is also the focus of mobile payment service users due to the financial transaction process. Several users have stopped using QRIS services for mobile payments due to the potential risks involved (Gao et al., 2018). So, this research used the ECM model (Bhattacharjee, 2001) combined with the ISSM model (Delone & McLean, 2003) and two variables, namely the trust (Yuan et al., 2014) and the perceived risk (Cao et al., 2018), to identify continuance intention in the QRIS service on mobile payments.

This study explores the factors that influence continuance intention to use QRIS on mobile payment (e-wallet and mobile banking). Two research questions are posed:

RQ1. What variables support or influence continuance intention to use QRIS services on mobile payments?

RQ2. How do the variables perceived usefulness, satisfaction, trust, and perceived risk influence the continuance intention to use QRIS services on mobile payments?

2. RESEARCH FRAMEWORK

The quality of information is crucial, as it directly impacts users' satisfaction. Cidral et al. (2018) argue that information quality encompasses relevance, sufficiency, precision, and punctuality. Good information quality enhances users' satisfaction, as they rely on QRIS service on mobile payment systems, expecting reliable, relevant, and timely information (Gao et al., 2018). Users' initial expectations of information systems evolve during their usage, with information quality significantly influencing the confirmation of these expectations. Tam and Oliveira (2016) emphasize the importance of information quality in determining user satisfaction with mobile

banking. Similarly, Zhang et al. (2017) note that high-quality information content enhances user satisfaction with virtual learning community services.

H1. Information Quality (INFQ) significantly influences on Satisfaction (ST)

H2. Information Quality (INFQ) significantly influences on Confirmation (CT)

Delone and McLean (2003) introduced system quality, presenting it as the overall system quality performance. System quality represents the speed of access, good connection, and navigation (Cidral et al., 2018; Gao et al., 2018). QRIS service on mobile payment providers that accommodate the above user-perceived system quality can increase the level of expectations, thereby making it easier to use mobile payment services. In addition, the quality of the system can provide satisfaction when using QRIS services for mobile payments. Confirming users' initial expectations can influence mobile payment usage in the long term.

H3. System Quality (SYSQ) significantly influences on Satisfaction (ST)

H4. System Quality (SYSQ) significantly influences on Confirmation (CT)

Service quality encompasses assurance, personalization, reliability, and responsiveness. When users perceive a service as reliable and the QRIS service on mobile payment provider consistently offers support when needed, it confirms user expectations, encouraging continuance system usage (Tam & Oliveira, 2016). Ensuring service quality is essential for the providers of QRIS service on mobile payment to enhance user satisfaction, build trust in the service, and promote continued QRIS service mobile payment usage (Gao et al., 2018). Positive expectations during the acceptance process facilitate users' adoption of information systems, underscoring the critical role of service quality in confirming user expectations.

H5. Service Quality (SERQ) significantly influences on Satisfaction (ST)

H6. Service Quality (SERQ) significantly influences on Confirmation (CT)

Confirmation refers to users' evaluation of a product, service, or technology, which occurs when they compare their initial expectations with its performance (Franque et al., 2021). If their expectations are met, it results in positive confirmation, whereas unmet expectations lead to negative confirmation (Alraimi et al., 2015; Oghuma et al., 2016). In the context of QRIS service in mobile payment usage, confirming users' expectations enhances both user satisfaction and the perceived usefulness of the service (Susanto et al., 2016).

H7. Confirmation (CT) significantly influences on Satisfaction (ST)

H8. Confirmation (CT) significantly influences on Perceived Usefulness (PU)

Perceived usefulness is the degree to which individuals start to understand the advantages of using the IS (Davis, 1989). When users perceive the benefits of a service or system, it strengthens their long-term relationship with it (Lee, 2010; Rezvani et al., 2017). In the context of QRIS service in mobile payment, perceived usefulness is crucial as users recognize its benefits, leading to increased utilization of the system. Perceived usefulness significantly influences users' intention to continue using QRIS service in mobile payment. Earlier research indicates that perceived usefulness is very important to satisfaction and increases the intention to continue using IS (Cho, 2016; Joo et al., 2017).

H9. Perceived Usefulness (PU) significantly influences on Satisfaction (ST)

H10. Perceived Usefulness (PU) significantly influences on Continuance Intention (CI)

Satisfaction reflects an individual's comfort level when using QRIS services for mobile payments. This level of satisfaction is influenced by the service experience results, which can create long-term relationships and influence continuance intentions in use (Basak & Calisir, 2015; Bhattacharjee, 2001). If the user is satisfied with the service or system, long-term relationships become stronger (Cao et al., 2018; Franque et al., 2021). However, when users feel dissatisfied with something service, they may stop using it (Kumar et al., 2018). Several studies have confirmed that satisfaction is the influence that can increase continuity intention in motivating users to evaluate the individual performance of that service or system (Carillo et al., 2017; Cho, 2016; Mouakket, 2015).

H11. Satisfaction (ST) significantly influences on Continuance Intention (CI)

Trust represents users' belief level in the QRIS service provided through mobile payment. Lack of security will also increase the perceived risk and uncertainty associated with QRIS service on mobile payment post-adoption, potentially influencing the intention to continue usage. Numerous studies have demonstrated the impact of trust on the intention to continue using various services, including mobile payment (Cao et al., 2018), mobile wallets (Kumar et al., 2020), and mobile banking (Susanto et al., 2016). When users feel a service is reliable, they perceive it as trustworthy, which engenders feelings of satisfaction, whereas distrust can lead to dissatisfaction and negative evaluations (Cao et al., 2018). Trust has consistently shown a significant positive effect on satisfaction across various studies (Cao et al., 2018; Poromatikul et al., 2020; Susanto et al., 2016).

H12. Trust (TR) significantly influences on Satisfaction (ST)

H13. Trust (TR) significantly influences on Continuance Intention (CI)

Perceived risk refers to users' reactions to uncertainty and potential negative outcomes when utilizing a system or service (Yuan et al., 2014). QRIS services in mobile payment often entail risks related to privacy breaches, loss of personal data, and transaction security, which are significant concerns for consumers (Gao et al., 2018). Some users may worry about the possibility of their personal information being shared with other entities by the service provider. Perceived risk has a notable adverse impact on satisfaction with mobile payment usage (Chen & Li, 2016; Yuan et al., 2014). Furthermore, a negative relationship exists between perceived risk and the intention to continue using mobile payment services (Chen & Li, 2016; Rouibah et al., 2016; Shao et al., 2019).

H14. Perceived Risk (PR) significantly influences on Satisfaction (ST)

H15. Perceived Risk (PR) significantly influences on Continuance Intention (CI)

3. RESEARCH METHODS

3.1 Sampling

Based on a deep review of the literature, this study uses one of the non-probability sampling techniques, namely purposive sampling. Purposive sampling involves deliberately selecting samples based on specific criteria to gather pertinent information that may not be attainable from other sources (Taherdoost, 2016). Data collection took place over two weeks, from December 22, 2023, to January 4, 2024. During this data collection period, the minimum target number of respondents was 250 samples (Hair Jr et al., 2021), with predetermined criteria being predetermined, namely respondents aged at least 18 years who are users of QRIS services on mobile payment. Based on the data collection process, a total of 543 respondents completed online questionnaires. Subsequently, data screening was conducted, resulting in 513 datasets deemed suitable for further analysis.

3.2 Research Instrument

The research instrument comprises two sections written in Indonesian. The first section pertains to the demographic profile of the respondents, encompassing questions related to gender, age, education, and occupation, and two questions related to application use (mobile payment used and frequency of use). The second section consists of statements corresponding to indicators/items concerning information quality (INFQ), system quality (SYSQ), service quality (SERQ), perceived usefulness (PU), satisfaction (ST), confirmation (C), trust (T), perceived risk (PR), and continuance intention (CI).

Meanwhile, in this study, measurements are conducted using a 5 (five) point Likert scale, offering respondents five options for each question. These options

include strongly disagree with an assigned value of 1, disagree with a value of 2, neutral with a value of 3, agree with a value of 4, and strongly agree with a value of 5.

3.3 Data Analysis

This study employed partial least squares–structural equation modeling (PLS-SEM) for data analysis. PLS-SEM was chosen as it is widely recognized in the quantitative research community for assessing the relationships between independent and dependent variables in research models (Zuhdi et al., 2016). The PLS-SEM method adopts a regression-based approach, emphasizing efforts to minimize residual variance in the dependent variable. The PLS-SEM analysis in this study involves two tests: the outer model and the inner model.

4. RESULTS AND DISCUSSION

4.1 Demographic Analysis

Based on data from 513 respondents who filled out the questionnaire, the number of male respondents to this study was 208 people or 41% of the total 513 respondents. Meanwhile, the number of female respondents is 305, or 59% of the total 356 respondents. Respondents of the female gender dominated this study because women prefer to carry out simple payment transactions using QRIS services, as explained in the research (Franque et al., 2021) that the response from men tends to be lower when compared to the response from women in carrying out the payment process. Meanwhile, in terms of age distribution, the majority of respondents in this study were aged between 17 - 25 years old, with a total of 240 people or 90% of the total 513 respondents. This age group is mostly students or college students. This group of students is Generation Z, which is often the target of large-scale internet surveys because they are computer and internet users (Ozok et al., 2010).

Most of the respondents had the last education in SMA/SMK, with a total of 319 people and a total of 513 respondents. The next order is in the S1 education group, with a total of 126 people. Then, for respondents with the last D1/D2/D3/D4 education, there were 55 people. Education level is often a crucial factor that reflects online consumer behavior, as online consumers tend to be more educated than traditional consumers (Franque et al., 2021). The demographic profile of respondents is shown in Table 1.

Table 1 Demographic Profile of Respondents

Respondent profile	Total	Percentage
Gender		
Male	208	41%
Female	305	59%
Age		

Respondent profile	Total	Percentage
17 - 25 years	464	90%
26 - 35 years	34	7%
36 - 45 years	10	2%
46 - 55 years	1	0.2%
56 - 65 years	4	1%
Educational stage		
Secondary School	319	62%
Associate's Degree	55	11%
Bachelor's Degree	126	25%
Master's Degree	11	2%
Doctoral's Degree	2	0.4%

4.2 Measurement Model Test Results (Outer Model)

The outer model test is also called the measurement model. The first test is convergent validity. An indicator is considered valid if the outer loading of each indicator has a minimum threshold of 0.7 (Hair Jr et al., 2021). Table 2 displays the calculation results for convergent validity across all indicators/items. All 40 indicators examined in this study are valid, with outer loading values above 0.7.

Table 2 Convergent Validity Results

Indicator	Outer Loading	Information
CI1	0,784	Valid
CI2	0,828	Valid
CI3	0,866	Valid
CI4	0,827	Valid
CT1	0,800	Valid
CT2	0,806	Valid
CT3	0,815	Valid
CT4	0,799	Valid
INFQ2	0,702	Valid
INFQ4	0,753	Valid
INFQ5	0,744	Valid
INFQ6	0,795	Valid
INFQ7	0,802	Valid
INFQ8	0,725	Valid
PR1	0,826	Valid
PR2	0,887	Valid
PR3	0,859	Valid
PR5	0,804	Valid
PU1	0,790	Valid
PU2	0,771	Valid
PU3	0,804	Valid
PU4	0,798	Valid
PU5	0,781	Valid
SERQ1	0,754	Valid
SERQ2	0,802	Valid
SERQ4	0,800	Valid
SERQ5	0,809	Valid
ST1	0,785	Valid
ST2	0,785	Valid
ST3	0,823	Valid
ST4	0,796	Valid
ST5	0,790	Valid
SYSQ1	0,770	Valid
SYSQ2	0,780	Valid
SYSQ3	0,802	Valid
TR1	0,801	Valid
TR2	0,805	Valid
TR3	0,786	Valid
TR4	0,835	Valid
TR5	0,798	Valid

The next convergent validity test for each of these variables will employ the AVE criteria, with each variable having a minimum value of 0.5 so that each variable can be considered valid (Hair Jr et al., 2021). The result of the convergent validity test indicates that the AVE values for all nine variables are more than 0.5. The subsequent test examination involves test discriminant validity utilizing the Fornell-Larcker criterion, which states that the square of each variable AVE must be greater than its highest correlation with other variables. The results in Table 3 demonstrate that all variables satisfy this criterion, with their square root AVE values exceeding correlations with other variables, confirming their validity.

Table 3 Result of the Fornell-Larcker criterion

	CI	CT	INFQ	PR	PU	SERQ	ST	SYSQ	TR
CI	0,827								
CT	0,506	0,805							
INFQ	0,467	0,636	0,754						
PR	-0,056	-0,088	-0,133	0,845					
PU	0,422	0,508	0,538	-0,161	0,789				
SERQ	0,492	0,655	0,640	-0,212	0,599	0,791			
ST	0,589	0,679	0,626	-0,177	0,662	0,714	0,796		
SYSQ	0,390	0,563	0,650	-0,181	0,461	0,622	0,574	0,784	
TR	0,555	0,709	0,642	-0,173	0,508	0,668	0,677	0,527	0,805

The reliability is also assessed through two criteria: Cronbach's alpha and composite reliability, which must be greater than 0.7 (Hair Jr et al., 2021). This study cites Ekolu and Quainoo (2019), indicating that while Cronbach's alpha between 0.5 - 0.7 is generally deemed acceptable with sufficient reliability, it should be supplemented by a composite reliability value exceeding 0.7. The reliability test result demonstrates that all variables utilized in this study are reliable, as indicated in Table 4.

Table 4 Reliability Test Results

Variable	Cronbach's Alpha	Composite Reliability	Information
Continuance Intention (CI)	0,845	0,847	High
Confirmation (CT)	0,819	0,820	High
Information Quality (INFQ)	0,848	0,850	High
Perceived Risk (PR)	0,867	0,890	High
Perceived Usefulness (PU)	0,849	0,853	High
Service Quality (SERQ)	0,801	0,803	High
Satisfaction (ST)	0,855	0,856	High
System Quality (SYSQ)	0,687	0,689	Moderate
Trust (TR)	0,865	0,868	High

4.3 Structural Model Test Result (Inner Model)

This test encompasses model fit testing, path coefficient analysis, determination coefficient (R^2), effect size (f^2), and predictive relevance (Q^2). Model fit tests are conducted to evaluate the research model's suitability and mitigate or prevent specification errors, ensuring compatibility with the sample data. The criteria for fit model testing in this study include the standardized root mean square residual (SRMR), exact fit test (Euclidean and Geodesic values), and normed fit index (NFI). The fit model test results indicate that the research model is deemed satisfactory as it satisfies the specified criteria, as depicted in Table 5.

Table 5 Fit Model Result

Criterion	Limit Value	Model Value	Information
SRMR	< 0,08	0,053	Good fit
RMSttheta	< 0,12	0,108	Good fit
d_ ULS	< 95	2,262	Good fit
d_ G	< 95	0,723	Good fit
NFI	> 0,9	0,811	Marginal fit

The coefficient of determination test evaluates the accuracy of predicting the impact of independent variables on dependent variables. R^2 values range from 0 to 1, with higher values indicating better measurement accuracy. According to (Hair Jr et al., 2021), R^2 values fall into three categories: < 0.25 indicates weak, 0.25 - 0.75 indicates moderate, and > 0.75 indicates strong. Given that this research pertains to consumer behavior, an R^2 value of 0.20 is considered sufficiently high. The results of the coefficient of determination test are presented in Table 6.

Table 6 Coefficient of Determination Test Result

Variable	R Square	Information
Continuance Intention (CI)	0,397	High
Confirmation (CT)	0,517	High
Perceived Usefulness (PU)	0,258	High
Satisfaction (ST)	0,669	High

The effect size test (f^2) tests the predictive impact of specific variables on others within the model. According to Hair (2017), if the value of f^2 falls between 0.02-0.15, it indicates a small impact; between 0.15-0.35 suggests a moderate impact; and if it exceeds 0.35, it signifies a large impact. Conversely, if the f^2 value is less than 0.02, it suggests no impact on the model structure. The results of the effect size test indicate that: a) seven hypotheses or correlations demonstrate a small impact, including TR-CI, SYSQ-CT, ST-CI, INFQ-CT, PU-ST, CT-ST, and SERQ-ST; b) two hypotheses exhibit a moderate effect, which is SERQ-CT and CT-PU; c) and six hypotheses show no impact: PU-CI, PR-CI, SYSQ-CT, PR-ST, INFQ-ST, and SYSQ-ST.

The predictive relevance test (Q2) evaluates how independent variables (predictors) can predict the dependent variable. Hair Jr et al. (2021), a model exhibits predictive relevance if the Q2 value exceeds 0. This test calculates the Q2 value using the blindfolding method. The results of the predictive relevance test indicate that all dependent variables have Q2 values greater than 0, affirming that the model in this study possesses predictive relevance for estimating independent variables within the model.

The path coefficient analysis, which involves hypothesis testing, aims to assess the significance and strength of relationships between variables and to test hypotheses. Path coefficients typically range from -1 to +1. The bootstrapping procedure is employed to determine the significance of the coefficient (t-value) and the strength of the relationship (p-value) and test the hypotheses. Bootstrapping is conducted using a two-tailed test with a critical value of 1.96 (at a significance level of 5%). If the t-value exceeds the critical value, the coefficient is considered significant, and if the p-value is less than 0.05, the hypothesis can be accepted (Hair Jr et al., 2021). The results of the path coefficient test are detailed in Table 7.

Table 7 Results of Path Coefficients, t statistics, and p values

Hypothesis	Relationship	Original Sample (O)	t Statistics	p Values	Information
H1	INFQ → ST	0,048	1,024	0,306	Rejected
H2	INFQ → CT	0,314	7,067	0,000	Accepted
H3	SYSQ → ST	0,069	1,646	0,100	Rejected
H4	SYSQ → CT	0,124	2,278	0,023	Accepted
H5	SERQ → ST	0,222	4,765	0,000	Accepted
H6	SERQ → CT	0,377	7,550	0,000	Accepted
H7	CT → ST	0,193	4,334	0,000	Accepted
H8	CT → PU	0,508	15,419	0,000	Accepted
H9	PU → ST	0,279	7,185	0,000	Accepted
H10	PU → CI	0,032	0,707	0,480	Rejected
H11	ST → CI	0,820	7,051	0,000	Accepted
H12	TR → ST	0,180	4,115	0,000	Accepted
H13	TR → CI	0,292	5,938	0,000	Accepted
H14	PR → ST	-0,018	0,713	0,476	Rejected
H15	PR → CI	0,067	1,772	0,076	Rejected

Based on the test results, it was concluded that (H1 was rejected) and showed that information quality has no significant influence on satisfaction. This finding is consistent with previous research that states that information quality does not significantly influence satisfaction (Brown & Jayakody, 2008; Setyo & Rahmawati, 2015). This may occur because user satisfaction does not depend on the quality of information produced by the system. However, this does not significantly affect user satisfaction in using QRIS services, as users do not require much information when

using the service. Meanwhile, it was noticed that information quality positively and significantly influences confirmation (H2 accepted). The findings are in line with prior research, which demonstrates that information quality positively affects confirmations (Franque et al., 2021; Li & Shi, 2012; Limayem et al., 2007; Roca et al., 2006). High-quality information shapes users' acceptance and expectations of a service (Franque et al., 2021). Various attributes of high-quality information, such as accuracy, relevance, freshness, and timeliness, positively affect users' formation of expectations or anticipations regarding QRIS services in mobile payment. Users tend to harbor positive acceptance expectations when QRIS services offer easily understandable, reliable, and user-relevant information.

In contrast, a relationship that is positive and has no significant influence on system quality and satisfaction than (H3 rejected). This finding aligns with previous research, suggesting that system quality does not significantly affect user satisfaction (Erwin & Wijaya, 2019). Although QRIS systems have achieved a high level of maturity and homogeneity across various mobile payment platforms, users now pay more attention to the quality of services and information provided. With the increasing uniformity and consistency of system quality, users no longer encounter noticeable differences that can provide additional satisfaction. Based on the test results, it is concluded that system quality positively and significantly influences confirmation (H4 accepted). This finding is consistent with prior research that perceived system quality positively and significantly affects the confirmation (Dağhan & Akkoyunlu, 2016). Users who are sensitive to system quality tend to perceive QRIS mobile payment services as confirmable due to their functionality, including accessibility, navigation, and security. The rationale behind the observations in this study may be that perceived system quality enhances the utility benefits obtained by users from QRIS services.

Service quality also has a positive and significant influence on satisfaction (H5 accepted). The overall evaluation of users on service quality, particularly regarding QRIS services offered in mobile payment applications, can create a satisfying user experience when using them. If the QRIS service can meet or even exceed user expectations, it can trigger feelings of satisfaction because there is an alignment between user expectations and the perceived reality. This finding is relevant to previous research, which indicated that service quality affected satisfaction (Al Ardi & Yulisetiari, 2018; Kasiri et al., 2017; Wijaya et al., 2021). Moreover, the relationship between service quality and confirmation was positive and significant (H6 accepted). This indicates that service quality creates positive expectations and effectively ensures that the user experience meets their expectations. This finding aligns with previous research, which indicates that service quality positively influences confirmation (Dağhan & Akkoyunlu, 2016; Franque et al., 2021).

Furthermore, the statistical result indicated a positive and significant influence on confirmation and satisfaction (H7 accepted). Confirmation of the suitability of QRIS services in mobile payment to meet user expectations can encourage satisfaction, thereby increasing users' intention to reuse the service. This is consistent with previous research, which suggests that confirmation influences user satisfaction (Bhattacharjee, 2001; Franque et al., 2021; Susanto et al., 2016). Positive and significant influences are also shown in confirmation and perceived usefulness, which were positively and significantly influenced (H8 accepted). Users perceive that their initial expectations are met when using QRIS services in mobile payment, both in terms of service suitability and functionality. This finding also aligns with previous research, which suggests that confirmation positively influences perceived usefulness (Bhattacharjee, 2001; Franque et al., 2021; Mouakket, 2015; Yuan et al., 2014).

Next, a positive and significant relationship was also proven between perceived usefulness and satisfaction (H9 accepted). Users experience high satisfaction when they perceive significant benefits in using QRIS services in mobile payment during transaction processes. Efficient transaction processes, ease of use, and added value through promotions are key factors that can enhance the user experience and create a deeper sense of satisfaction, as proven by previous research (Bhattacharjee, 2001; Franque et al., 2021; Lai et al., 2013; Susanto et al., 2016). The relationship of perceived usefulness did not significantly affect continuous intention (H10 rejected). These findings are in contrast with previous research indicating that perceived usefulness positively influences continuance intention (Bhattacharjee, 2001; Liébana-Cabanillas et al., 2021). However, the results align with a study conducted by Franque et al. (2021) regarding the use of mobile payment applications. Perceived usefulness, such as ease of use, speed, and effectiveness in conducting transactions through QRIS services in mobile payment, may not always directly impact users' intentions to continue using the service.

According to the test result, it is shown that (H11 accepted). It means that satisfaction was positive and influenced continuance intention. These findings are consistent with previous research indicating that satisfaction positively influences continuance intention (Franque et al., 2021; Joo et al., 2017; Kumar et al., 2018; Yuan et al., 2014). Users demonstrate high levels of satisfaction and enjoyment with QRIS mobile payment services, creating a strong intention to continue using the service. Customer satisfaction is a key factor that can enhance users' intention to continue using financial services (Susanto et al., 2016).

In addition (H12 accepted), it was indicated that trust influenced satisfaction, and the relation was positive. These results are in line with previous research that shows that trust positively affects satisfaction (Cao et al., 2018; Poromatikul et al., 2020; Susanto et al., 2016). This trust impacts immediate satisfaction and maintains

positive evaluations from users over a longer period, even after they have used the service for a considerable time. Therefore, building and maintaining user trust is crucial for QRIS service providers in mobile payment to ensure user satisfaction. Then (H13 accepted) revealed that trust also influences, and it was positive. Users feel confident that QRIS services in mobile payment are reliable, safe to use, and provide good service, which encourages users' intention to continue using the service. The perceived trust built by users significantly impacts reducing risk and, as a result, can increase their desire to continue adopting QRIS services in mobile payment (Cao et al., 2018). When users feel that the risks of using the service are minimized and the quality of service is well maintained, this trust becomes key in stimulating users' intention to continue utilizing the service.

A positive relationship and no significant influence exists between perceived risk and satisfaction (H14 rejected). User satisfaction can be achieved when the perceived level of risk is low and conversely (Aldas-Manzano et al., 2011). The fact that perceived risk does not affect user satisfaction indicates that users feel comfortable and trust the security and reliability of QRIS services in mobile payment. The absence of perceived risk on continuance intention indicates that perceived risk does not directly influence continuance intention (H15 rejected). This finding aligns with the rest of Liébana-Cabanillas et al. (2015), that users do not feel concerned about potential risks that may arise when using QRIS services in mobile payment applications, and this does not impact their intention to continue using the service.

5. CONCLUSION

From the findings of this study, it can be concluded that trust and satisfaction influence the continuance of intention to use QRIS services in mobile payments. Satisfaction has the most significant impact on continuance intention, indicating that users are inclined to continue using QRIS services due to the satisfaction they derive from them. Furthermore, out of the four variables examined, namely perceived usefulness (PU), perceived risk (PR), satisfaction (ST), and trust (TR), only satisfaction and trust have a significant influence on continuance intention. Perceived usefulness and perceived risk do not significantly affect continuance intention, suggesting that these factors are not the primary determinants of users' decisions to continue using QRIS services in mobile payment.

This reaffirms that the sustainability of QRIS service usage is not solely determined by technical functionality or ease of use but also by the satisfaction users derive from their experiences. Therefore, enhancing user satisfaction and building trust through improving service quality are seen as strategic steps to support the sustainability of QRIS service usage in mobile payment applications. Thus, this research contributes to understanding the factors influencing continuance intention

in using QRIS services in mobile payments and provides practical implications for service providers to enhance service quality and build user trust to support the sustainability of QRIS service usage.

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