

The Influence of Perceived Usefulness, Ease of Use, and Sharia Financial Literacy on QRIS Users: A Case Study of UINSU Student MSMEs

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Article Info

Article history:

Received, 12-03-2026

Accepted, 08-04-2026

Published, 18-04-2026

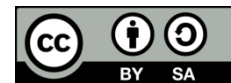
Keywords:

QRIS, Perceived Usefulness, Perceived Ease, Sharia Financial Literacy, Student MSMEs

ABSTRACT

The purpose of this study is to examine how MSME actors who are UINSU students use QRIS in relation to perceived utility, perceived ease of use, and Islamic financial knowledge. 26,512 current students from the 2022 cohort make up the research population, and 100 responders were chosen proportionately from each faculty. The approach used is quantitative with SEM-PLS to test causal relationships between variables. The study's findings indicate that while Islamic financial literacy has no discernible impact on QRIS adoption, perceived utility and simplicity of use do. Perceived usefulness is the most dominant factor because students feel the efficiency of transactions, ease of record-keeping, and increased business professionalism. Perceived ease of use also plays an important role in reducing technological barriers. On the contrary, Islamic financial literacy has not yet become a determinant of usage. The implication is that the adoption of QRIS needs to be focused on strengthening benefits and convenience as well as more practical and contextual Islamic financial learning.

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1. Introduction

The Indonesian payment system has undergone substantial modifications as a result of advances in digital technology. The Quick Response Code Indonesian Standard (QRIS), an innovation created to support financial inclusion for MSMEs by merging many payment service providers into a single, interoperable standard, was unveiled on August 17, 2019, by Bank Indonesia and the Indonesian Payment System Association (ASPI). It is expected that the implementation of QRIS will make the payment process easier and reduce adoption barriers for consumers and merchants (Syah et al., 2022).

In practice, non-digital payment systems still face various obstacles, such as limited transaction speed, high risk of recording errors, and low efficiency in financial management, especially in the MSME sector. In addition, the use of cash is also vulnerable to the risk of loss and does not sufficiently support transaction transparency. This situation poses a serious challenge for business actors, particularly young entrepreneurs, in facing increasingly digital-based economic demands. Therefore, the transformation towards a digital payment system has become an unavoidable necessity. QRIS has emerged as the national digital payment standard that integrates various financial service providers into a single QR code system, allowing transactions to be completed more quickly, safely, and efficiently (Sahputra & Siregar, 2025).

This ease of access allows users to respond to changes more quickly, avoid delays in decision-making, and improve the accuracy of necessary actions (Wicaksono et al., 2024). In line with this, digitalization also becomes a key factor in driving entrepreneurial growth in Indonesia, especially for young entrepreneurs (Kargapolov et al., 2020). This is in line with the implementation of QRIS as part of the national strategy to accelerate digital economic transformation and expand financial inclusion in society, which is in line with the implementation of QRIS as part of the national strategy to accelerate digital economic transformation and expand financial inclusion in society.

For Micro, Small, and Medium Enterprises (MSMEs), and new business pioneers such as students who run independent businesses, the use of QRIS becomes a practical solution to support cashless transaction activities. Lack of innovation can cause businesses to stagnate and make them more vulnerable to rivals (Amin et al., 2022). Students are a group of adolescents who exhibit consumer-oriented behavior, as they tend to explore emerging trends in their environment, including the use of electronic money (Arif & Imsar, 2023). However, the level of QRIS adoption among student MSME actors, especially in the environment of the State Islamic University of North Sumatra (UINSU), is still relatively low (Alfiandi et al., 2024).

This phenomenon indicates a gap between the great potential of digital financial technology utilization and its actual usage in the field (Saputra et al., 2024). In the context of micro-enterprises managed by students, student SMEs are part of entrepreneurial activities on campus or additional businesses. The use of QRIS has two advantages: it increases efficiency in transactions and also boosts professionalism and business competitiveness. However, in reality, the implementation of digital payment technology such as QRIS does not only depend on the availability of technology; psychological factors such as perceptions of benefits and ease of use, financial literacy, as well as cultural and regulatory aspects also influence the level of actual acceptance and usage.

The Technology Acceptance Model (TAM) and the Theory of Planned Behaviour (TPB) are the sources of perceived utility and usability, are strong predictors in influencing the intention and behaviour of technology adoption, according to a number of studies on the use of QRIS among MSMEs and younger generations. These findings are also reinforced by research on MSMEs in Indonesia that shows a significant effect of these two variables on the decision to use QRIS (Syah et al., 2022). Nevertheless, most previous studies tend to focus solely on the technological perception aspect, without integrating Islamic financial literacy as a relevant variable in the context of Muslim users, particularly in Islamic higher education environments. In addition, studies that specifically examine QRIS usage behavior

among student MSME segments are still relatively limited. Thus, a study need needs to be filled, specifically by thoroughly investigating how perceived utility, usability, and Sharia financial literacy affect QRIS use among UINSU student SMEs.

The Theory of Planned Behaviour (TPB) has a major impact on the decision-making process about the adoption of digital payments, in addition to the TAM element. Pupils who comprehend the idea of Islamic finance, particularly the ban on usury, transaction transparency, and ethical transactions, will be more careful in selecting financial products that are halal, safe, and Sharia-compliant, such as QRIS. Research conducted in Islamic educational institutions, such as UINSU (State Islamic University of Indonesia), is believed to influence the choice of payment mechanisms that are Sharia-compliant and considered halal and safe by Muslim entrepreneurs. Understanding Islamic finance requires a good understanding of Sharia-compliant financial instruments, the concept of muamalah, and proficiency in managing funds according to Sharia (Pratama & Nisa, 2024). Research linking financial literacy (both general and Sharia) with the use of digital payment services shows that individuals with a higher level of understanding tend to adopt new services more quickly, such as QRIS, especially when they are aware of the economic benefits and the existing risks (Sari & Suci, 2024).

Although there are many studies that examine the factors influencing the implementation of QRIS among public MSMEs and the general public, there are still few studies that focus on student-run MSMEs in Islamic higher education environments. MSMEs run by students have their own distinctive characteristics; they generally have a good educational background, have an understanding of technology, but at the same time, the decisions they make in business are often influenced by Sharia values and a lack of experience in management. Therefore, it is anticipated that integrating the Theory of Planned Behaviour with TAM variables (perception of utility and ease of use) will yield deeper insights into the factors that facilitate or impede the usage of QRIS in this context. Studies evaluating the use of QRIS among students show the contribution of benefits, ease, and

demographic factors to usage intention, but few have examined Islamic financial literacy as a specific independent variable (Syahrin et al., 2025).

One of the factors suspected to influence the level of QRIS usage is perceived usefulness. The degree to which people think utilising a technology might enhance their business performance is reflected in perceived usefulness (Davis and Davis 2015). The likelihood that someone will use the system increases with perceived usefulness. Electronic money, as an easy and practical payment tool, is inseparable from the public's acceptance of the presence of technology (Tambunan et al., 2023). Using digital technology can improve one's capacity for entrepreneurship, as business actors gain broader access to information, marketing, and various business support tools that facilitate operational processes (Ichsan et al., 2023). In the context of student MSMEs, the benefits of QRIS can be seen from the ease of transactions, time efficiency, and increased business professionalism, yet student entrepreneurs often have not experienced tangible benefits from using QRIS, such as improved business efficiency, faster transactions, and ease in financial recording. Some of them still choose cash transactions because they consider QRIS has not provided significant added value for small businesses. This creates a gap between theoretical perception and field reality. In fact, in the Islamic concept, every convenience and benefit of technology should be utilized to support the economic productivity of the community, as emphasized in the word of Allah SWT (QS. Al-Qashash: 77):

وَأَتَّبِعْ فِيمَا آتَاكَ اللَّهُ الدَّارَ الْآخِرَةَ وَلَا تَنْسَ نَصِيبَكَ مِنَ الدُّنْيَا وَأَحْسِنَ كَمَا أَحْسَنَ اللَّهُ إِلَيْكَ وَلَا تَبْغِ الْفُسَادَ فِي الْأَرْضِ إِنَّ اللَّهَ لَا يُحِبُّ الْمُفْسِدِينَ

“And seek, through what Allah has given you, the home of the Hereafter; and do not forget your share of the world, and do good as Allah has done good to you, and do not cause corruption on the earth. Indeed, Allah does not like those who spread corruption”.

This verse emphasizes that the use of technology and economic innovation such as QRIS is part of the effort to utilize God's blessings in the world to achieve the blessings of the hereafter through efficient and halal economic activities. As for the indicators of benefit (Rangkuti, 2024), increasing performance, facilitating work, and experiencing the benefits of technology. Another crucial factor is perceived simplicity of use. According to the TAM, perceived ease of use is a gauge of how much a person believes it will be easy to learn and utilise a particular system (Venkatesh & Davis, 2000). If university students running MSMEs consider QRIS easy to use, they will be more likely to adopt it in their daily business activities (Mayasari et al., 2024).

Easy transactions, quick payment processing, and security that gives consumers and business actors a sense of security are all impacted by how simple QRIS is to use (Nasution et al., 2025). However, the reality on the ground shows that not all students have the same perception of ease, resulting in a gap between the expected ease and the actual user experience. In Islamic economics, the principle of ease (taysīr) is a fundamental basis in every muamalah activity. Allah Swt in (QS. Al-Baqarah: 185) states:

رِيدُ اللَّهُ بِكُمُ الْيُسْرَ وَلَا يُرِيدُ بِكُمُ الْعُسْرَ

“Allah wants ease for you and does not want hardship for you”,

This verse serves as the basis that a good economic system is one that facilitates transactions, not one that makes them difficult. Therefore, ease of use of QRIS aligns with the spirit of sharia as long as it is used for halal and productive activities. The indicators of ease include (Rangkuti 2021), easy to learn, easy to use.

Another important component is knowledge of Islamic finance. The ability to comprehend, manage, and carry out financial decisions in line with Islamic principles is referred to as Islamic financial literacy (Nuroniayah et al., 2024). According to Ajzen (1991), "intentions are assumed to capture the motivational factors that influence a behaviour; they

are indications of how hard people are willing to try." The Theory of Planned Behaviour states that behavioural intentions, which are derived from attitudes, subjective norms, and perceived behavioural control, have an impact on an individual's financial decisions. This implies that having a thorough comprehension of Sharia finance might boost one's self-assurance and capacity to make wise financial selections.

In Indonesia, just 37.72 percent of people are financially literate in Islamic finance, compared to 75.28 percent in conventional finance (Gunawan & Siregar, 2021). The determining factors for inadequate Islamic financial literacy include limited public access to education about the services, benefits, risks, rights, and responsibilities associated with Islamic financial services (Suwandi & Marliyah, 2023). To be able to discern between what is allowed and what is forbidden in Islam, a Muslim must be literate or knowledgeable, so that every decision made can be in accordance with sharia principles and avoid practices that contradict religious provisions (Yuslem et al., 2023).

In the context of using QRIS, understanding the concept of halal-haram in digital transactions, usury, and Sharia economic efficiency becomes an important factor influencing usage decisions. Good financial literacy enables MSME actors to understand the benefits of QRIS as a payment instrument that aligns with Islamic financial principles. Putra et al. (2024), found that most MSME actors have not yet comprehensively understood the concept of Sharia finance in a digital context, such as the prohibition of usury and the principle of fairness in transactions. Low literacy causes the community to not yet be confident that digital transactions, including QRIS, can be carried out without violating sharia principles (Sjahrudin et al., 2024). In fact, Islam has emphasized the importance of understanding and managing finances correctly to avoid harmful practices, as stated by Allah Almighty in (QS. Al-Baqarah: 275).

الَّذِينَ يَأْكُلُونَ الرِّبَا لَا يَقُومُونَ إِلَّا كَمَا يَقُومُ الَّذِي يَتَخَبَّطُهُ الشَّيْطَانُ مِنَ الْمَسِّ ۚ ذَٰلِكَ بِأَنَّهُمْ قَالُوا إِنَّمَا الْبَيْعُ مِثْلُ الرِّبَا وَأَحَلَّ اللَّهُ الْبَيْعَ وَحَرَّمَ الرِّبَا ۚ فَمَنْ جَاءَهُ مَوْعِظَةٌ مِنْ رَبِّهِ فَانْتَهَىٰ فَلَهُ مَا سَلَفَ وَأَمْرُهُ إِلَى اللَّهِ ۗ وَمَنْ عَادَ فَأُولَٰئِكَ أَصْحَابُ النَّارِ ۗ هُمْ فِيهَا خَالِدُونَ

“People who consume (take) usury cannot stand except as one stands who is possessed by Satan due to (the pressure of) madness. Their condition is because they say (believe) that trade is the same as usury, while Allah has made trade lawful and forbidden usury. As for those who have received admonition from their Lord and then cease (from taking usury), it is for them what they earned earlier (before the admonition); and their affair (is left) to Allah. But whoever returns (to taking usury), then such are the inhabitants of the Fire; they will abide therein forever”.

This verse becomes the theological basis for the importance of Islamic financial literacy, so that Muslims can transact in the correct way and avoid usury practices and uncertainty (gharar). The low understanding of students regarding the Sharia aspects is what creates a knowledge gap between general literacy and Islamic financial literacy. By improving financial literacy, it is hoped that it can contribute to the enhancement of MSME businesses so that decision-making becomes wiser (Harahap et al., 2022). Some indicators of Islamic financial literacy include (Dahlia et al., 2020), knowledge, ability, attitude, and trust.

Based on the context above, the following are the goals of this study: (1) to assess the impact of perceived usefulness on the utilization of QRIS by UMKM students at UINSU; (2) to investigate how perceived usability affects QRIS usage; and (3) to examine how Islamic financial literacy influences or moderates the use of QRIS by combining the Theory of Planned Behaviour with the Technology Perspective (TAM), it is expected that this study can provide theoretical contributions that enrich the literature on the adoption of digital payments in the context of Islamic higher education, as well as providing practical implications for campus administrators, local policymakers, and payment service providers in designing interventions that can increase QRIS adoption in accordance with sharia values and the needs of students running MSMEs.

2. Methods

This study uses a quantitative technique to investigate the effects of perceptions of usefulness and convenience of use and the Structural Equation Modelling (SEM-PLS) method, and Sharia financial literacy on the use of QRIS among student MSME actors at UINSU. The selection of entrepreneurial students in the environment of the State Islamic University of North Sumatra (UINSU) as research subjects is based on their unique characteristics, namely as a group that is relatively technologically literate yet at the same time situated in an academic environment based on Islamic values. This condition makes them relevant for examining the integration between technology acceptance factors and Sharia financial literacy in decision-making regarding the use of QRIS. In addition, student MSME actors are a developing segment with great potential to drive the digitalization of the economy, but the level of adoption of digital payment technology among them is still not optimal, making it important to analyze further.

Because it can simultaneously evaluate the measurement and structural models and explain causal links between variables, the SEM-PLS model was selected (Hair et al., 2021). The associations between latent variables—perceived utility, ease of use, Sharia financial literacy, and QRIS usage—are investigated using this method. The two main stages of SEM-PLS analysis are the outer model and the inner model. The outer model is used to assess validity, reliability, and indicators using loading factor values (>0.7), Average Variance Extracted (AVE >0.5), Composite Reliability (CR >0.7), and Cronbach's Alpha (>0.7). Discriminant validity is assessed using cross loading and the Fornell-Larcker criterion.

Next, The inner model uses path coefficients and R-square (R^2) values to analyse the structural connections between latent variables and ascertain the degree and direction of influence between constructs. For significance testing ($p < 0.05$), the bootstrapping method is employed. This approach enables SEM-PLS to explain the direct and indirect effects between variables while also ensuring the validity of the measurement model that represents the behaviour of QRIS usage based on Islamic economic values. The study's population

consists of 26,512 active UINSU students from the 2022 cohort, according to data. The sample size was determined using Slovin's algorithm with a 10% error rate (e), yielding:

$$n = \frac{N}{1+N(e)^2} = \frac{26,512}{1+26,512(0,10)^2} = 99,64.....(1)$$

As a result, 100 respondents were used as samples. Proportional purposive sampling was the method employed to guarantee representation from a range of UINSU faculties. Data from UINSU students who are MSME actors was collected via an online survey using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). This study's questionnaire was modified using tools created for earlier research, namely the work of Rangkuti (2024) for perceived usefulness and ease, for Islamic financial literacy from the work of Dahlia et al. (2020), and for Qris usage adapted from Irvianti et al. (2023). Data analysis was conducted using SmartPLS software, including validity testing, reliability testing, and structural model testing.

3. Result

One hundred respondents who satisfied the requirements as student entrepreneurs of MSMEs at UINSU were given online questionnaires to complete in order to collect data for this study. With the aid of SmartPLS, the SEM-PLS method was used to analyse the data.

Measurement Model Evaluation (Outer Model)

Convergent Validity Test

Table 1. Outer Loading Results of Phase 1 Convergent Validity Test

	Ease	Literacy	User	Usefulness
KFN1				0.917
KFN2				0.924

KFN3			0.933
KFN4			0.903
KFN5			0.671
KFN6			0.895
KFN7			0.819
KFN8			0.909
KFN9			0.856
KMD1	0.946		
KMD2	0.870		
KMD3	0.965		
KMD4	0.967		
KMD5	0.928		
LK1		0.916	
LK10		0.923	
LK2		0.904	
LK3		0.892	
LK4		0.873	
LK5		0.857	
LK6		0.880	
LK7		0.829	
LK8		0.900	
LK9		0.912	
PQ1			0.939
PQ2			0.912
PQ3			0.930
PQ4			0.937
PQ5			0.916
PQ6			0.943
PQ7			0.939
PQ8			0.949
PQ9			0.920

Source: SmartPLS Output, 2025

The outer loading value of 0.671 for the variable utility indicator is below the ideal threshold of 0.70, indicating that the indicator has not yet been able to optimally represent the construct. Therefore, indicators with values below 0.70 need to be eliminated to improve the model's convergent validity. The removal of this indicator aims to enhance the quality of the measurement model, particularly in increasing the AVE value and consistency among the indicators. Subsequently, a retest is conducted in stage 2 to ensure that the remaining indicators meet the eligibility criteria and can better reflect the utility variable.

Table 2. Outer Loading Results of Phase 2 Convergent Validity Test

	Ease	Literacy	User	Usefulness
KFN1				0.913
KFN2				0.934
KFN3				0.943
KFN4				0.914
KFN6				0.894
KFN7				0.798
KFN8				0.919
KFN9				0.856
KMD1	0.946			
KMD2	0.870			
KMD3	0.965			
KMD4	0.967			
KMD5	0.928			
LK1		0.916		
LK10		0.923		
LK2		0.904		
LK3		0.892		
LK4		0.873		
LK5		0.857		
LK6		0.880		
LK7		0.829		

LK8	0.900	
LK9	0.912	
PQ1		0.939
PQ2		0.912
PQ3		0.930
PQ4		0.937
PQ5		0.916
PQ6		0.943
PQ7		0.939
PQ8		0.949
PQ9		0.920

Source: SmartPLS Output, 2025

All outside loading values exceeded the 0.70 threshold, according to the findings of the second stage testing, indicating that they satisfy the convergent validity requirements. This indicates that each indicator has a good capability in reflecting the latent construct being measured. Therefore, the indicators used are considered consistent and representative in explaining their respective variables. This improvement further demonstrates that the measurement model's quality was successfully improved by the elimination procedure in the preceding stage, making the model more reliable and appropriate for use in the subsequent analysis stage.

Discriminant Validity Test

Table 3. Cross Loading Results of Discriminant Validity Test

	Ease	Literacy	User	Usefulness
KFN1	0.796	0.090	0.760	0.913
KFN2	0.850	0.135	0.821	0.934
KFN3	0.906	0.116	0.862	0.943
KFN4	0.861	0.143	0.812	0.914
KFN6	0.763	0.179	0.740	0.894
KFN7	0.730	0.118	0.728	0.798

KFN8	0.868	0.161	0.829	0.919
KFN9	0.845	0.044	0.807	0.856
KMD1	0.946	0.038	0.844	0.903
KMD2	0.870	0.054	0.767	0.757
KMD3	0.965	0.089	0.848	0.890
KMD4	0.967	0.066	0.840	0.884
KMD5	0.928	0.130	0.843	0.886
LK1	0.029	0.916	0.069	0.090
LK10	0.097	0.923	0.089	0.148
LK2	0.087	0.904	0.090	0.139
LK3	0.090	0.892	0.076	0.142
LK4	0.038	0.873	0.071	0.102
LK5	0.047	0.857	0.064	0.096
LK6	0.076	0.880	0.079	0.128
LK7	0.080	0.829	0.065	0.115
LK8	0.094	0.900	0.126	0.134
LK9	0.029	0.912	0.037	0.076
PQ1	0.872	0.133	0.939	0.896
PQ2	0.773	0.057	0.912	0.797
PQ3	0.805	0.056	0.930	0.806
PQ4	0.795	0.069	0.937	0.812
PQ5	0.872	0.102	0.916	0.826
PQ6	0.806	0.126	0.943	0.823
PQ7	0.825	0.037	0.939	0.833
PQ8	0.851	0.101	0.949	0.837
PQ9	0.821	0.094	0.920	0.809

Source: SmartPLS Output, 2025

The cross-loading values indicate that each indicator has a higher correlation with its own construct compared to other constructs, thus meeting the criteria for discriminant validity. This confirms that each variable of usefulness, ease of use, Sharia financial literacy, and QRIS usage can be empirically distinguished well. In line with this, the previous convergent validity results also showed that all indicators have met the threshold ≥ 0.70 . These two findings' consistency suggests that the measuring model has a high degree of

validity. Consequently, the research tool is considered legitimate and appropriate for more examination.

Reliability and Construct Validity Test

Table 4. Results of Construct Reliability and Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Usefulness	0.965	0.967	0.971	0.806
Ease	0.964	0.966	0.972	0.876
Literacy	0.971	0.997	0.974	0.790
User	0.981	0.981	0.983	0.868

Source: SmartPLS Output, 2025

All variables have Cronbach's Alpha values and composite reliability (rho_A and rho_C) above the minimum criterion of 0.70, according to the test findings. This suggests that the internal consistency of each construct is excellent, where the indicators used are capable of measuring their respective variables in a stable and consistent manner. Furthermore, all variables' Average Variance Extracted (AVE) values are greater than 0.50, indicating that each construct can account for more than half of the variance of its indicators. This condition demonstrates that convergent validity has been well fulfilled, so the indicators used truly represent the constructs being measured. Overall, these findings attest to the measuring model's high degree of validity and reliability. When these requirements are met, the research tool can be deemed accurate and viable for usage in the subsequent analysis phase, namely for evaluating the structural model.

Model Fit Test

Table 5. Model Fit Test Results

	Saturated model	Estimated model
SRMR	0.043	0.043
d_ ULS	0.956	0.956
d_ G	2.876	2.876
Chi-square	1191.532	1191.532
NFI	0.785	0.785

Source: SmartPLS Output, 2025

The model exhibits an excellent degree of fit, according to the SEM-PLS model fit test findings. The model can accurately describe the data since the difference between the empirical covariance matrix and the estimated matrix is relatively modest, as indicated by an SRMR value of 0.043, which is below the 0.08 criterion. Furthermore, there are no discernible disparities between the observed data and the model estimation findings according to the d_ ULS (0.956) and d_ G (2.876) values, so it can be said that the model does not experience significant deviations. Although the Chi-square value of 1,191.532 is quite large, in the PLS-SEM approach this value is not the main indicator in assessing model fit, but is only informative. Furthermore, an NFI value of 0.785, which has surpassed the minimum threshold of 0.70, indicates that the model has an adequate level of fit. Overall, The model has satisfied the feasibility requirements, according to all goodness of fit indicators. The model can move on to the inner model evaluation stage to examine the associations between variables since all of the goodness of fit indicators indicate that the model has satisfied the feasibility requirements.

Structural Model Evaluation (Internal Model)

Determinant Coefficient Test (R^2)

Table 6. R Square Test Results (R^2)

Var. Dependen	R-square	R-square adjusted
User	0.817	0.812

Source: SmartPLS Output, 2025

An R-square value of 0.817 indicates that 81.7% of the Usage variable can be explained by the independent variables in the model, with the remaining 18.3% being influenced by factors outside the study model. This implies that the model can provide a strong explanation for the dependent variable. Additionally, the modified R-square value of 0.812 shows that the model is stable and unaffected by the number of variables or sample size, which is not significantly different from the R-square. This small difference indicates that the independent variables used are indeed relevant and not excessive in explaining the construct. Thus, the structural model can be categorized as having a high (substantial) explanatory power, making it capable of significantly explaining variations in the Usage variable and appropriate for use in hypothesis testing. Figure 1 below illustrates the results of the PLS-SEM Algorithm technique, showing R^2 next to the original sample in the research model.

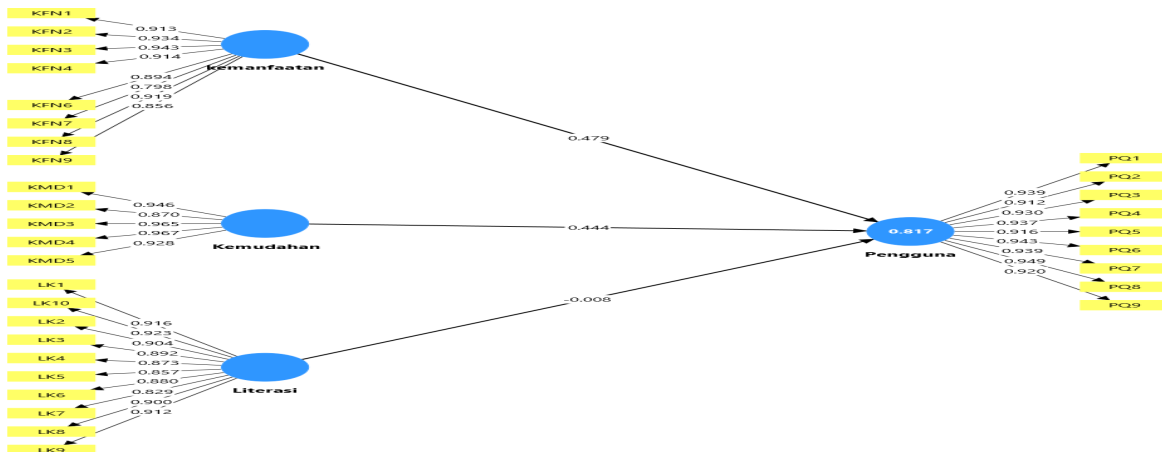


Figure 1. Output of the PLS SEM Model Algorithm

Path Coefficient Test

Table 7. Path Coefficient Bootstrapping Significance Test Results

	Benefits	Ease	Literacy	User
Benefits				0.479
Ease				0.444
Literacy				-0.008
User				

Source: SmartPLS Output, 2025

A value of 0.479 indicates that utility has a fairly significant positive impact on consumption. This suggests that if consumers think a service would be helpful, they are more likely to use it. This finding implies that usage habit is significantly influenced by usefulness. Additionally, a coefficient of 0.444 indicates that utilisation is positively impacted by convenience of use. Put otherwise, the more user-friendly a system or service is, the more likely it is to be adopted. Ease of use becomes a factor that directly increases interest and decisions in using the service.

Meanwhile, the coefficient value of -0.008 in the relationship between literacy and usage indicates a very weak influence and tends to be insignificant. This value, which is close to zero, suggests that literacy does not make a meaningful contribution in explaining usage variation. Therefore, literacy is not a significant factor influencing usage behaviour in the context of this study. Overall, these findings demonstrate that whereas literacy has no discernible impact on usage, the factors of usefulness and simplicity of use have a major influence. This confirms that practical factors and user experience are more decisive than knowledge in driving the use of services.

Effect Size Test

Table 8. Effect size results (f^2)

	Usefulness	Ease	Literacy	User
Usefulness				0.177
Ease				0.154
Literacy				0.000
User				

Source: SmartPLS Output, 2025

The effect size (f^2) value of 0.177 for the relationship between usefulness and usage indicates a small to medium effect category. This suggests that usefulness contributes fairly significantly to influencing usage, although it is not a dominant influence. Furthermore, the f^2 value of 0.154 for the relationship between ease of use and usage is also in the small to medium category. This means that ease of use plays a real role in increasing usage, but its contribution is still at a moderate level compared to other factors.

Meanwhile, the f^2 value of 0.000 in the relationship of literacy to usage indicates the absence of an effect or a very weak influence. This confirms that literacy does not contribute significantly to changes in the usage variable in this research model. Overall, these results reinforce previous findings that usefulness and ease are factors that play a role in influencing usage, while literacy does not have a significant impact in the context of this study.

4. Discussion

Analysis of the Variable Influence of Usefulness on the Use of QRIS

Perceived usefulness occupies a central position in explaining QRIS adoption behavior among UMKM students at UINSU. Within the framework of the Technology Acceptance Model (TAM), the concept of perceived usefulness is positioned not only as a psychological factor but also as a rational determinant that explains how individuals assess the economic value of a technology. According to Davis (1989) perceived usefulness reflects the user's belief that a system can enhance productivity, effectiveness, and financial

performance. In this study, perceived usefulness is manifested through transaction efficiency, payment speed, business professionalism, and ease of financial record-keeping.

The path coefficient value between QRIS usage and usefulness of 0.479 indicates a fairly strong positive influence. This means that the more intensively students use QRIS, the greater the benefits they experience, both operationally and managerially. This finding is also reinforced by the f^2 value of 0.177, which indicates the practical effectiveness of this variable in the structural model. In addition, the construct validity of usefulness is very strong, as seen from the AVE of 0.806 and composite reliability of 0.971.

These findings reinforce the results of the study Syah et al. (2022) which proved that the perception of usefulness is the main determinant of QRIS adoption among MSMEs in Indonesia. They found that direct economic benefits such as transaction efficiency and ease of financial management significantly increase interest in use. In Islamic economics, the principle of *maslahah* (usefulness) is an important foundation in economic decision-making. QS. Al-Qashash: 77 emphasizes that humans are commanded to utilize Allah's blessings for the good of this world and the hereafter. QRIS, when used for halal business activities, becomes a tool that supports efficiency, transparency, and economic blessing. Thus, technology is not only functionally valuable but also ethical if directed towards the welfare of the community.

Conceptually, these results indicate that direct experience with using QRIS shapes perceptions of benefits more strongly than merely theoretical information. Students running SMEs tend to evaluate technology based on its economic impact, not just the offered features. This suggests that in the context of SMEs, the approach to technology adoption is more utility-driven rather than value-driven.

Analysis of the Variable Influence of Ease on QRIS Usage

The TAM framework states that ease of use directly influences intention to use and strengthens perceived usefulness. The path coefficient of the ease of use variable to utilisation is 0.444 with a f^2 value of 0.154, indicating that ease of use has a significant influence on the intensity of QRIS usage. This variable also shows very strong dependability, with an AVE of 0.876 and a Cronbach's Alpha of 0.964. These findings are consistent with studies by Nasution et al. (2025), which found that QRIS's simplicity, speed, and security are key elements in boosting adoption among Medan's halal SMEs. The principle of *taysir* (ease) in Islam is emphasized in QS. Al-Baqarah: 185 that Allah desires ease for people. In the context of muamalah, the ideal economic system is one that minimizes difficulty and increases efficiency. QRIS fulfills this principle because it simplifies transactions and reduces operational burdens.

These findings indicate that technology adoption among students is more driven by technical factors than by normative awareness. When technology is considered easy to use, psychological resistance decreases, making adoption decisions more rational and pragmatic. These findings align with research conducted by Fred Davis, which states that perceived ease of use has a significant influence in reducing individual psychological barriers to technology adoption. When a system is considered easy to use, individuals tend to accept the technology without deeply considering normative factors (Davis, 1989). In addition, research by Venkatesh & Davis (2000) also shows that ease of use plays an important role in shaping user attitudes, so that technology adoption decisions are more based on considerations of efficiency and convenience rather than social pressure. Thus, these various research findings confirm that ease of use can reduce psychological resistance and encourage more rational and pragmatic decision-making in digital technology adoption.

Analysis of the Variable Influencing Sharia Financial Literacy on the Use of QRIS

According to Ajzen's (1991) theory of planned behaviour, attitudes, subjective standards, and perceived control all have an impact on behavioural intentions. Sharia

financial literacy should influence attitudes and beliefs toward financial instruments. The path coefficient of sharia financial literacy on QRIS usage is -0.008 with $f^2 = 0.000$, meaning there is no significant effect. Although the construct reliability is very high ($CR = 0.974$), it does not contribute to user behavior. These findings are consistent with those of Dahlia et al. (2020) who found that without the motivation of observable economic rewards, literacy does not always directly affect financial decisions. This is also reinforced by Gunawan & Siregar (2021), who showed that literacy is not necessarily proportional to actual behavior.

Islam requires its followers to understand the principles of halal, usury, justice, and transparency (QS. Al-Baqarah: 275). However, in empirical reality, understanding sharia does not automatically become a behavioral motivation, especially if technology is considered neutral or not yet understood from the perspective of fiqh al-muamalat. These findings indicate the existence of a knowledge-action gap, which is a condition where students understand the principles of Islamic finance conceptually, but have not yet made them a primary consideration in making decisions regarding the use of financial technology such as QRIS. The weak influence of Islamic financial literacy in this study can be explained by the indicators used in the questionnaire, which generally include aspects of knowledge (understanding of riba, gharar, and halal principles), attitudes, as well as trust in the Islamic financial system.

Although respondents tend to have a fairly good level of knowledge, this aspect has not yet been internalized into actual behavior in the use of technology, because it is not accompanied by strong attitudes and beliefs in the context of digital transactions. As a result, QRIS is more perceived as a technical tool that emphasizes convenience and efficiency, rather than as an instrument considered based on religious values. This condition indicates that the Sharia financial literacy possessed by students is still cognitive in nature and has not reached the applicative stage in everyday economic practice. Therefore, this finding becomes an important critique for Islamic educational institutions to not only emphasize theoretical

aspects, but also to strengthen contextual and practical approaches in Sharia financial learning so that it can shape financial behavior in accordance with Sharia principles.

5. Conclusion

This study demonstrates that, in contrast to Islamic financial literacy, technological aspects like perceived utility and ease of use had a greater impact on the adoption of QRIS among student MSMEs. The research findings show that although students have a rudimentary comprehension of Islamic finance principles, this literacy has not been fully internalised in actual behaviour, especially when it comes to making decisions about the use of financial technology. Therefore, Islamic financial literacy has not become a major factor in the adoption of QRIS since it is still cognitive and has not reached the applicative stage in this context.

The scientific implication of this research is the need to develop a technology acceptance model that is more contextual by incorporating the value dimension, particularly Islamic financial literacy, as a variable that is measured not only from the aspect of knowledge but also from the aspects of attitude and behavior. Meanwhile, practically, the results of this study provide recommendations for Islamic educational institutions, especially universities, to strengthen a more applicable and contextual Islamic finance curriculum, thereby being able to encourage the integration between the understanding of Islamic values and the practice of using financial technology. In addition, for policymakers and digital payment service providers, more intensive educational efforts are needed regarding the halal aspects and Sharia compliance in the use of QRIS, in order to increase trust and adoption among student MSME actors.

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