

An Islamic Economic Perspective on the Influence of Perceived Ease of Use and Perceived Usefulness on QRIS Usage Decisions Through Attitude Toward Using as an Intervening Variable: Evidence from MSMEs in Gowa Regency

Azmi Yusriyah Naurah¹, Jamaluddin Majid², Sudirman³

^{1,2,3}Alauddin State Islamic University Makassar, South Sulawesi, Indonesia

Email: azmiyusriyahnaurah@gmail.com, jamal.majid@uin-alauddin.ac.id, sudirman.andri@uin-alauddin.ac.id

Keywords :

Perception of Convenience,
Perception of Usability,
Consumption Decisions,
Consumer Attitudes, QRIS,
Islamic Economics.

Abstract

This study aims to analyze the influence of the perception of ease of use and the perception of usability on the decision to use the Quick Response Code Indonesian Standard (QRIS), with user attitudes as an intervening variable in Micro, Small, and Medium Enterprises (MSMEs) in Gowa Regency in the perspective of Islamic economics. The type of research used is quantitative research with an explanatory approach. Data analysis was carried out using SmartPLS software version 4.11.4 through the Partial Least Squares (PLS) approach to test the validity, reliability, structural model, and research hypothesis.

The results of the study show that the perception of ease of use does not have a significant effect on the decision to use QRIS or on user attitudes. On the other hand, the perception of usability has a positive and significant effect on the decision to use QRIS as well as on user attitudes. In addition, user attitudes have a significant effect on the decision to use QRIS. In the mediation analysis, the user's attitude did not mediate the influence of the perception of ease of use on the decision to use QRIS, but succeeded in mediating the influence of the perception of usability on the decision to use QRIS.

Overall, the findings of this study show that the decision to use QRIS in MSMEs is more driven by the perception of benefits than the perception of ease of use. From an Islamic economic perspective, these results are in line with the principles of *maqasid al-shariah*, especially *maslahah* (public benefit) and *hifz al-mal* (protection of property), where the adoption of technology is expected to provide real benefits, increase efficiency, and ensure safe and transparent financial transactions.

INTRODUCTION

The development of digital technology has brought significant changes to the payment system in Indonesia. The transition from cash-based transactions to non-cash transactions continues to accelerate along with the growth of financial technology (fintech) that offers greater convenience, speed, and security in transactions. One of the innovations introduced by Bank Indonesia is the Quick Response Code Indonesian Standard (QRIS), which is a national QR code standard designed to integrate various digital payment services into one system that is easily accessible and used by the public (Apriadi & Chaidir, 2024; Safitri & Fihartini, 2024). The implementation of QRIS not only supports the digitization of payment systems, but also improves transaction efficiency for business actors, including Micro, Small, and Medium Enterprises (MSMEs).

MSMEs have a strategic role in the Indonesian economy because they make a significant contribution to economic growth, job creation, and improving community welfare (Trimulyana, 2024). In the digital era, MSMEs are required to adapt to technological developments to increase

business competitiveness. One form of adaptation is the use of QRIS as a digital payment method. Through QRIS, MSME actors can receive payments faster, safer, and more practically compared to conventional payment methods. However, the level of acceptance and use of QRIS among MSMEs still varies, which are influenced by various factors, both technical and psychological (Sodik & Riza, 2023).

In particular, South Sulawesi has great potential to become a center for sharia economic development. Majid stated that "making Makassar a laboratory for economic development and Islamic banking will contribute to accelerating economic growth in South Sulawesi" (Majid, 2014). Gowa Regency is one of the regions that has experienced sustainable growth in the number of MSMEs and has actively participated in the transformation of digital payments through the adoption of QRIS. However, not all MSME actors show the same level of technology acceptance. Some business actors have integrated QRIS in their business activities, while others still show different levels of use. This condition makes Gowa Regency a relevant location to examine the factors that affect the decision to use QRIS, especially from the aspects of the perception of ease of use, perception of usability, and user attitude.

To explain user acceptance of technology, one of the most widely used theoretical frameworks is the Technology Acceptance Model (TAM) developed by Fred Davis. This theory states that individual decisions in accepting and using technology are mainly influenced by two main constructs, namely the perception of ease of use and the perception of usability (Purnama et al., 2023). The perception of ease of use refers to an individual's belief that a technology can be used with minimal effort, while the perception of usability refers to the belief that the technology can improve user performance and effectiveness. These two factors are believed to influence user attitudes, which further shapes the decision to use a technology.

Although the Technology Acceptance Model (TAM) has been widely used in technology adoption research, previous studies have shown inconsistent results. Some studies have found that the perception of ease of use has a significant effect on technology usage decisions, while other studies have shown that the effect is not statistically significant. Similarly, in the perception of usability, some studies show a strong influence on usage decisions, while others give different results. This inconsistency shows that the relationships between variables in TAM are contextual and can be influenced by user characteristics, previous experience with technology, and the environment in which the technology is used (Soegoto et al., 2024).

In addition to the perception of ease of use and perception of usability, user attitudes towards the use of technology are also important factors in the Technology Acceptance Model (TAM). User attitudes reflect an individual's positive or negative evaluation of a technology. A positive attitude tends to encourage users to accept and use technology sustainably (Walean & Talumantak, 2021). Therefore, user attitudes can act as a mediating variable that connects the influence of the perception of ease of use and the perception of usability on technology usage decisions. In the context of QRIS adoption, the study of user attitudes is important because it can provide an understanding of the psychological mechanisms underlying the decisions of MSME actors in using digital payment systems (Sidin et al., 2024).

From the perspective of Sharia Economics, the use of QRIS also has relevance to the concept of *maqāṣid al-syarī'ah*, especially in the aspects of *maslahah* (benefit) and *ḥifẓ al-māl* (protection of property). A digital payment system that is able to increase transaction efficiency, security, and transparency can support the achievement of sharia goals in better safeguarding and managing assets. In addition, the principle of *taysīr* (convenience) in Islam provides the basis that

technological innovations that provide convenience and benefits to society are acceptable as long as they do not conflict with sharia principles (Latifah, 2024).

METHODS

This study uses a quantitative research design and is carried out in Gowa Regency with an estimated time of three months. Gowa Regency was chosen because it has a diversity of MSME sectors that are suitable to study the adoption of QRIS as a digital payment system, including trade areas, culinary centers, creative industries, and start-up communities. The location of the research was adjusted to the type of MSMEs being researched and the level of adoption of QRIS technology in each sector.

The data used in this study consisted of primary data and secondary data. Primary data was obtained directly from respondents through field data collection. The main source of primary data is MSME actors, especially business owners or managers who have adopted QRIS as a payment method. Data was collected through questionnaires, interviews, and direct observation at the business site. In addition, customers who use QRIS in culinary transactions are also involved as a primary data source to obtain information about their experiences and attitudes towards using QRIS.

Secondary data is obtained from available sources, such as government documents that include policies and programs to support the digitization of payment systems in MSMEs, as well as previous studies related to the adoption of QRIS in the MSME sector. Field observations are also carried out to directly monitor the use of QRIS in payment transactions.

The data collection technique in this study was carried out through two methods, namely questionnaire and literature study. Questionnaires are used as the main instrument to collect quantitative data through surveys that are distributed to respondents. The questionnaire consists of structured questions designed to measure respondents' characteristics, knowledge, attitudes, and behaviors related to the use of QRIS. Meanwhile, literature studies are conducted to collect relevant information from various sources, such as books, journals, theses, government documents, as well as Islamic economic references such as the Qur'an, to support the research theoretical framework.

The data analysis in this study was carried out using Structural Equation Modeling (SEM) with SmartPLS 3.0 software. This study uses the Partial Least Squares (PLS) approach in SEM. PLS-SEM is a variance-based method that is able to overcome some limitations of regression analysis and does not rely on strict assumptions such as data distribution, measurement scale, and sample size. This method is considered robust and widely used in social science research.

The population in this study is all Micro, Small, and Medium Enterprises (MSMEs) in Gowa Regency that have used or have the potential to adopt QRIS as a digital payment system. The MSME sector was chosen because of its strategic role in the regional economy and the increasing adoption of digital financial technology. The research sample included MSMEs in Gowa Regency during the research period. The sampling technique used is purposive sampling, which is the selection of respondents based on certain criteria that are in accordance with the research objectives.

The sample criteria include: (1) MSMEs that are actively operating in Gowa Regency, (2) have used or have access to QRIS as a digital payment system, (3) are willing to be research respondents, and (4) have data relevant to the research variables. Based on these criteria, as many as 310 MSME respondents were obtained as a sample in this study.

Operational Definitions and Scope of the Study

Operational definition refers to the procedure used to measure research variables or concepts so that they can be systematically observed and empirically tested. The goal is to provide a clear and objective understanding of the concepts being researched. Therefore, operational definitions have an important role in ensuring the consistency and validity of the data collected in a study (Rezi Safutri et al., 2024).

1. Independent Variable (X) An independent variable is a variable that is manipulated or studied to determine its effect on the dependent variable. In this study, the independent variables are as follows:

a. Perceived Ease of Use (PEOU) The perception of ease of use refers to the extent to which a person believes that the use of a system or technology does not require heavy and difficult effort. Previous research has shown that PEOU has a significant positive relationship with users' intention to adopt QRIS (Affifatusholihah et al., 2022).

b. Perceived Usefulness (PU) Perception of usability refers to the extent to which a person believes that the use of a system can improve its performance. The greater the benefits felt from using a system, the higher the likelihood of individuals accepting and using the system (Oematan et al., 2024).

2. Dependent Variable (Y) A dependent variable is a variable that is influenced by one or more independent variables in a research model. This variable is generally used to measure the outcome or impact that arises from changes in independent variables. In this study, the dependent variable is the decision to use QRIS, which is the decision-making process regarding whether users will continue to use QRIS as a digital payment method in daily transactions or choose alternative payment methods.

3. Mediation Variable (Z) In the context of this study, which examines the influence of the perception of ease of use and the perception of usability on the decision to use QRIS, user attitudes towards use play a role as a mediating variable. User attitudes have an important role in strengthening and explaining the relationship between the perception of ease of use, the perception of usability, and the decision to use QRIS. A positive attitude towards QRIS is expected to increase the likelihood of users adopting and using the digital payment system in a sustainable manner.

Hypothesis Testing

The hypothesis test in this study was carried out using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach with the help of SmartPLS software version 4.11.4. The analysis was carried out through two main stages, namely the evaluation of the measurement model (outer model) and the evaluation of the structural model (inner model). The evaluation of the outer model was carried out to assess the validity and reliability of the construct through factor loading, Average Variance Extracted (AVE), Composite Reliability, and Cronbach's Alpha testing. Furthermore, an internal model evaluation was carried out to test the relationship between research variables by assessing the coefficient of determination (R^2), effect size (f^2), and path coefficient.

Hypothesis testing was carried out using a bootstrapping procedure to obtain t-statistical values and p-values for each relationship between variables. The hypothesis is accepted if the p-value is < 0.05 and the t-statistic > 1.96 at a 95% confidence level. On the other hand, the hypothesis is stated to be unsupported if the p-value is > 0.05 and the t-statistic < 1.96 . In addition

to examining the direct influence, this study also analyzed the indirect influence to test the mediating role of user attitudes in the relationship between the perception of ease of use, the perception of usability, and the decision to use QRIS in MSMEs in Gowa Regency.

Results and Discussion

Descriptive Statistical Analysis

Descriptive statistical analysis was used to provide a preliminary overview of the characteristics of the research data as well as the tendency of respondents' responses to the variables studied. The purpose of the descriptive analysis is to present information about the distribution of data and the general condition of the research variables before further analysis using a structural model. In this study, descriptive statistical analysis was used to describe the characteristics of respondents and their perception of variables, namely Perception of Ease of Use (X1), Perception of Usability (X2), User Attitude (Z), and Decision to Use QRIS (Y) in MSMEs in Gowa Regency.

The results of the descriptive analysis provide an overview of the tendency of respondents' answers to each indicator used in the study, so that it can describe the level of acceptance and use of QRIS among MSME actors. The results of the descriptive statistical analysis are presented as follows:

Table 1
Distribution of Respondents by Business Type

Business Type	Number of Respondents	Percentage (%)
Culinary	113	36%
Cosmetics	45	14%
Convenience	40	13%
Wholesale	40	13%
Electronics	36	12%
Fashion	36	12%
Total	310	100

Referring to Table 1, the majority of respondents in this study are engaged in the culinary business sector, which is 113 respondents (36%). Furthermore, it was followed by cosmetic store businesses as many as 45 respondents (14%), while electronics and fashion businesses as many as 36 respondents each (12%). The remaining 80 respondents (26%) are included in other types of businesses. The dominance of the culinary sector shows that MSMEs in Gowa Regency are dominated by businesses that focus on meeting the daily needs of the community. These findings indicate that the culinary sector is one of the main drivers of the regional economy due to its relatively stable and sustainable demand.

Table 2
Distribution of Respondents by Business Duration

Business Duration	Number of Respondents	Percentage (%)
3 – 5 Years	173	56%

6 – 8 Years	96	31%
More than 9 Years	41	13%
Total	310	100

The findings also show that the majority of MSMEs are in a relatively stable stage of business development, where business actors have gone through the start-up phase and have experience in managing their businesses. In addition, the existence of MSMEs that have been operating for more than six years, including those with more than nine years of business experience, reflects a relatively strong level of sustainability and business continuity.

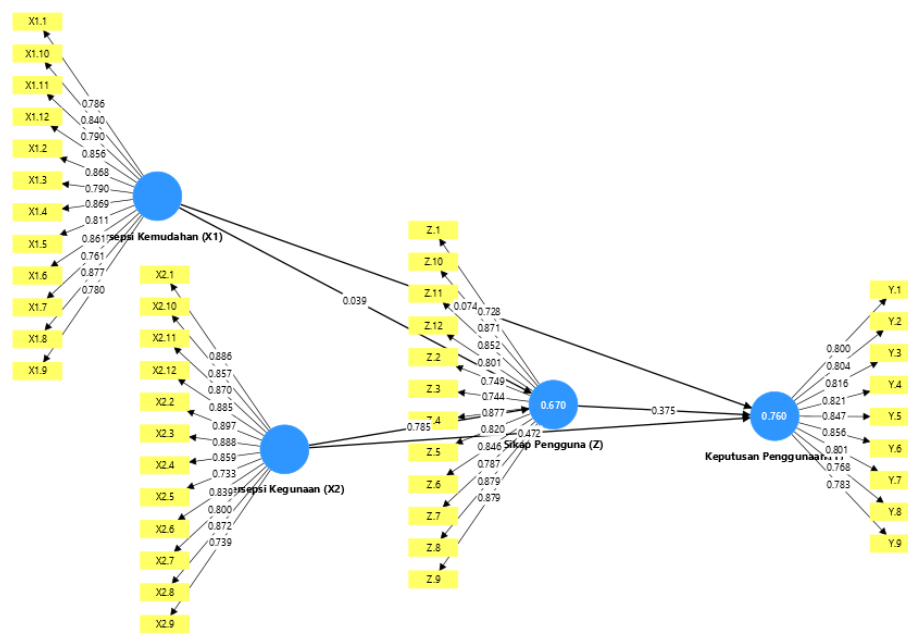
Hypothesis Testing Results

The hypothesis test in this study was carried out using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach with the help of SmartPLS software version 4.11.4. After the measurement model (outer model) is declared to meet the required validity and reliability criteria, the next stage is to evaluate the structural model (inner model) to test the relationship between the research variables.

Measurement Model Analysis (Outer Model)

The measurement model (outer model) aims to evaluate the relationship between latent variables and their indicators. Evaluation of the outer model includes testing the validity and reliability of the instrument. Validity testing consists of two stages, namely convergent validity and discriminant validity. Meanwhile, reliability testing was carried out through the evaluation of Cronbach's Alpha and Composite Reliability values. In this study, the evaluation of the outer model was carried out using the PLS Algorithm procedure with the help of SmartPLS software version 4.11.4.

Figure 1.
Structural Model



Source: Processed using SmartPLS Version 4.11.4.

Convergent validity refers to the extent to which indicators have a correlation with the latent construct they measure. This validity is evaluated through the relationship between the item score (or component score) and the construct score, which is reflected in the standardized loading factor value. The value indicates the degree of correlation between each indicator and the constructed being measured. The reflective indicator is declared to have adequate convergent validity if the loading factor value exceeds 0.70, indicating a strong relationship with the underlying construct.

Table 3
Outer Loading

	Perceived Ease of Use (X1)	Perceived Usefulness (X2)	Use Decision (Y)	Attitude Toward Use (Z)
X1.1	0.786			
X1.2	0.868			
X1.3	0.790			
X1.4	0.869			
X1.5	0.811			
X1.6	0.861			
X1.7	0.761			
X1.8	0.877			
X1.9	0.780			
X1.10	0.840			
X1.11	0.790			
X1.12	0.856			
X2.1		0.886		

X2.2		0.897		
X2.3		0.888		
X2.4		0.859		
X2.5		0.733		
X2.6		0.839		
X2.7		0.800		
X2.8		0.872		
X2.9		0.739		
X2.10		0.857		
X2.11		0.870		
X2.12		0.885		
Y1.1			0.800	
Y1.2			0.804	
Y1.3			0.816	
Y1.4			0.821	
Y1.5			0.847	
Y1.6			0.856	
Y1.7			0.801	
Y1.8			0.768	
Y1.9			0.783	
Z1.1				0.728
Z1.2				0.749
Z1.3				0.744
Z1.4				0.877
Z1.5				0.820
Z1.6				0.846
Z1.7				0.787
Z1.8				0.879
Z1.9				0.879
Z1.10				0.871
Z1.11				0.852
Z1.12				0.801

Source: Processed using SmartPLS Version 4.11.4.

Based on the results of the convergent validity test presented in Table 3, all measurement items have an outer loading value above the recommended threshold of 0.70, so that all indicators are declared valid. In the Ease of Use Perception construct (X1), there are twelve valid indicators with outer loading values ranging from 0.761 to 0.877. In the Usability Perception construct (X2), as many as twelve indicators met the validity criteria with values between 0.733 and 0.897. Furthermore, the QRIS Usage Decision construct (Y) consists of nine valid indicators with outer loading values ranging from 0.756 to 0.768. Meanwhile, the User Attitude (Z) construct consists of twelve indicators that are also declared valid with values between 0.728 and 0.879.

The validity of a construct can also be further evaluated through the value of Average Variance Extracted (AVE). A construct is declared to meet the criteria of convergent validity if the AVE value is greater than 0.50, indicating that the construct is able to explain more than half of the variance of its indicators.

Table 4
Average variance extracted

Variable	Average variance extracted (AVE)
Perceived Ease of Use (X1)	0.681
Perceived Usefulness (X2)	0.715
Use Decision (Y)	0.658
Attitude Toward Use (Z)	0.674

Source: Processed using SmartPLS Version 4.11.4.

Based on Table 4, the Average Variance Extracted (AVE) values for each construct are 0.681 for Ease of Use Perception (X1), 0.715 for Usability Perception (X2), 0.658 for QRIS Use Decision (Y), and 0.674 for User Attitude (Z). All constructs in this study had an AVE value that exceeded the recommended threshold, which was 0.50. Thus, it can be concluded that the entire construct meets adequate convergent validity and is declared valid for further analysis.

Table 5
Cross Loading

	Perceived Ease of Use (X1)	Perceived Usefulness (X2)	Use Decision (Y)	Attitude Toward Use (Z)
X1.1	0.786	0.579	0.492	0.480
X1.2	0.868	0.858	0.736	0.763
X1.3	0.790	0.547	0.482	0.452
X1.4	0.869	0.806	0.719	0.624
X1.5	0.811	0.553	0.484	0.444
X1.6	0.861	0.775	0.689	0.639
X1.7	0.761	0.498	0.413	0.338
X1.8	0.877	0.861	0.752	0.726
X1.9	0.780	0.511	0.461	0.441
X1.10	0.840	0.829	0.697	0.706
X1.11	0.790	0.548	0.484	0.457
X1.12	0.856	0.835	0.728	0.697
X2.1	0.749	0.886	0.755	0.696
X2.2	0.780	0.897	0.720	0.705
X2.3	0.760	0.888	0.741	0.705
X2.4	0.773	0.859	0.658	0.643
X2.5	0.650	0.733	0.691	0.655
X2.6	0.708	0.839	0.665	0.655
X2.7	0.671	0.800	0.646	0.634
X2.8	0.751	0.872	0.743	0.715
X2.9	0.648	0.739	0.687	0.675
X2.10	0.742	0.857	0.702	0.708
X2.11	0.741	0.870	0.759	0.711

X2.12	0.741	0.885	0.766	0.776
Y.1	0.739	0.703	0.800	0.722
Y.2	0.561	0.648	0.804	0.588
Y.3	0.519	0.625	0.816	0.628
Y.4	0.714	0.746	0.821	0.705
Y.5	0.554	0.643	0.847	0.605
Y.6	0.559	0.678	0.856	0.641
Y.7	0.528	0.592	0.801	0.609
Y.8	0.572	0.635	0.768	0.663
Y.9	0.657	0.731	0.783	0.743
Z.1	0.550	0.611	0.683	0.728
Z.2	0.603	0.643	0.710	0.749
Z.3	0.613	0.658	0.709	0.744
Z.4	0.552	0.639	0.676	0.877
Z.5	0.518	0.602	0.663	0.820
Z.6	0.597	0.714	0.623	0.846
Z.7	0.590	0.707	0.636	0.787
Z.8	0.665	0.755	0.689	0.879
Z.9	0.632	0.746	0.689	0.879
Z.10	0.649	0.754	0.671	0.871
Z.11	0.537	0.619	0.663	0.852
Z.12	0.488	0.570	0.598	0.801

Source: Processed using SmartPLS Version 4.11.4.

Based on Table 5, the cross loading values in the constructs of Perception of Ease of Use (X1), Perception of Usability (X2), User Attitude (Z), and Decision of Use of QRIS (Y) indicate that each indicator has a higher correlation to its respective constructs compared to other constructs. The results of the evaluation of convergent validity and discriminant validity showed consistent conformity, where all indicators were declared valid. These findings show that the measurement model has a good degree of conformity and is able to effectively distinguish between constructs. Therefore, the research instrument was declared valid and suitable for further analysis.

Table 6
Cronbach's Alpha

Variable	Cronbach's alpha
Perceived Ease of Use (X1)	0.958
Perceived Usefulness (X2)	0.963
Use Decision (Y)	0.935
Attitude Toward Use (Z)	0.956

Source: Processed using SmartPLS Version 4.11.4.

Based on Table 6, all variables in the model show Cronbach's Alpha values above the minimum threshold of 0.70, which indicates that the research instrument is reliable and has

internal consistency in measuring constructs. The Usability Perception Construct (X2) had the highest Cronbach's Alpha value of 0.963, followed by Ease of Use Perception (X1) of 0.958, User Attitude (Z) of 0.956, and QRIS Usage Decision (Y) of 0.935. Thus, the entire construct in the model has met the required reliability criteria and is suitable for further analysis.

Table 7
Composite Reliability

Variable	Composite reliability (rho_c)
Perceived Ease of Use (X1)	0.962
Perceived Usefulness (X2)	0.968
Use Decision (Y)	0.945
Attitude Toward Use (Z)	0.961

Source: Processed using SmartPLS Version 4.11.4.

Based on Table 7, all constructs in the model show a Composite Reliability value above the recommended threshold of 0.70, which indicates that all constructs are reliable. These results show that the indicators in each construct have a high level of internal consistency in measuring their respective variables. The Usability Perception Construct (X2) obtained the highest Composite Reliability value of 0.968, followed by Ease of Use Perception (X1) of 0.962, User Attitude (Z) of 0.961, and Decision of QRIS Use (Y) of 0.945. Therefore, all constructs in the model have met the Composite Reliability criteria and are declared worthy of further analysis.

Structural Model Analysis (Inner Model)

The analysis of the structural model (inner model) is carried out after the measurement model (outer model) meets the required criteria of validity and reliability. This analysis aims to evaluate the relationships between latent constructs in the research model as well as test the proposed hypothesis. In this study, the evaluation of the structural model was carried out using the value of the determination coefficient (R^2). This assessment aims to measure the extent to which independent variables are able to explain variations in dependent variables. The interpretation of R^2 values is divided into three categories, namely substantial (≥ 0.75), moderate (≥ 0.50), and weak (≥ 0.25).

Table 8
R-Square

Variable	R-square
Use Decision (Y)	0.760

Source: Processed using SmartPLS Version 4.11.4.

Based on the results of R-Square presented in Table 8, the R^2 value for the QRIS Use Decision construct (Y) is 0.760. This shows that 76.0% of the variation in QRIS Usage Decisions can be explained by exogenous constructs, namely Ease of Use Perception (X1), Usability Perception (X2), and User Attitude (Z). The remaining 24.0% variation was explained by other factors not included in the study. Therefore, based on the established R^2 value criteria, the structural model can be categorized as substantial, which shows strong explanatory ability.

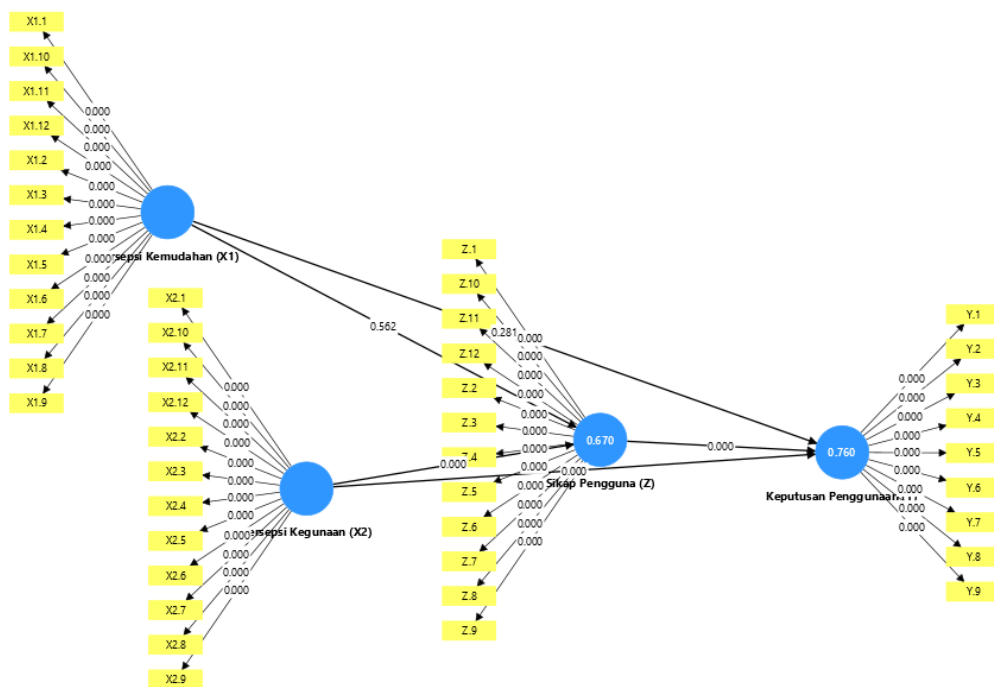
Hypothesis Testing

Hypothesis testing was carried out using the bootstrapping procedure to obtain path coefficient, t-statistic, and p-value values for each relationship between constructs. This analysis was conducted to examine the direct and indirect influence between Perception of Ease of Use (X1), Perception of Usability (X2), User Attitude (Z), and Decision to Use QRIS (Y). The hypothesis is stated to be accepted if the p-value is < 0.05 and the t-statistic > 1.96 . On the other hand, the hypothesis is stated to be unsupported if the p-value is > 0.05 and the t-statistic < 1.96 .

In addition to examining the direct influence, this study also analyzed the indirect influence to test the mediating role of User Attitude (Z) in the relationship between Perception of Ease of Use (X1), Perception of Usability (X2), and Decision to Use QRIS (Y). The results of the hypothesis test are presented based on the path coefficient, t-statistic, and p-value values obtained through the bootstrapping procedure, which is the basis for determining whether the proposed hypothesis is supported or not supported.

The results of hypothesis testing using PLS bootstrapping analysis are presented as follows:

Figure 3.
Path Diagram



Source: Processed using SmartPLS Version 4.11.4.

Table 9
Path Coefficient Bootstrapping Direct & Indirect Effect

Path Coefficient	Original sample (O)	T statistics (O/STDEV)	P values
Perceived Ease of Use (X1) → QRIS Usage Decision (Y)	0.074	1.079	0.281

Perceived Usefulness (X2) → QRIS Usage Decision (Y)	0.472	5.168	0.000
Perceived Ease of Use (X1) → User Attitude (Z)	0.039	0.580	0.562
Perceived Usefulness (X2) → User Attitude (Z)	0.785	13.767	0.000
User Attitude (Z) → QRIS Usage Decision (Y)	0.375	5.540	0.000
Perceived Ease of Use (X1) → User Attitude (Z) → QRIS Usage Decision (Y)	0.015	0.573	0.566
Perceived Usefulness (X2) → User Attitude (Z) → QRIS Usage Decision (Y)	0.295	5.070	0.000

In SmartPLS software, the statistical significance of each hypothetical relationship is tested using a bootstrapping procedure, which is a technique that results in resampling of the original data. This approach is used to minimize potential problems related to data abnormalities and produce more robust model parameter estimation.

Based on the results presented in Table 9, the results of hypothesis testing with the bootstrapping method can be interpreted as follows:

1. The Effect of Ease of Use Perception (X1) on QRIS Usage Decisions (Y)
Hypothesis 1 (H1) proposes that the Perception of Ease of Use has a significant effect directly on the Decision to Use QRIS. Based on the results in Table 9, the relationship resulted in a p-value of 0.281 and a t-statistic of 1.079. Since the p-value is > 0.05 and the t-statistic < 1.96 , H1 is not supported. Thus, the Perception of Ease of Use does not have a statistically significant effect on the Decision to Use QRIS.
2. The Effect of Usability Perception (X2) on QRIS Usage Decision (Y)
Hypothesis 2 (H2) proposes that Perception of Usability has a significant effect directly on the Decision to Use QRIS. Based on the results in Table 9, the relationship resulted in a p-value of 0.000 and a t-statistic of 5.168. Since the p-value < 0.05 and the t-statistic > 1.96 , H2 is supported. Thus, Usability Perception has a positive and statistically significant effect on QRIS Use Decisions.
3. The Effect of Ease of Use Perception (X1) on User Attitudes (Z)
Hypothesis 3 (H3) proposes that the Perception of Ease of Use has a significant effect on User Attitude. Based on the results in Table 9, the relationship resulted in a p-value of 0.562 and a t-statistic of 0.580. Since the p-value > 0.05 and the t-statistic < 1.96 , H3 is not supported. Thus, the Perception of Ease of Use has no significant effect on User Attitude.
4. The Effect of Usability Perception (X2) on User Attitudes (Z)
Hypothesis 4 (H4) proposes that Perception of Usability has a significant effect on User Attitude. Based on the results in Table 9, the relationship resulted in a p-value of 0.000 and a t-statistic of 13.767. Since the p-value is < 0.05 and the t-statistic > 1.96 , H4 is supported. Thus, Usability Perception has a positive and statistically significant effect on

User Attitude.

5. The Influence of User Attitude (Z) on the Decision to Use QRIS (Y)

Hypothesis 5 (H5) proposes that User Attitudes have a significant effect on QRIS Use Decisions. Based on the results in Table 9, the relationship resulted in a p-value of 0.000 and a t-statistic of 5.540. Since the p-value < 0.05 and the t-statistic > 1.96 , H5 is supported. Thus, User Attitudes have a positive and significant effect on QRIS Use Decisions.

6. Indirect Influence of Ease of Use Perception (X1) on QRIS Usage Decision (Y) through User Attitude (Z)

Hypothesis 6 (H6) proposes that the Perception of Ease of Use has a significant indirect effect on the Decision to Use QRIS through User Attitude. Based on the results in Table 9, the relationship resulted in a p-value of 0.566 and a t-statistic of 0.573. Since the p-value > 0.05 and the t-statistic < 1.96 , H6 is not supported. Thus, the Perception of Ease of Use does not have a significant indirect influence on the Decision to Use QRIS through User Attitude.

7. Indirect Influence of Usability Perception (X2) on QRIS Use Decision (Y) through User Attitude (Z)

Hypothesis 7 (H7) proposes that Usability Perception has a significant effect indirectly on QRIS Use Decisions through User Attitudes. Based on the results in Table 9, the relationship resulted in a p-value of 0.000 and a t-statistic of 5.070. Since the p-value is < 0.05 and the t-statistic > 1.96 , H7 is supported. Thus, Usability Perception has a significant indirect influence on QRIS Use Decisions through User Attitudes.

Discussion

Direct Effect of Ease of Use Perception (X1) on QRIS Usage Decisions (Y)

The results of the first hypothesis test (H1) show that the Perception of Ease of Use does not have a significant effect on the Decision to Use QRIS in MSMEs in Gowa Regency. This is evidenced by a p-value of 0.281 (> 0.05) and a t-statistic of 1.079 (< 1.96), so H1 is not supported. These findings show that the ease of use of QRIS is not a determining factor in the decision of MSME actors to adopt QRIS. In other words, the convenience aspect is no longer the main consideration in the decision-making process of using the technology.

Based on the Usage Decision Theory, these results indicate that ease of use is no longer the main factor in the decision-making process. In this theory, usage decisions are the result of a series of processes, ranging from the recognition of needs, information search, alternative evaluation, usage decisions, to post-use behavior. When a technology has been widely used and is generally perceived to be easy to use, then the convenience aspect tends to lose its differentiating role in the decision-making process. As a result, users are more likely to consider other factors such as the benefits and practical value offered by the technology.

These findings are in line with the Extended Technology Acceptance Model (TAM2) developed by Venkatesh and Davis, which states that at a more mature stage of use, the acceptance of technology is not only influenced by the perception of effort, but also by instrumental evaluations of the real benefits and outcomes that the technology can demonstrate. As the user experience increases, the basis for the acceptance of technology shifts from the aspect of convenience to the assessment of the effectiveness and benefits produced.

The results of this study are different from several previous studies that show a significant influence between the perception of ease of use and the intention to use technology. For example, Kim (2022) found that the Perception of Ease of Use has a significant effect on the intention to use mobile payment applications. This difference suggests that the role of convenience perception can vary depending on the context, user characteristics, and stage of technology adoption.

However, these findings are in line with the research of Setyaningsih and Putri (2022) who stated that the Perception of Ease of Use does not have a significant effect on the decision to use QRIS. In addition, Muhammad et al. (2024) stated that the use of QRIS has become habitual behavior, so that the convenience aspect is no longer the main consideration in decision-making, because this feature has been considered a standard characteristic of digital payment systems.

From the perspective of Islamic Economics, these findings show that QRIS has fulfilled the principle of *taysir al-mu'amalah* (ease of transactions). However, such convenience is no longer enough to directly influence usage decisions. Although the principle of *taysir* is an important part of *Maqashid al-Shariah*, the principles of Islamic economics do not make convenience the sole basis for economic decision-making.

The insignificance of the influence of the Perception of Ease of Use indicates a shift in behavior, from the orientation of convenience to the orientation of usefulness (*maslahah*) and the protection of property (*hifz al-mal*). This also shows that in the context of modern financial technology, the *taysir* principle has been normalized, where convenience is seen as a minimum requirement, no longer the main differentiating factor in technology adoption. Thus, within the framework of *Maqashid al-Shariah*, this condition does not reduce the relevance of sharia principles, but rather reinforces that the goals of sharia go beyond the aspect of convenience towards the achievement of wider benefits.

Direct Influence of Usability Perception (X2) on QRIS Usage Decision (Y)

The results of the second hypothesis (H2) test showed that Usability Perception had a positive and statistically significant effect on the Decision to Use QRIS in MSMEs in Gowa Regency. This is evidenced by a p-value of 0.000 (< 0.05) and a t-statistic of 5.168 (> 1.96), so that H2 is declared supported. These findings show that Usability Perception is one of the key factors that influence the decision of MSME actors in adopting QRIS. In other words, the greater the benefits felt from using QRIS, the higher the tendency of business actors to use the digital payment system.

These findings are in line with Usage Decision Theory, which states that individuals tend to choose the alternatives that provide the most benefit in meeting their needs. At the alternative evaluation stage, individuals compare various options based on their expected value and benefits before finally making a use decision. Thus, when QRIS is perceived to provide high benefits, users will be more likely to choose it over other alternative payment methods.

The results of this study also support the Technology Acceptance Model (TAM) developed by Fred Davis, which defines Usability Perception as an individual's belief that the use of a technology can improve performance and work effectiveness. In addition, TAM2 developed by Venkatesh and Davis (2000) confirms that Usability Perception is one of the most powerful determinants in technology acceptance. The model explains that when users are familiar with a technology, adoption decisions are driven more by the tangible benefits obtained than by mere technical convenience.

A number of previous studies have supported this finding. Hidayat et al. (2024) found that the perception of benefits has a positive and significant effect on the decision of MSMEs to adopt QRIS. In the study, the perception of benefits is in line with the concept of Perception of Usability in TAM, which is the belief that technology can improve user performance capabilities. These findings reinforce the argument that the practical value generated by a technology has an important role in shaping adoption decisions.

However, there are also studies that show different results. Harryanto et al. (2019) found that Usability Perception did not have a significant effect on the intention of using internet banking. The study shows that even though users are aware of the benefits of a technology, adoption decisions are not always determined by the perception of usability alone, but are also influenced by previous experience, behavioral tendencies, and other contextual conditions.

From the perspective of Islamic Economics, these findings are in line with the principles of *maslahah* (benefit) and *hifz al-mal* (protection of property). Furthermore, the results of this study show that there is a dominant utilitarian orientation, where economic decisions are based on the level of benefits produced. This reflects that MSME actors act in accordance with the principle of *jalb al-masalih* (achievement of benefits), by viewing QRIS not only as a means of payment, but also as a means to optimize financial resources and increase economic efficiency. Therefore, the adoption of QRIS can be interpreted as a practical manifestation of *hifz al-mal*, as it contributes to the more effective management, protection, and utilization of assets in modern economic activities.

Direct Effect of Perception of Ease of Use (X1) on User Attitude (Z)

The results of the third hypothesis (H3) test showed that the Perception of Ease of Use did not have a significant effect on User Attitudes towards QRIS in MSMEs in Gowa Regency. This is evidenced by a p-value of 0.562 (> 0.05) and a t-statistic of 0.580 (< 1.96), so H3 is not supported. These findings indicate that the ease of use of QRIS is not a decisive factor in shaping user attitudes. In other words, although QRIS is perceived as easy to use, it is not directly able to form a more positive attitude from MSME actors towards the technology.

Based on the Theory of Decision Use, user attitudes are psychological results formed in the stage of searching for information and evaluating alternatives. The results of this study show that the ease of use of QRIS is not enough to create a more positive affective evaluation of the technology. This indicates that ease of use tends to be seen as a basic feature, rather than a factor that can significantly shape user attitudes.

These findings are also in line with the Extended Technology Acceptance Model (TAM2) developed by Venkatesh and Davis, which states that the influence of Ease of Use Perception can weaken as user experience and familiarity with a technology increases. When individuals are used to using digital systems, ease of use is no longer the main factor in attitude formation, but rather shifts to the assessment of the benefits obtained.

The results of this study are different from Trilaksono (2024) which found that the Perception of Ease of Use has a significant effect on the Attitude of Using QRIS in students. This difference can be caused by differences in respondent characteristics, level of technological experience, and the context of use between students and MSME actors.

However, the results of this study are in line with Chen and Tseng (2012) who found that the Perception of Ease of Use does not have a significant effect on User Attitudes in the context of e-learning systems. The study shows that when users have had enough experience with digital

technology, convenience is no longer the main factor in forming attitudes towards the use of technology.

From the perspective of Islamic Economics, although the principle of *taysir* (convenience) is highly recommended in *muamalah*, the formation of attitudes is not only determined by the aspect of convenience alone. User attitudes are more influenced by the perception of benefits and the level of trust in the system. Therefore, attitudes towards QRIS are more determined by the extent to which the technology provides *maslahah* (benefit and welfare) in economic activities rather than the level of convenience offered. These findings reinforce that within the framework of *Maqashid al-Shariah*, the value of benefits and economic value has a more dominant role than ease in influencing individual evaluations of financial technology.

Direct Influence of Usability Perception (X2) on User Attitude (Z)

The results of the fourth hypothesis test (H4) show that Usability Perception has a positive and statistically significant effect on User Attitudes towards QRIS in MSMEs in Gowa Regency. This is evidenced by a p-value of 0.000 (< 0.05) and a t-statistic of 13.767 (> 1.96), so that H4 is declared supported. These findings show that Usability Perception is an important factor in shaping user attitudes towards QRIS. In other words, the greater the benefits felt by MSME actors, the more positive their attitude towards the use of QRIS will be.

Based on Usage Decision Theory, individuals tend to develop positive attitudes towards perceived alternatives to provide meaningful benefits in meeting their needs. Thus, the higher the perception of the usefulness of QRIS, the more positive the user's attitude towards the technology. These findings suggest that Usability Perception has an important role in shaping user attitudes before entering the end-use decision stage.

Theoretically, in the Technology Acceptance Model (TAM) developed by Fred Davis, Usability Perception is the main factor in shaping attitudes towards technology. Users will be more likely to have a positive attitude if the technology used is perceived to be able to improve performance and provide real benefits. The results of this study show that MSME actors in Gowa Regency view QRIS as a technology that provides real and practical benefits in their business activities.

A number of previous studies support this finding. Sochiffan (2022) in his research on the use of QRIS for tax payment found that Usability Perception has a significant effect on Usage Attitudes, and this attitude subsequently affects usage intentions. A similar pattern was also found by Astuti et al. (2022) in the context of using QRIS for *infaq* and *alms* transactions, which shows that Usability Perception has a positive effect on the attitude of using QRIS, as well as the attitude has a significant effect on the intention to use the technology.

However, there are also studies that show different results. Tyas and Darma (2020) found that Usability Perception does not have a significant effect on User Attitudes in the context of technology acceptance in Islamic financial institutions. These results show that the perception of benefits alone is not always enough to form a positive attitude, as attitudes are also influenced by other factors such as convenience, user experience, and usage habits.

From the perspective of *Maqashid al-Shariah*, these findings reflect the principle of *maslahah*, where individuals tend to accept and form positive attitudes towards systems that provide real benefits. As a digital payment system, QRIS facilitates transactions and financial management, thereby encouraging the formation of positive user attitudes and supporting the sustainable use of technology in economic activities.

Direct Influence of User Attitude (Z) on QRIS Use Decision (Y)

The results of the fifth hypothesis test (H5) show that User Attitudes have a positive and statistically significant effect on the Decision to Use QRIS on MSMEs in Gowa Regency. This is evidenced by a p-value of 0.000 (< 0.05) and a t-statistic of 5.540 (> 1.96), so that H5 is declared supported. These findings show that User Attitudes are an important factor in shaping QRIS usage decisions. In other words, the more positive the attitude of MSME actors towards QRIS, the higher their tendency to adopt and use the technology.

Based on the Theory of Decision Use, attitude is an individual's evaluative response to an object that is formed through the process of searching for information and evaluating alternatives. Attitudes serve as psychological tendencies that influence an individual's behavioral choices toward the various alternatives available. Therefore, the decision of use can be understood as a manifestation of a pre-formed attitude.

These findings are also in line with the Technology Acceptance Model (TAM) developed by Fred Davis, which states that User Attitudes are an important variable that bridges users' perceptions of technology with usage intentions and decisions. Within the framework of TAM, individuals who have a positive attitude towards a system will be more likely to accept and use the technology in their daily activities. The results of this study show that MSME actors who have a positive attitude towards QRIS are more likely to decide to use it in their business activities.

A number of previous studies have supported this finding. Erwinsyah et al. (2023) found that the intention of use has a positive and significant effect on the actual use of QRIS digital payment technology. The findings show that when users have a positive attitude and intention towards QRIS, actual usage behavior tends to increase. However, there are also studies with different results, such as Fecira and Abdullah (2020), which found that User Attitudes do not have a significant effect on user intent in the context of e-learning system adoption. This suggests that a positive attitude does not always directly lead to a use decision, as other factors such as habits, needs, and previous experience can also play a role.

From the perspective of Islamic Economics, attitude can be related to the concept of *niyyah* (intention), which is the basis of every human action. A positive attitude towards QRIS reflects good intentions in utilizing technology to improve business performance. Thus, the decision to use QRIS is not only based on rational considerations, but is also influenced by the orientation of internal values that are in line with Islamic principles.

Indirect Influence of Ease of Use Perception (X1) on QRIS Usage Decision (Y) through User Attitude (Z)

The results of the sixth hypothesis test (H6) show that the Perception of Ease of Use does not have a significant indirect influence on the Decision to Use QRIS through User Attitudes in MSMEs in Gowa Regency. This is evidenced by a p-value of 0.566 (> 0.05) and a t-statistic of 0.573 (< 1.96), so that H6 is declared unsupported. These findings show that Ease of Use Perception does not affect QRIS Usage Decisions through User Attitudes. In other words, although User Attitude acts as a mediating variable, ease of use does not contribute significantly to QRIS usage decisions.

In the Technology Acceptance Model (TAM) developed by Fred Davis, Ease of Use Perception is defined as an individual's belief that a technology can be used easily without requiring a large amount of effort. TAM explains that when users perceive a system to be easy to

use, they tend to form a positive User Attitude, which further influences usage intentions and decisions. However, at a more mature stage of technology adoption, the influence of Perception of Ease of Use on attitudes and decisions of use tends to weaken, while Perception of Usability becomes a more dominant factor in determining user behavior.

When usage decisions are based more on habits and previous experiences than convenience considerations, the role of Ease of Use Perception as a driver of behavior becomes smaller. As a result, its indirect influence on usage decisions through User Attitudes becomes insignificant. This is in line with research by Wardhani et al. (2023) which shows that in the context of habitual use, the role of attitude mediation no longer effectively channels the influence of ease of use on the intention and decision of use.

Similar findings were also put forward by Revyathi and Tselios (2019), who found that Ease of Use Perception did not have a significant indirect influence on user intent through User Attitude. The results of the study show that when users have enough experience and familiarity with digital technology, attitudes are no longer a strong mediator between ease of use and usage decisions.

However, Aditya et al. (2025) found different results in the context of using GoPay in Indonesia, where the Perception of Ease of Use was proven to have a positive and significant effect on user intent through User Attitude. These findings show that ease of use can still play a role in shaping positive attitudes, especially in the context of users who are still in the early stages of establishing technology adoption.

From the perspective of Maqashid al-Shariah, although the principle of taysir (convenience) is an advocated value in Islamic economic transactions, economic decisions are in practice more influenced by *maslahah* (benefit) and *hifz al-mal* (protection of property). Therefore, ease of use alone without significant benefits is not enough to influence usage decisions. This shows that in the context of QRIS adoption, functional benefits and economic value have a more dominant role than the convenience aspect in shaping user behavior.

Indirect Influence of Usability Perception (X2) on QRIS Use Decision (Y) through User Attitude (Z)

The results of the seventh hypothesis test (H7) show that Usability Perception has a positive and significant indirect influence on the Decision to Use QRIS through User Attitudes in MSMEs in Gowa Regency. This is evidenced by a p-value of 0.000 (< 0.05) and a t-statistic of 5.070 (> 1.96), so that H7 is declared supported. These findings show that Usability Perception not only has a direct effect on QRIS usage decisions, but also indirectly through the formation of positive User Attitudes. In other words, the benefits felt from the use of QRIS are able to shape positive attitudes of users, which in turn drives their decision to adopt the technology.

In the Technology Acceptance Model (TAM) developed by Fred Davis, Usability Perception is defined as an individual's belief that the use of a technology can improve performance, effectiveness, and productivity. TAM explains that when users feel the clear benefits of a technology, they are more likely to form a positive User Attitude, which further influences usage intentions and decisions. Thus, theoretically, User Attitudes act as a mediating variable that bridges the relationship between Usability Perception and usage behavior.

These findings are in line with research by Ariff et al. (2024) which shows that Usability

Perception has a positive and significant effect on Usage Intent through User Attitudes in the context of e-wallet adoption. The research confirms that the perception of benefits is able to form a positive attitude which then encourages the use of digital payment technology. However, there are also different research results, such as Harryanto et al. (2019), which found that Usability Perception does not have a significant effect on Intention of Use in the context of internet banking adoption. This shows that the perception of benefits does not always automatically shape positive attitudes or indirect influences on usage decisions through attitudes.

From the perspective of Islamic Economics, these findings reflect the implementation of the principles of Maqashid al-Shariah, especially *maslahah* (public benefit) and *hifz al-mal* (protection of property). The perceived benefits of using QRIS contribute to forming a positive attitude of users, which ultimately drives usage decisions. This shows that in this study, the decision-making process is greatly influenced by the extent to which a technology provides real value benefits. Therefore, technologies that provide clear economic value are more readily accepted and used in economic activities that are in line with Islamic principles.

CONCLUSION

This study aims to analyze the influence of the perception of ease of use and the perception of usability on the decision to use QRIS with user attitudes as an intervening variable in MSMEs in Gowa Regency in the perspective of Islamic Economics. The results of the study showed that the perception of ease of use did not have a significant effect on both user attitudes and decisions on the use of QRIS. These findings indicate that ease of use has become a minimum prerequisite and is no longer a major determining factor in technology adoption decisions.

On the other hand, the perception of usability has a positive and significant effect on user attitudes and decisions to use QRIS. This shows that perceived benefits, such as transaction efficiency, ease of financial record, and payment security, are the main factors driving the adoption of QRIS among MSMEs. In addition, user attitudes have also been proven to have a positive and significant effect on the decision to use QRIS.

In indirect effect testing, user attitudes did not mediate the relationship between the perception of ease of use and the decision to use QRIS. However, user attitudes have been shown to mediate the relationship between the perception of usability and the decision to use QRIS. Thus, the perception of usability is the most dominant factor in explaining the decision to use QRIS in MSMEs in Gowa Regency.

From the perspective of Islamic Economics, these findings show that the adoption of QRIS is in line with the principles of *maqashid al-shariah*, especially *taysir* (convenience), *maslahah* (utility), and *hifz al-mal* (protection of property). This indicates that the use of QRIS is not only driven by the acceptance of technology, but also contributes to economic efficiency and the improvement of people's welfare more broadly.

This research has several limitations. First, the research was only conducted on MSMEs in Gowa Regency, thus limiting the generalization of research results to other regions. Second, this study only uses the variables of ease of use perception, usability perception, and user attitude as determining factors for the decision to use QRIS. Therefore, further research is recommended to expand the scope of the region, increase the number of samples, and add other variables such as trust, risk perception, digital financial literacy, social influence, and government support in order to provide a more comprehensive understanding of QRIS adoption behavior.

REFERENCES

- Abigail Soesana and others, *Quantitative Research Methodology*, ed. by Abdul Karim, Cet. I (Yayasan Kita Menulis, 2023). p. 38.
- Affifatusholihah, L., Fadhilah, & Farah Putri Wenang Lusianingrum. (2022). Effect of TAM and Attitudes toward advertising on intention to use QRIS. *Management Science Research Journal*, 1(2), 79–85. <https://doi.org/10.56548/msr.v1i2.26>
- Apriadi, F., & Chaidir, T. (2024). Generation Z's Decision to Use QRIS in Mataram City: UTAUT Model. *Journal of Economics Finance and Management Studies*, 07(05). <https://doi.org/10.47191/jefms/v7-i5-18>
- Apriadi, F., & Chaidir, T. (2024). Journal of Economics, Finance and Management Studies Generation Z's Decision to Use QRIS in Mataram City: UTAUT Model. *Journal of Economics, Finance and Management Studies*, 7(5), 2426–2435. <https://doi.org/10.47191/jefms/v7-i5-18>
- Ariff, M. S. M., Zakuan, N. A., Ismail, K., & Ahmad, A. (2024). The mediating role of attitude toward using in the relationship between perceived usefulness and behavioral intention toward e-wallet adoption. *International Journal of Academic Research in Business and Social Sciences*, 14(3), 1021–1035. <https://doi.org/10.6007/IJARBS/v14-i3/21045>
- Doo, M. Y. (2023). An investigation of the social influence processes of flipped class students: An application of the extension of the technology acceptance model. *Education and Information Technologies*, 28(12), 16593–16613. <https://doi.org/10.1007/s10639-023-11878-3>
- Erwinsyah, E., Ningsih, K. E., Syahrudin, S., & Anjelita, K. (2023). The effect of the perception of ease of use and the perception of usability on the intention to use and actual use of QRIS digital payment technology. *Indonesian Journal of Economics & Management*, 23(1). <https://doi.org/10.53640/jemi.v23i1.1337>
- Faizi, F., & Shuib, M. S. B. (2021). Fatwa on Sharia Products and Its Role in The Development of Islamic Finance Industry. *Islamadina Journal of Islamic Thought*, 22(2), 189. <https://doi.org/10.30595/islamadina.v22i2.11859>
- Febriani, A., Iswandi, N., & Tiara, S. A. (2021). Quick Response Code Indonesian Standard System on the Mobile Banking Application of Mandiri Sharia Bank. *Fitrah Journal of Islamic Studies*, 7(2), 285–310. <https://doi.org/10.24952/fitrah.v7i2.4489>
- Fecira, D., & Abdullah, T. M. K. (2020). The analysis of e-learning acceptance using the Technology Acceptance Model (TAM). *Journal of Economics, Social & Humanities*, 2(04), 35–50. Retrieved from <https://www.jurnalintelektiva.sthf.ac.id/index.php/jurnal/article/view/341>
- Harryanto, H., Muchran, M., & Ahmar, A. S. (2019). Application of TAM model to the use of information technology. *arXiv*. <https://doi.org/10.48550/arXiv.1901.11358>
- Harryanto, H., Muchran, M., & Ahmar, A. S. (2019). Application of TAM model to the use of information technology. *arXiv*. <https://doi.org/10.48550/arXiv.1901.11358>
- Hidayat, N., Supratman, A., Master of Management, Faculty of Economics, University of Mataram, Utami, A. S., Master of Management, Faculty of Economics, University of

- Mataram, Yuliastuti, T., & Master of Management, Faculty of Economics, University of Mataram. (2024). The Decision to Use QRIS in MSMEs is Seen from the Perceived Benefits and Perceived Ease of use with Intention as an Intervening Variable. *Journal of Economics, Finance and Management Studies*, 07(06).
<https://doi.org/10.47191/jefms/v7-i6-66>
- Latifah, E. (2024). Analysis of Islamic Economic Principles in Financial Technology in Indonesian Islamic Banking. *IJJB*, 1(2), 75–85. <https://doi.org/10.62569/ijjb.v1i2.13>
- Majid, "Indonesia's Islamic Economy: Where It Is Going," Alauddin University Press, Makassar, 2014. [Online]. Available: <https://repositori.uin-alauddin.ac.id/12284/1/Ekonomi%20Islam%20Indonesia%20ke%20power%20a%20rahnya.pdf>
- Narayan, A., Rachman, F. N., & Rivaldo, A. (2025). The Effect of Perceived Ease of Use, Perceived Usefulness on Behavioral Intention through Attitude Towards in the Use of GoPay Applications in Indonesia. *West Science Journal of Business and Management*, 4(04), 573–600. <https://doi.org/10.58812/jbmws.v4i04.2965>
- Oematan, M. E., Rahayu, S., & Dyah, J. (2024). The Effect of Perceived Usefulness and Perceived Ease of Use on Behavioral Intention Mediated by User Satisfaction in E-Commerce Users-The Effect of Perceived Usefulness and Perceived Ease of Use on Behavioral Intention Mediated by User Satisfaction in E-Commerce Users. *Journal Economy*, 13(3), 472–479. <https://doi.org/10.54209/ekonomi.v13i01>
- Purnama, P. A., Kroon, K. K., & Suryadi, N. (2023). The Effect of Perception of Ease of Use and Perception of Usability on Behavioral Interest in Using Technology (Case Study on SMEs in Malang). *Journal of Minfo Polgan*, 12(1), 872–87. <https://doi.org/10.33395/jmp.v12i1.12503>
- Revythi, A., & Tselios, N. (2019). Extension of Technology Acceptance Model by using System Usability Scale to assess behavioral intention to use e-learning. *Education and Information Technologies*, 24, 2341–2355. <https://doi.org/10.1007/s10639-019-09869-4>
- Sari, A. C., & Adinugraha, H. H. (2022). Implementation of QRIS-Based Payments Towards the Digitalization of Indonesian MSMEs. *Sharia Economics Journal of Economic Studies*, 5(2). <https://doi.org/10.30983/es.v5i2.5027>
- Sebastián, M. G. de B., Guede, J. R. S., & Antonovica, A. (2022). Tam versus utaut models: a contrasting study of scholarly production and its bibliometric analysis. *Techno Review International Technology Science and Society Review*, 12(3), 1–27. <https://doi.org/10.37467/revtechno.v11.4445>
- Sidin, S. H. M., Mursityo, Y. T., & Maghfiroh, I. S. E. (2024). Analysis of Interest Factors for the Adoption of Indonesian Standard Quick Response Code Payment Services in Food & Beverage MSME Actors Using a Modified Technology Acceptance Model Framework. *Journal of Information Systems, Information Technology, and Education System Information*, 5(1), 13–23. <https://doi.org/10.25126/justsi.v5i1.324>
- Silva, M. W. S. S., Perera, H. S. C., & Kumara, P. A. P. S. (2023). Effect of Perceived Risk on Behavioural Intention of Using Digital Financial Services: Exploring the Theoretical Gap. *South Asian Journal of Business Insights*, 3(2), 23–48. <https://doi.org/10.4038/sajbi.v3i2.56>

- Sodik, F., & Riza, A. F. (2023). The Potential of Bank Sharia M-banking QRIS as a Payment Technology to Support Sharia Financial Inclusion in Indonesia. *Indonesian Economic Journal*, 12(2), 125–154. <https://doi.org/10.52813/jei.v12i2.315>
- Soegoto, H., Apsarini, F., & Supandi, A. (2024). Payment system development in Indonesia. *Journal of Business and Management Research*, 17(1), 11–20. <https://doi.org/10.23969/jrbm.v17i1.10416>
- Trilaksono, Wahyu and Rizki Yudhi Dewantara, S.Sos., M.AP, and Safrudin Hisyam Tualeka, S.Tr. Kom., M.AB. (2024) The Effect of Perceived Usefulness and Perceived Ease Of Use on Attitude Toward Using and its Impact on Intention To Use (Survey on QRIS Students, Faculty of Administrative Sciences, Brawijaya). Bachelor thesis, Brawijaya University. <http://repository.ub.ac.id/id/eprint/237982>
- Trimulyana, R. A. (2024). Digital Transformation in Sharia Banking and Its Impact on Muslim Communities. *Persya: Journal of Banking Sharia*, 2(1), 8–12. <https://doi.org/10.62070/persya.v2i1.52>
- Tyas, E. I., & Darma, E. S. (2020). The effect of perceived usefulness, perceived ease of use, perceived enjoyment, and actual usage on information technology acceptance: An empirical study on employees of the accounting and finance department of Baitul Maal Wa Tamwil in the Special Region of Yogyakarta. *Indonesian Accounting and Business Review*, 4(1). <https://doi.org/10.18196/rab.010103>
- Venkatesh, V., & Davis, F. D. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science*, 46(2), 186–204. <https://doi.org/10.1287/mnsc.46.2.186.11926>
- Walean, R., & Talumantak, J. (2021). Modeling Structural Equations in Mobile Banking Adoption Case Study: Bsgtouch Bank Solutgo. *CogIToSmart Journal*, 7(2), 421–435. <https://doi.org/10.31154/cogito.v7i2.347.421-435>