

Implementation of the Technology Acceptance Model (TAM) in analyzing the intention to use QRIS among students of Hidayatul Muftadi'ien Islamic Boarding School Kotagede Yogyakarta



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ABSTRACT

The widespread adoption of digital payment systems has accelerated financial inclusion in Indonesia, with the Indonesian Standard Quick Response Code (QRIS) emerging as a key innovation in cashless transactions. However, understanding the factors that influence users' intention to adopt QRIS remains essential, particularly within Islamic educational institutions. This study examines the effects of convenience, perceived usefulness, security, and trust on students' intention to use QRIS at the Kotagede Hidayatul Muftadi'ien Islamic Boarding School in Yogyakarta. A quantitative research design was employed using purposive sampling to collect data from 74 respondents. The proposed relationships were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS3. The findings reveal that convenience and perceived usefulness have positive but statistically insignificant effects on students' intention to use QRIS. In contrast, security and trust significantly and positively influence adoption intentions, highlighting the importance of users' confidence in the reliability and safety of digital payment systems. The model explains 87.9% of the variance in QRIS usage intention, indicating substantial explanatory power. These results suggest that security and trust are the primary determinants of QRIS adoption among students in Islamic boarding school environments. The study contributes to the digital payment and financial technology literature by demonstrating that psychological and security-related considerations may outweigh functional benefits in shaping adoption intentions within specific cultural and institutional contexts. The findings provide practical implications for policymakers and payment service providers seeking to increase QRIS adoption through strategies that enhance system security, build user trust, and promote digital financial literacy among young consumers.

Keywords: Convenience; Perceived Benefits; Security; Trust; Interest In Using QRIS



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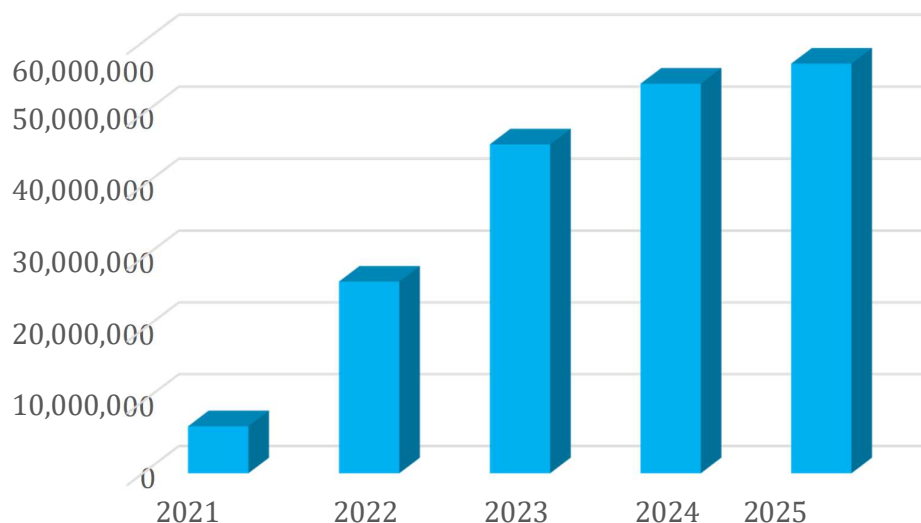
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INTRODUCTION

Technological advancements in the digital era have transformed various aspects of human life, including the payment systems used by society (Hendrawan et al., 2023). Digitalization in the financial sector has encouraged the emergence of various payment innovations designed to improve efficiency, accelerate transaction processes, and provide greater security. In response to these developments, Bank Indonesia introduced the Quick Response Code Indonesian Standard (QRIS) as a national QR code-based payment standard that enables various digital payment service providers, such as OVO, DANA, GoPay, LinkAja, and other digital wallets, to operate under a single standardized system. The introduction of QRIS represents one of the government's efforts to accelerate the implementation of cashless transactions while supporting the national financial inclusion program. The use of QRIS allows people to conduct transactions more conveniently, quickly, and securely without relying on cash (Seniati & Werastuti, 2024).

In recent years, the use of the Quick Response Code Indonesian Standard (QRIS) in Indonesia has experienced significant growth. Data from Bank Indonesia indicate that the number of QRIS users increased consistently, from approximately 6.55 million users in 2021 to more than 57 million users in 2025 (Bank Indonesia, 2025). Similar growth has also been observed in the Special Region of Yogyakarta, where the number of QRIS users reached 925,880, with a total transaction value of IDR 5.81 trillion (Bank Indonesia, 2025). These figures indicate that QRIS has gained increasing public trust as a practical and efficient digital payment method. However, the level of acceptance of this digital payment technology is not uniform across all segments of society. Such differences are influenced by various factors, including individual user characteristics and the surrounding social environment. The increasing trend in QRIS adoption over the past five years is illustrated in Figure 1, which shows a steady growth in the number of QRIS users in Indonesia from 2021 to 2025.

User Count Total Number Of QRIS Users in Indonesia Over The Last Five Years



Source: Bank Indonesia, 2025

Figure 1
Growth in the Number of QRIS Users in Indonesia, 2021-2025

One of the groups that is relevant to be examined in studies on the use of the Quick Response Code Indonesian Standard (QRIS) is students enrolled in Islamic boarding schools (santri). As Islamic-based educational institutions, Islamic boarding schools possess unique characteristics that distinguish them from other educational institutions, particularly in the adoption and utilization of digital technology. While some Islamic boarding schools still restrict students' access to digital devices, others have begun to provide broader access while maintaining appropriate supervision mechanisms. One example is Hidayatul Muftadi'ien Islamic Boarding School in Kotagede, Yogyakarta, which has started integrating digital technology into various daily activities, including the use of QRIS as a payment method for transactions. This phenomenon highlights the need to examine the factors that influence students' intention to use QRIS as a digital payment method (Manurung et al., 2024).

To explain technology acceptance, this study employs the Technology Acceptance Model (TAM) developed by Davis (1989). This model suggests that the acceptance of a technology is influenced by perceived ease of use and perceived usefulness. Perceived ease of use refers to an individual's belief that a technology can be used easily and requires minimal effort to operate. Meanwhile, perceived usefulness reflects the belief that the use of a technology can enhance the effectiveness and efficiency of performing certain activities. The higher an individual's perception of a technology's ease of use and usefulness, the greater the likelihood that the technology will be accepted and continuously used (Joan and Sitinjak, 2019).

In addition to ease of use and perceived usefulness, security is another important factor that encourages the adoption of digital payment systems. Arisa, (2020) explains that security refers to a system's ability to protect users' personal information, maintain data confidentiality, and minimize the risk of misuse during transaction processes. When users are confident that their personal data and transaction activities are well protected, they are more likely to utilize digital payment services (Fakriah et al., 2025). Therefore, the level of security serves as one of the key determinants influencing individuals' decisions to use QRIS as a digital payment method.

In addition to security, users' trust in digital payment systems is also an important factor influencing technology adoption (Kurniasari, 2021). According to Asri et al., (2020), trust reflects users' confidence that a payment system has a good reputation, is capable of delivering services that meet their expectations, and can be relied upon throughout the transaction process. The higher the level of trust users have in a technology, the greater their tendency to continue using it and to consider it their preferred payment method. Conversely, when trust is low, the technology acceptance process may be hindered even if the system offers various conveniences and benefits (Ansori & Nugroho, 2024).

Several previous studies have identified various factors that influence people's intention to adopt digital payment technologies. Iqbal et al., (2022) reported that perceived usefulness, security, and service features significantly influence users' intention to use digital banking services. Similarly, Utami, (2021) found that trust and security have a positive effect on individuals' intention to use mobile payment services. Furthermore, a study conducted by Fadilah et al., (2023) concluded that perceived ease of use and perceived usefulness contribute positively to the intention to use digital payment applications. However, most of these studies focused on respondents such as university students, banking customers, or the general public. Therefore, research specifically examining the factors influencing the use of QRIS within the Islamic boarding

school environment remains relatively limited.

Based on the preceding discussion, a research gap still exists regarding studies that examine the factors influencing the intention to use QRIS among students of Islamic boarding schools. Research investigating the effects of perceived ease of use, perceived usefulness, security, and trust on the intention to use QRIS within this specific group remains relatively limited. Furthermore, the Islamic boarding school environment possesses unique characteristics, such as varying levels of digital literacy, institutional policies governing technology use, and transaction patterns that differ from those of the general population. These distinctive characteristics may influence how students accept and utilize digital payment technologies. Therefore, this study offers a novel contribution by analyzing the factors affecting the intention to use QRIS among students of Hidayatul Muftadi'ien Islamic Boarding School in Kotagede, Yogyakarta, through the application of the Technology Acceptance Model (TAM) integrated with the variables of security and trust.

Based on the background described, this study aims to examine and analyze the effects of perceived ease of use, perceived usefulness, security, and trust on the intention of students at Hidayatul Muftadi'ien Islamic Boarding School in Kotagede, Yogyakarta, to use QRIS as a digital payment method. The findings of this study are expected to contribute to the existing literature on the adoption of digital payment technologies and serve as a reference for educational institutions and digital payment service providers in promoting the use of QRIS within Islamic boarding school environments.

LITERATURE REVIEW, RESEARCH FRAMEWORK, AND HYPOTHESES

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is one of the most widely used theoretical models for explaining how individuals accept and use a particular technology. Davis, (1989) stated that the model focuses on two primary constructs, namely perceived usefulness and perceived ease of use, as the key factors influencing technology acceptance. Individuals who perceive a technology as easy to use and beneficial to their activities are more likely to develop a stronger intention to continue using that technology. In this study, the TAM framework is employed as the theoretical foundation for analyzing the effects of perceived ease of use and perceived usefulness on students' intention to use QRIS within the Islamic boarding school environment (Joan and Sitinjak, 2019).

Convenience

Achsa & Dewi, (2021) stated that perceived ease of use is one of the primary factors influencing users' acceptance of technology. This concept refers to the degree to which users believe that a system can be utilized without requiring substantial physical or mental effort. When an application or platform is perceived as complex and difficult to operate, users' intention to use it tends to decrease. Conversely, a system that is easy to understand, simple to operate, and readily accessible is more likely to encourage users to adopt it for their transactional activities.

Venkatesh & Davis (2016) proposed that perceived ease of use can be measured through four main indicators: easiness, clear and understandable, easy to learn, and overall easiness. These indicators are used to evaluate the extent to which users perceive a system as easy to learn, understand, and operate, thereby providing an overall simple and effortless user experience.

Perceived Benefits

According to (Kotler et al., 2016), perception is not formed solely by physical stimuli but is also influenced by environmental factors and individual conditions. In the context of technology, perceived usefulness refers to an individual's belief that the use of a technology can enhance the effectiveness and efficiency of their performance (Dalcher & Shine, 2003; Jogiyanto, 2007). This perception reflects the degree to which individuals believe that technology can deliver faster, more efficient, and more satisfactory outcomes compared to conventional methods (Cahaya and Randa, 2025).

Fadillah and Za (2023) further explained that perceived usefulness can be measured through four indicators: useful (the extent to which the system helps individuals perform their activities), effectiveness (the efficiency gained in terms of time and effort), accomplish faster (the system's ability to accelerate work processes or transactions), and advantageous (the perceived benefits or added value obtained from using the system). Overall, perceived usefulness is an important factor that encourages individuals to adopt and continuously use technologies such as QRIS.

Security

In the context of digital transactions, security is a key factor that determines the level of user acceptance. According to (Arisa, 2020), based on the Theory of Planned Behavior (TPB), attitudes toward a particular behavior are formed by beliefs regarding its expected consequences. In this regard, security is measured through two indicators: data confidentiality (privacy) and security assurance. Security is defined as the belief that the QRIS system is capable of protecting users' personal data, maintaining the confidentiality of information, and preventing the misuse of transactions. When users believe that the system is secure, their trust and intention to use it are likely to increase.

Trust

Trust reflects users' confidence that a technological system can operate reliably and deliver outcomes that meet their expectations. Asri et al., (2020) explained that, based on the Theory of Reasoned Action (TRA), an individual's intention to perform a particular behavior is influenced by their beliefs regarding the object or system being used. In the context of QRIS usage, trust refers to the degree of confidence users have that the payment system possesses strong credibility, can protect them from potential fraud, and ensures the security of every transaction conducted through the platform. Therefore, the higher the level of trust in a digital payment system, the greater the likelihood that users will adopt and utilize QRIS as a preferred transaction method (Utami, 2021).

According to (Asri et al., 2020), the trust variable is measured through three main indicators: benevolence, ability, and integrity. These indicators are used to assess the extent to which users perceive that a digital payment system demonstrates concern for users' interests, possesses the capability to provide services effectively, and maintains consistency in upholding honesty and fulfilling its commitments.

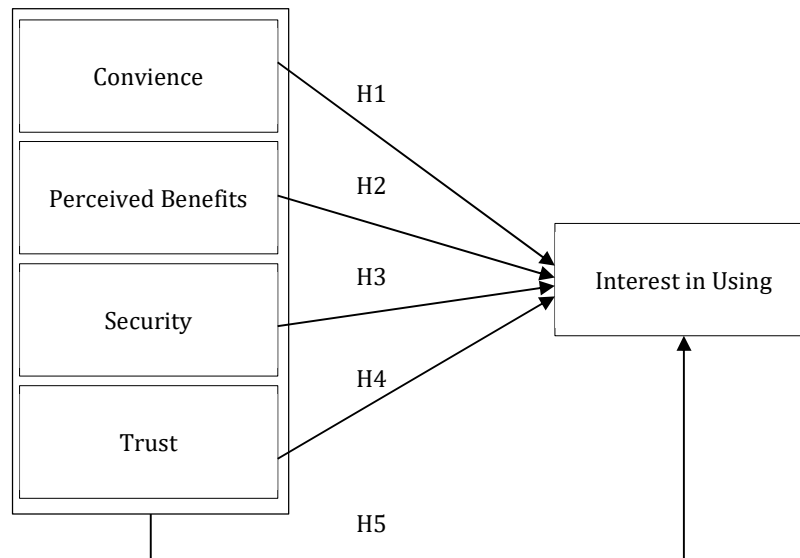
Interest in using

Interest refers to a psychological drive that emerges after an individual receives a particular stimulus and evaluates a product or service as worthy of use. According to (Ferdinand, 2014), interest can be categorized into four indicators: transactional interest (the intention to purchase or use a product or service), referential interest (the intention to recommend it to others), preferential interest (the tendency to make it the primary choice), and exploratory interest (the desire to seek further information about it). In this

study, these four dimensions are employed to measure students' intention to use QRIS (Asri et al., 2020)

Research Framework

Based on the Technology Acceptance Model (TAM) and previous empirical studies Juniasti, (2024) and Lianti et al., (2026), this study develops a conceptual framework to examine the factors influencing students' intentions to use QRIS. Figure 2 presents the framework proposed that convenience, perceived benefits, security, and trust as the independent variables and students' intention to use QRIS as the dependent variable. It also serves as the foundation for formulating the research hypotheses and examining the factors affecting students' intention to use QRIS at Hidayatul Muftadi'ien Islamic Boarding School, Kotagede, Yogyakarta.



Source: Developed by the author based on Juniasti, (2024), and Lianti et al., (2026)

Figure 2
Research Framework

Based on the theoretical foundation and findings of previous studies discussed, the hypotheses of this study are formulated as follows:

- H1: Convenience has a positive and significant effect on the intention to use QRIS among students of Hidayatul Muftadi'ien Islamic Boarding School, Kotagede, Yogyakarta.*
- H2: Perceived benefits has a positive and significant effect on the intention to use QRIS among students of Hidayatul Muftadi'ien Islamic Boarding School, Kotagede, Yogyakarta.*
- H3: Security has a positive and significant effect on the intention to use QRIS among students of Hidayatul Muftadi'ien Islamic Boarding School, Kotagede, Yogyakarta.*
- H4: Trust has a positive and significant effect on the intention to use QRIS among students of Hidayatul Muftadi'ien Islamic Boarding School, Kotagede, Yogyakarta.*

H5: Convenience, perceived benefits, security, and trust simultaneously have a positive and significant effect on the intention to use QRIS among students of Hidayatul Muftadi'ien Islamic Boarding School, Kotagede, Yogyakarta.

METHOD

This study employs a quantitative approach with an associative research design aimed at analyzing the relationships and effects between independent and dependent variables (Akbar et al., 2023). This approach was chosen because it enables the examination of the effects of perceived ease of use, perceived usefulness, security, and trust on the intention to use QRIS based on numerical data. Data analysis was conducted using SmartPLS 3 software to assess the relationships among the constructs in the research model.

The data used in this study are primary data collected directly from respondents through the distribution of an online questionnaire using Google Forms as the data collection instrument. The research instrument was developed based on the indicators of each variable under investigation. Respondents' answers were measured using a four-point Likert scale, where a score of 1 indicates strongly disagree, a score of 2 indicates disagree, a score of 3 indicates agree, and a score of 4 indicates strongly agree (Retnawati, 2015).

The sampling technique employed in this study was non-probability sampling using a purposive sampling method, in which respondents were selected based on specific criteria relevant to the research objectives (Firmansyah and Dede, 2022). The respondents in this study consisted of 74 active students of Hidayatul Muftadi'ien Islamic Boarding School in Kotagede, Yogyakarta, who had used or were familiar with QRIS as a digital payment method. The respondents were selected using a purposive sampling technique based on predetermined criteria relevant to the research objectives. This sampling approach was considered the most appropriate because not all students had experience using QRIS or regular access to payment digital facilities. Therefore, only those who met the specified criteria were included in the study (Puspayuda, 2022).

The data analysis procedures employed in this study include validity testing, reliability testing, and multiple linear regression analysis to examine the effects of each independent variable on the dependent variable (Ashraf and Ahmed, 2022). The results of the analysis are expected to provide empirical evidence regarding the factors influencing the intention to use QRIS within the Islamic boarding school environment (Thayib et al., 2017).

RESULT AND DISCUSSION

This study involved a total of 74 respondents, all of whom were active students of Hidayatul Muftadi'ien Islamic Boarding School in Kotagede, Yogyakarta, in accordance with the purposive sampling criteria established by the researcher. This indicates that all respondents involved in the study possessed characteristics relevant to the research objectives.

Based on the educational level within the Islamic boarding school, the respondents consisted of several academic levels. The largest group came from Grade 1 Wustho, consisting of 15 respondents (20%), followed by Grade 2 Ula with 12 respondents (16%), Asatidz with 11 respondents (15%), and Grade 1 Ula with 11 respondents (15%). Furthermore, there were 8 respondents (11%) from Grade 1 Ulya, 7 respondents (9%) from the I'dad level, and 5 respondents (7%) each from Grade 2 Wustho and Grade 2 Ulya. This distribution indicates that the respondents represented various educational levels within the Islamic boarding school environment.

The distribution is presented in the following table.

Table 1
Demographic Respondent

Demographic	Total Number of Respondent	Percentage
Respondent Status		
Active Santri	74	100%
Class		
I'dad	7	9%
1 Ula	11	15%
2 Ula	12	16%
1 Wustho	15	20%
2 Wustho	5	7%
1 Ulya	8	11%
2 Ulya	5	7%
Asatidz	11	15%
Total	74	100%

Measurement Model Assessment (Outer Model)

The measurement model (outer model) assessment was conducted to evaluate the validity and reliability of the measurement instruments used in this study. Convergent validity was assessed using outer loadings and Average Variance Extracted (AVE), where the recommended values are greater than 0.70 and 0.50, respectively. Reliability was evaluated using Cronbach's Alpha (CA) and Composite Reliability (CR), with acceptable values above 0.70 (Hair et al., 2022). The result of the measurement model assessment are presented in Table 2.

Table 2
Measurement Model Assessment

Measurement Model Assessment					
Constructs Items		Outer	CA	CR	AVE
		Loadings			
Convenience			0.937	0.988	0.872
K1	I am interested in using QRIS because its features and services are easy to learn.	0.921			
K2	I am interested in using QRIS because its features and services are easy to use.	0.952			
K3	I think QRIS is easy to use.	0.937			
K4	I am interested in using QRIS because its features and services are easy to understand.	0.933			
K5	I am interested in using QRIS because it is simple to operate.	0.948			
K6	I think transactions using e-money are clear and easy to understand.	0.936			
K7	I am interested in using Paytren because it is easy to operate and does not require much effort.	0.945			
K8	I think QRIS is very easy to learn.	0.957			
K9	It is easy for me to become skilled in using QRIS.	0.915			

Measurement Model Assessment

Constructs Items		Outer Loadings	CA	CR	AVE
K10	I am interested in using QRIS because it is flexible for transactions and can be used anytime and anywhere.	0.885			
K11	I am interested in using QRIS because it is easy to operate and does not require much effort.	0.942			
K12	I am interested in using Paytren because it is very simple to operate.	0.933			
Perceived Benefits			0.975	0.978	0.789
M1	Using QRIS can improve my productivity.	0.843			
M2	By using QRIS, I feel that my payment transactions become easier.	0.921			
M3	QRIS helps me complete my payment needs without difficulty.	0.888			
M4	Using QRIS makes my transactions more effective.	0.919			
M5	Using QRIS saves me more time compared to cash payments.	0.937			
M6	QRIS is very effective in simplifying the payment process within the Islamic boarding school environment.	0.897			
M7	QRIS makes transactions faster.	0.897			
M8	Transactions using QRIS are completed more quickly than those using other payment methods.	0.943			
M9	QRIS allows me to complete payments more quickly when purchasing goods or paying fees.	0.851			
M10	Using e-money enables me to benefit from various discounts and promotional offers.	0.729			
M1 1	With QRIS, I gain additional advantages compared to cash payments (such as enhanced security and transaction records).	0.923			
M1 2	QRIS provides added value in terms of convenience and flexibility in transactions.	0.935			
Security			0.975	0.980	0.889
A1	I am interested in using QRIS because the confidentiality of my personal data is protected during transactions.	0.940			
A2	I am interested in using QRIS based on its level of confidentiality.	0.931			
A3	I believe that the security of the personal information I provide is well protected by QRIS.	0.933			
A4	I am interested in using QRIS because it has adequate controls to protect my personal and financial data.	0.950			
A5	I am interested in using QRIS because it provides security assurance for my balance and funds.	0.934			
A6	I believe that transactions conducted through QRIS are secure and trustworthy.	0.968			
Trust			0.976	0.979	0.841
P1	I am interested in using QRIS because it can be trusted for conducting transactions.	0.908			
P2	I am motivated to use QRIS because it is practical and easy to use.	0.923			
P3	The features provided by QRIS are continuously developed to meet users' needs.	0.914			

Measurement Model Assessment

Constructs Items		Outer Loadings	CA	CR	AVE
P4	I am interested in using QRIS because it provides convenient and effective services.	0.957			
P5	I believe that the quality of QRIS services will not disappoint its users.	0.918			
P6	QRIS protects users' personal data and privacy effectively.	0.823			
P7	I am interested in using QRIS because it delivers services as promised to its users.	0.909			
P8	QRIS provides clear and easy-to-understand information regarding payment procedures.	0.943			
P9	QRIS continues to provide convenience and comfort for its users.	0.951			
Interest In Using			0.974	0.977	0.780
G1	I am interested in using QRIS.	0.897			
G2	I tend to use QRIS because it provides excellent service quality.	0.903			
G3	I believe that QRIS has a good reputation.	0.894			
G4	I am willing to recommend QRIS to others who intend to use electronic payment methods.	0.917			
G5	I tend to speak positively about QRIS to my family, friends, and people close to me.	0.896			
G6	I am willing to recommend the use of QRIS to others.	0.865			
G7	I am interested in using QRIS rather than conventional payment methods.	0.917			
G8	I prefer using QRIS for payment transactions.	0.901			
G9	If multiple payment methods are available, I would still choose QRIS.	0.885			
G10	I am interested in seeking information about QRIS.	0.793			
G11	I am interested in using QRIS after receiving information from relatives or people close to me.	0.852			
G12	I would like to learn about the new features available in QRIS.	0.873			

Source: Primary Data Processed Using SmartPLS 3.0, 2026

Result of Convergent Validity Assessment

Convergent validity was assessed using two main indicators: outer loadings and Average Variance Extracted (AVE) (Ashraf and Ahmed, 2022). The outer loading values of all items in each construct exceeded the minimum threshold of 0.70. This indicates that each indicator is capable of explaining its respective construct adequately (Hair et al., 2022).

The highest outer loading value was found in item A6 (0.968), while the lowest value was observed in item M10 (0.729); however, this value still met the required criteria (>0.70). Furthermore, the AVE values for all five constructs were above the minimum threshold of 0.50, with perceived ease of use obtaining an AVE value of 0.872, perceived usefulness 0.789, security 0.889, trust 0.841, and intention to use QRIS 0.780. Therefore, all constructs were considered to have achieved convergent validity, as each indicator demonstrated a strong correlation with the construct it represents.

Result of Construct Reliability Assessment

The construct reliability evaluation in this study was conducted using two assessment indicators, namely Composite Reliability (CR) and Cronbach's Alpha (CA) (Hair et al., 2022). The results showed that all variables had Composite Reliability values exceeding the minimum threshold of 0.70, indicating a high level of internal consistency. The Composite Reliability values were 0.988 for perceived ease of use, 0.977 for perceived usefulness, 0.975 for security, 0.978 for trust, and 0.976 for intention to use QRIS.

Similar findings were also observed in the Cronbach's Alpha values, where all constructs obtained values above the minimum threshold of 0.70. The perceived ease of use variable had a Cronbach's Alpha value of 0.987, perceived usefulness 0.975, security 0.975, trust 0.976, and intention to use QRIS 0.974. These results indicate that the research instrument has adequate reliability in measuring each construct examined in this study. Hair et al., (2022) stated that Cronbach's Alpha values ranging from 0.60 to 0.70 can still be considered acceptable in exploratory research, particularly when the Composite Reliability value demonstrates a high level of reliability.

Fornell and Larcker Criterion

Discriminant validity was assessed using the Fornell-Larcker criterion. A construct is considered to have adequate discriminant validity when the square root of its AVE exceeds its correlation with the other constructs in the model. This indicates that each construct measures a distinct concept and adequately represents its own indicators (Hair et al., 2022). The result of the Fornell Larcker criterion assessment are presented in Table 3.

Table 3
Fornell and Larcker

Construct	X1 ($\sqrt{\text{AVE}} = 0.872$)	X2 ($\sqrt{\text{AVE}} = 0.789$)	X3 ($\sqrt{\text{AVE}} = 0.889$)	X4 ($\sqrt{\text{AVE}} = 0.841$)	Y ($\sqrt{\text{AVE}} = 0.780$)
X1	0.934	0.929	0.822	0.890	0.851
X2	0.929	0.888	0.917	0.930	0.910
X3	0.822	0.917	0.943	0.900	0.913
X4	0.890	0.930	0.900	0.917	0.907
Y	0.851	0.910	0.913	0.907	0.883

Source: Primary Data Processed Using SmartPLS 3.0, 2026

Based on the results of the Fornell-Larcker criterion assessment, the square root values of Average Variance Extracted ($\sqrt{\text{AVE}}$) for each construct were higher than their correlations with other constructs. This condition indicates that each variable has achieved good discriminant validity, as each construct is able to explain its own indicators more strongly than its relationships with other constructs. Therefore, the measurement model demonstrates adequate discriminant validity.

For example, the convenience construct (X1) has a $\sqrt{\text{AVE}}$ value of 0.934, which is higher than its correlation with intention to use QRIS (Y) of 0.851 and with security (X3) of 0.822. Similar results are also observed for the security construct (X3), which obtained a $\sqrt{\text{AVE}}$ value of 0.943. This value exceeds its correlations with convenience (X1), which is 0.822, and with trust (X4), which reaches 0.900. These findings indicate that each construct has a good ability to distinguish itself from other constructs within the research model.

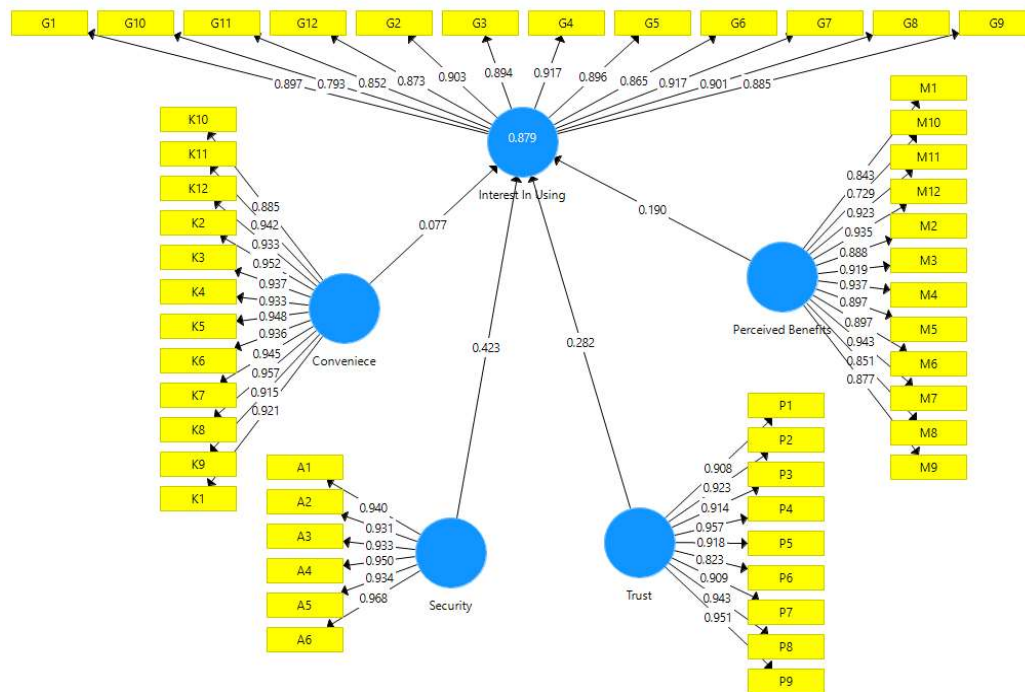
The trust construct (X4) shows a $\sqrt{\text{AVE}}$ value of 0.917, which represents a high value compared to its correlations with other constructs. The perceived benefits

construct (X2) obtained a $\sqrt{\text{AVE}}$ value of 0.888, while the intention to use QRIS construct (Y) achieved a $\sqrt{\text{AVE}}$ value of 0.883.

The overall results of the Fornell-Larcker criterion assessment indicate that each construct has a high square root of AVE value, demonstrating that the research model has good discriminant validity in accordance with Yarsasi et al. (2025). Therefore, the constructs in this study are capable of explaining their respective variables and can be used for further analysis.

Structural Model Assessment (Inner Model)

The structural model assessment (inner model) was conducted to analyze the causal relationships among the latent constructs included in the research model (Hair et al., 2022). The estimated relationships between variables are presented in Figure 5 and were analyzed using the Partial Least Squares–Structural Equation Modeling (PLS-SEM) method through SmartPLS 3 software. The research model was developed based on the Technology Acceptance Model (TAM) framework, involving five constructs: convenience (X1), perceived benefits (X2), security (X3), trust (X4), and intention to use QRIS (Y).



Source: Primary Data Processed Using SmartPLS 3.0, 2026

Figure 3
Structural Model Path Diagram

The structural model assessment (inner model) was conducted to examine the relationships among latent variables in this study. The evaluation of the structural model was carried out by analyzing the R-square (R^2) value and the path coefficients obtained from the bootstrapping procedure using SmartPLS. The results showed that the R-square (R^2) value for the Intention to Use QRIS construct was 0.879. This finding indicates that

87.9% of the variation in the intention to use QRIS can be explained by the variables of perceived ease of use, perceived usefulness, security, and trust. Meanwhile, the remaining 12.1% is explained by other variables not included in this research model.

Furthermore, the results of the path coefficient analysis indicate the following relationships:

1. Convenience has a positive effect on the intention to use QRIS ($\beta = 0.077$), indicating that higher levels of ease in using QRIS tend to increase users' intention to use QRIS. However, this relationship is not statistically significant, as indicated by the T-statistic value of 0.464 and the P-value of 0.643.
2. Perceived benefits has a positive effect on the intention to use QRIS ($\beta = 0.190$), indicating that the greater the benefits perceived by users, the higher their intention to use QRIS. However, this effect is not statistically significant, as shown by the T-statistic value of 0.857 and the P-value of 0.392.
3. Security has a positive and significant effect on the intention to use QRIS ($\beta = 0.423$), indicating that the higher the level of security perceived by users regarding the QRIS system, the greater their intention to use QRIS. This relationship is supported by the T-statistic value of 2.876 and the P-value of 0.004.
4. Trust has a positive and significant effect on the intention to use QRIS ($\beta = 0.282$), indicating that the higher the users' trust in the QRIS system, the greater their intention to use QRIS. This relationship is demonstrated by the T-statistic value of 2.138 and the P-value of 0.033.

Based on these results, it can be concluded that the Security and Trust variables are key factors influencing the intention to use QRIS among students of Hidayatul Muftadi'ien Islamic Boarding School in Kotagede, Yogyakarta. Meanwhile, the Convenience and Perceived Benefits variables were not found to have a significant effect on the intention to use QRIS in this study.

R Square

To evaluate the structural model, this study examined the coefficient of determination (R^2), which indicates how well the independent variables explain the variance in the dependent variables. Higher R^2 values suggest that the model has better predictive and explanatory capability. According to Hair et al., (2022), R^2 values of 0.75, 0.50, and 0.25 are classified as substantial, moderate, and weak, respectively. The result of the R^2 assessment are presented in Table 4.

Table 4
R Square

Variable	R-square	R-square adjusted
Y	0.879	0.872

Source: Primary Data Processed Using SmartPLS 3.0, 2026

Based on the R-square analysis results, the Intention to Use QRIS variable (Y) obtained a value of 0.879. This value indicates that 87.9% of the variation in the intention to use QRIS can be explained by the four independent variables in the research model, namely convenience (X1), perceived benefits (X2), security (X3), and trust (X4). Meanwhile, the remaining 12.1% is influenced by other factors that are not included in this research model.

These results are further supported by the Adjusted R-square value of 0.872. This value indicates that after adjusting for the number of predictor variables, the model still demonstrates a very strong explanatory capability. In other words, the adjustment does not reduce the model's ability to explain the variation in the intention to use QRIS.

(Hair et al., 2022) stated that an R-square value of 0.75 or higher is categorized as strong (substantial). Therefore, the structural model used in this study can be considered to have a high explanatory power in describing the relationships among constructs. This finding indicates that perceived ease of use, perceived usefulness, security, and trust are able to explain the intention of students at Hidayatul Muhtadi'ien Islamic Boarding School in Kotagede, Yogyakarta, to use QRIS very well.

Results of Path Coefficient Significance Testing

According to Ananda and Lestari, (2025), a variable can be considered to have an effect when its path coefficient value exceeds 0.30, while statistical significance is determined when the T-statistic value exceeds 1.96 and the p-value is less than 0.05. Table 5 presents the results of the path coefficient significance testing, including the estimated path coefficients, t-statistics, p-values, and the decision for each proposed hypothesis.

Table 5
Path Koefisien

Variable	Original sample (O)	Sample mean (M)	Standard Deviation (STDEV)	T statistics (O/STDEV)	P values
X1 -> Y	0.077	0.071	0.163	0.471	0.638
X2 -> Y	0.190	0.207	0.227	0.835	0.404
X3 -> Y	0.423	0.412	0.153	2.769	0.006
X4 -> Y	0.282	0.281	0.133	2.123	0.034

Source: Primary Data Processed Using SmartPLS 3.0, 2026

Based on the bootstrapping analysis results, the convenience (X1) and perceived benefits (X2) variables have a positive but insignificant effect on the intention to use QRIS (Y), as their respective T-statistic values are 0.471 and 0.835 (<1.96). Therefore, H1 and H2 are rejected. Meanwhile, the security (X3) and trust (X4) variables have a positive and significant effect on the intention to use QRIS, with T-statistic values of 2.769 and 2.123 (>1.96), respectively. Thus, H3 and H4 are accepted. These findings indicate that security and trust are the main factors influencing the intention of students at Hidayatul Muhtadi'ien Islamic Boarding School in Kotagede, Yogyakarta, to use QRIS.

The model fit assessment was conducted to determine whether the proposed research model adequately represents the observed data. In the context of PLS-SEM, several fit indices can be used to evaluate the overall suitability of the model, including SRMR, d_ULS, d_G, Chi-Square, and NFI. The SRMR value is commonly used to assess the difference between the observed and predicted correlations, while the NFI value reflects the overall adequacy of the proposed model. According to Hair et al., (2022), lower SRMR values and higher NFI values indicate a better fit between the model and the observed data. The values of the model fit indices obtained from the analysis are presented in the Table 6.

Table 6
Model Fit

Model fit measures	Saturated model	Estimated model
SRMR	0.107	0.107
d_ULS	1.047	1.047
d_G	0.412	0.412
Chi-Square	2.994.265	2.994.265
NFI	0.653	0.653

Source: Primary Data Processed Using SmartPLS 3.0, 2026

The model fit assessment results show that the Standardized Root Mean Square Residual (SRMR) value of 0.048 meets the goodness-of-fit criteria, as it is below the ideal threshold of 0.08. The d_ULS value of 3.086 and the Geodesic Discrepancy (d_G) value of 14.141 indicate that the model has an adequate level of fit, although further improvements may still be possible to achieve more optimal results. In addition, the Normed Fit Index (NFI) value of 0.653 indicates that the research model is reasonably acceptable in explaining the relationships among the research variables. Therefore, the structural model in this study can be considered acceptable and capable of explaining the relationships among constructs based on the theoretical framework employed (Lawata et al., 2020).

CONCLUSION AND SUGGESTIONS

Based on the findings of this study, it can be concluded that convenience and perceived benefits have a positive but insignificant effect on the intention to use QRIS among students of Hidayatul Mubtadi'ien Islamic Boarding School in Kotagede, Yogyakarta. This may be because most students are already familiar with digital technology, making convenience and perceived benefits factors become common aspects that do not significantly determine their intention to use QRIS. Meanwhile, security and trust have been proven to have a positive and significant effect on the intention to use QRIS. This indicates that the security of the system and users' trust are important factors influencing students' decisions to adopt QRIS as a digital payment method.

The results of this study also show that 87.9% of the variation in the intention to use QRIS can be explained by perceived ease of use, perceived usefulness, security, and trust, while the remaining 12.1% is influenced by other factors outside the research model. Therefore, the increase in QRIS usage intention within the Islamic boarding school environment is more strongly influenced by students' confidence in transaction security and their trust in the QRIS system rather than by perceived ease of use and perceived usefulness.

The study suggest that improving convience, perceivd benefits, security, and trust can encourage student's intention to use QRIS. The finding may serve as a referece fo educational institutions and digital payment providers in promotion the adoption of RIS through user friendly and secure payment service. Future studies are encouraged to include additional variables, such as digital financial literacy, social influence, or perceived risk, and to involve a large and more divers sampe to povidе a broader understanding of QRIS adoption.

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