

Determinant factors of QRIS payment method adoption among office administration education students at FKIP UNS

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Abstrak

Tingginya penggunaan QRIS di Indonesia menegaskan pentingnya mengidentifikasi faktor-faktor yang berperan dalam mendorong mahasiswa mengadopsi teknologi pembayaran digital tersebut. Penelitian ini bertujuan untuk menganalisis faktor-faktor determinan yang memengaruhi penggunaan metode pembayaran Quick Response Code Indonesian Standard (QRIS) pada mahasiswa Pendidikan Administrasi Perkantoran FKIP UNS. Penelitian ini menggunakan pendekatan kuantitatif dengan model Technology Acceptance Model (TAM) yang meliputi variabel Perceived Ease of Use (PEU), Perceived Usefulness (PU), Behavioral Intention (BI), dan Actual Use (AU). Populasi penelitian adalah mahasiswa Pendidikan Administrasi Perkantoran FKIP UNS dengan teknik pengambilan sampel menggunakan probability sampling – stratified sampling. Data dikumpulkan melalui kuesioner dan dianalisis menggunakan Structural Equation Modeling Partial Least Square (SEM-PLS). Hasil penelitian menunjukkan bahwa PEU berpengaruh positif dan signifikan terhadap PU, kemudian PU dan PEU berpengaruh positif dan signifikan terhadap BI, serta BI berpengaruh positif dan signifikan terhadap AU. Temuan ini menunjukkan bahwa kemudahan penggunaan dan persepsi kegunaan memiliki peran penting dalam meningkatkan niat serta penggunaan aktual QRIS di kalangan mahasiswa. Penelitian ini memberikan kontribusi terhadap pengembangan literatur terkait digital entrepreneurship yang menekankan pemanfaatan teknologi digital dalam kegiatan bisnis.

Kata kunci: niat perilaku; persepsi kemudahan penggunaan; persepsi kegunaan; penggunaan aktual; technology acceptance model (TAM)

Abstract

The high prevalence of QRIS adoption across Indonesia underscores the critical need to identify the factors that motivate university students to embrace this digital payment technology. This study aims to analyse the determinant factors influencing the use of

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the Quick Response Code Indonesian Standard (QRIS) payment method among students of the Office Administration Education programme at the Faculty of Teacher Training and Education, Universitas Sebelas Maret (FKIP UNS). A quantitative approach was employed, grounded in the Technology Acceptance Model (TAM), encompassing four key variables: Perceived Ease of Use (PEU), Perceived Usefulness (PU), Behavioural Intention (BI), and Actual Use (AU). The study population comprised students enrolled in the Office Administration Education programme at FKIP UNS, with a sample selected using probability sampling via stratified sampling. Data were collected through a structured questionnaire and analysed using Structural Equation Modelling with Partial Least Squares (SEM-PLS). The results indicate that PEU exerts a positive and significant effect on PU; both PU and PEU exert positive and significant effects on BI; and BI exerts a positive and significant effect on AU. These findings demonstrate that ease of use and perceived usefulness are pivotal in enhancing both the intention to use and the actual adoption of QRIS among students. This study contributes to the growing literature on digital entrepreneurship by highlighting the centrality of digital technology utilisation in business activities.

Keywords: actual use; behavioral intention; perceived ease of use; perceived usefulness; technology acceptance model (TAM)

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Introduction

Payment systems constitute one of the principal pillars underpinning financial reporting infrastructure (Tarantang et al., 2019). In tandem with the rapid advancement of technology, payment systems have undergone significant transformation, particularly in supporting business transactions that serve to establish relationships between stakeholding parties (Tarantang et al., 2019). Indonesian society, which previously relied predominantly on cash for transactional activities, has now become acquainted with and increasingly utilises various non-cash or digital payment methods (Handayani & Soeparan, 2022). Digital payment systems constitute a mechanism for transferring funds from a payer to a payee, whereby the funds may be stored, processed, and received in digital information form through the use of electronic payment instruments (Aisyah et al., 2023). Non-cash transactions are conducted without the use of physical currency, instead employing mechanisms such as bank transfers, card-based payments, or Quick Response (QR) code-based mechanisms (Pratiwi, 2023). These efforts are supported by Bank Indonesia through the National Non-Cash Movement (Gerakan Nasional Non-Tunai/GNNT) campaign (Amanda et al., 2025). This programme was introduced in response to the challenges of the digital era, with the objective of educating the public regarding the advantages of digital transactions (Rachmawati & Wahyudi, 2024).

This transformation also reflects the growth of Financial Technology (FinTech) in Indonesia within the payments sector. Non-cash payment technology improves existing systems by increasing data collection speed, ensuring the accuracy of stored information, and delivering long-term benefits (Amanda et al., 2025). Consequently, non-cash or cashless payment has emerged as one of the most widely adopted transactional methods in Indonesian society. This condition has spurred the emergence of a new innovation: QRIS (Jannah et al., 2023).

Quick Response Code Indonesian Standard (QRIS) is a QR code designed to facilitate faster and more efficient financial transactions by leveraging digital media as its operational system (Pulungan et al., 2023). Bank Indonesia, in collaboration with the Indonesian Payment System Association (Asosiasi Sistem Pembayaran Indonesia/ASPI), introduced QRIS in 2019 as an inclusive national non-cash payment standard (Gunawan et al., 2023). QRIS is designed to consolidate all transactions across various industries, as it can be accessed through diverse payment applications installed on smartphones connected to the internet (Azzahroo & Estiningrum, 2021). These applications take the form of e-wallets issued by both banking and non-banking institutions, functioning as server-based payment instruments that have received official authorisation from Bank Indonesia.

Digital payment via QRIS has grown increasingly popular in Indonesia, including among university students. This popularity is attributable to numerous advantages the technology offers, such as speed, convenience, and security (Nirwasita et al., 2024). Data from Bank Indonesia as of October 2023 recorded the total number of QRIS merchant users at 29.63 million (Rachmawati & Wahyudi, 2024). Furthermore, Bank Indonesia reported that during August 2024, the total value of national electronic money (e-money) transactions reached IDR 200 billion (Pangestika et al., 2025). By August 2025, QRIS transactions had reached 6.05 billion in volume, equivalent to IDR 579 trillion in value (Bank Indonesia, 2025). These data reflect a societal trend toward transitioning from cash-based payment methods to QR code-based payment systems perceived to be more practical, efficient, and secure. University students represent one of the most active demographics in QRIS adoption.

As members of a generation that extensively utilises digital technology in their daily lives, university students are deeply embedded in QRIS usage patterns. Given their adaptive orientation toward technology and relatively high daily transaction frequency, students require payment methods that are both practical and efficient to minimise time expenditure during transactions. Through QRIS, students can conduct transactions effortlessly by scanning a merchant-provided QR code, eliminating the need to carry large amounts of cash or endure lengthy payment queues. Students enrolled in the Office Administration Education programme (Pendidikan Administrasi Perkantoran/PAP) at FKIP UNS represent a particularly significant segment of potential QRIS users. The high prevalence of QRIS usage—relative to cash payments among PAP FKIP UNS students forms the compelling background for this research. This observation is grounded in findings from a preliminary study in which questionnaires were distributed to 39 randomly selected PAP FKIP UNS students to ascertain whether they used QRIS as a payment method. The results of this preliminary study revealed that 76.9% of PAP FKIP UNS students regularly utilise and implement QRIS as their preferred payment method in daily life, thereby justifying the selection of this student group as research respondents.

The trend of QRIS adoption among students is shaped by a number of factors. This study focuses specifically on the determinant factors that predict Actual Use (AU) of the QRIS payment system, grounded in the Technology Acceptance Model (TAM) developed by Venkatesh and Davis (1996). TAM is widely regarded as one of the most relevant frameworks for explaining the behaviour of individuals and groups in accepting new information technology. The model posits that actual technology use is determined by three principal factors: (1) Perceived Usefulness (PU), defined as the belief that using the system will enhance performance (Wulandari et al., 2024); (2) Perceived Ease of Use (PEU), defined as the belief that the system is easy to use (Wulandari et al., 2024); and (3) Behavioural Intention (BI), defined as the degree of motivation or inclination to engage in a particular behaviour (Sidabutar & Hanani, 2025).

Prior research serves as both a comparative benchmark and a foundational reference for the design and analysis of the present study. A review of the literature highlights studies that have examined factors influencing students' use of QRIS as a payment method. Türker et al. (2022) found that PEU had a significant positive effect on PU, and PU had a positive effect on BI in QR code-based payment contexts; however, PEU did not have a significant positive effect on BI for QR code-based payment. Caroline and Hastuti (2021) found that PEU had a positive effect on PU in the context of M-Banking technology. Sajili and Wiadi (2025) demonstrated that PU had a significant positive effect on BI for QRIS usage in Jakarta. Rukmana et al. (2025) found that PEU had a positive

effect on BI for BCA Mobile usage. Suganda and Suharto (2024) demonstrated that BI had a positive effect on AU for QRIS usage among millennial employees at financial service institutions.

Based on this body of prior research, a research gap is evident: studies incorporating the AU variable within the TAM framework remain limited. Furthermore, inconsistent findings regarding the PEU-BI relationship have been observed across prior studies. Additionally, no prior research has specifically examined QRIS usage among Office Administration Education students at FKIP UNS. The existence of this research gap, combined with the novelty of the present study's focus, underscores its importance. This study employs the TAM framework (Venkatesh & Davis, 1996) to examine the determinant effects of PU, PEU, and BI on AU of QRIS, using active students from the 2022, 2023, 2024, and 2025 cohorts of the PAP FKIP UNS programme as respondents.

Based on the foregoing phenomena and preliminary study findings, this research seeks to investigate in depth the "Determinant Factors of the QRIS Payment Method Among Office Administration Education Students at FKIP UNS." The study specifically aims to analyse the effects of Perceived Ease of Use (PEU) and Perceived Usefulness (PU) of QRIS on students' Behavioural Intention (BI) to use it (Türker et al., 2022), and to examine how this intention is subsequently reflected in the Actual Use (AU) of QRIS, observable through the frequency with which students utilise QRIS in their daily payment activities (Suganda & Suharto, 2024).

Research Methods

This study was conducted at the Office Administration Education programme (Pendidikan Administrasi Perkantoran/PAP), Faculty of Teacher Training and Education, Universitas Sebelas Maret, Surakarta (FKIP UNS), located at Jl. Ir. Sutami 36A, Kentingan, Jebres, Surakarta, Central Java 57126. The research was carried out across several stages, commencing in September 2025 and concluding in April 2026. This study employed a quantitative research approach, which involves the collection of data or information that can be converted into numerical form (Veronica et al., 2022). These data are subsequently processed and analysed using statistical tools, yielding findings that are objective, scientific, and methodologically defensible (Veronica et al., 2022). The analytical approach adopted to test the research hypotheses is the Technology Acceptance Model (TAM), as developed by Venkatesh and Davis (1996).

The research population constitutes the entirety of individuals or elements possessing certain characteristics that constitute the object of inquiry (Asrulla et al., 2023). A population may encompass individuals, objects, events, or any entities relevant to the research being conducted (Asrulla et al., 2023). In this study, the population comprised Office Administration Education students at FKIP UNS from the 2022 cohort ($n = 99$), 2023 cohort ($n = 101$), 2024 cohort ($n = 91$), and 2025 cohort ($n = 89$), yielding a total population of 380 students. Sampling was conducted using probability sampling with a stratified sampling technique, which ensures that every subject within the population has a known, non-zero probability of being selected as a sample (Ahmed, 2024). Stratified sampling divides the population into several distinct groups or strata based on specific homogeneous characteristics (Ahmed, 2024). This division is intended to ensure that each stratum or group is proportionally represented in the sample, thereby producing more accurate research findings that comprehensively reflect the population. Sample size determination was adjusted to account for the number of students in each cohort, and individual selection was based on the criterion of prior QRIS usage. The Slovin formula was applied to determine the appropriate sample size, given that the researcher did not know the ideal proportion to represent the existing population. The final sample comprised 195 students who met the criterion of having previously used QRIS. To ensure that respondents met this criterion, a screening question was administered prior to completion of the questionnaire. Respondents who confirmed prior QRIS usage were deemed eligible and subsequently included in the study sample.

This study employed a closed-ended questionnaire, as this instrument type is well suited to the research objectives. The use of a closed-ended questionnaire ensures that the data obtained are focused and readily interpretable. The instrument was designed to collect data pertaining to the study's primary variables. Instruments for the PEU, PU, and BI variables were adapted from Türker et al. (2022), while the AU variable instrument was adapted from Almaiah and Alismaiel (2019). All items across the PEU, PU, BI, and AU variables were measured using a five-point Likert scale (1–5). The Likert scale is designed to systematically measure the views, attitudes, opinions, and perceptions of individuals or groups regarding a social phenomenon (Sugiyono, 2019). Each questionnaire item on the Likert scale presents a range of response options reflecting the degree of agreement, from highly positive to highly negative.

This study utilised Structural Equation Modelling with Partial Least Squares (SEM-PLS), employing SmartPLS version 4 for data processing. The validity assessment technique used in the SEM-PLS analysis was the measurement model (outer model), which consists of convergent validity testing, discriminant validity testing, and reliability testing. The structural model (inner model) analysis comprised R-square, effect size, path coefficients, and predictive relevance testing. Hypothesis testing was conducted using the bootstrapping procedure.

Results and Discussion

Research Results

This study was conducted in the Office Administration Education programme at Universitas Sebelas Maret. The respondents consisted of 195 students who had previously used QRIS. The demographic profile of respondents included students aged between 18 and 23 years, enrolled in the Office Administration Education programme at Universitas Sebelas Maret across the 2022, 2023, 2024, and 2025 cohorts, each of whom had used QRIS on at least one prior occasion. Respondents served as the primary data source, with data collected via an online questionnaire distributed using Google Forms. These data were gathered to provide supplementary context supporting the researcher's analysis of the study phenomenon. Information collected included full name, student identification number, class, and cohort. All collected data were subsequently processed within the SEM-PLS model using SmartPLS version 4.1.1.2.

Figure 1

Final structural model of QRIS adoption based on SEM-PLS analysis

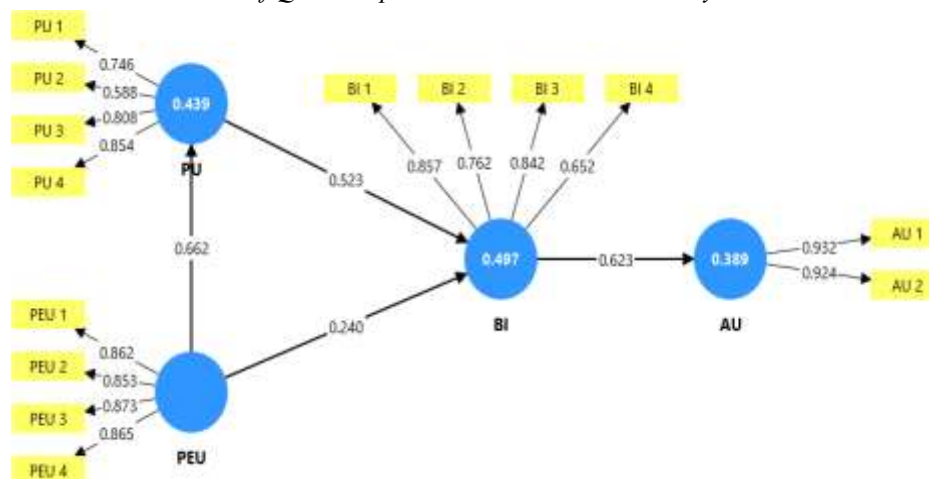


Figure 1 presents the final structural model derived from SEM-PLS analysis using SmartPLS version 4.1.1.2. The measurement model assessment encompassed the outer model, inner model, and hypothesis testing. Convergent validity was assessed through outer loading values to determine whether each indicator for a given variable was statistically valid. An indicator is considered valid when its outer loading value is ≥ 0.70 (Türker et al., 2022). Convergent validity was additionally evaluated using the Average Variance Extracted (AVE), whereby an AVE value of ≥ 0.50 indicates that the construct explains at least 50% of the variance in its indicators, signifying that the indicators are sufficiently representative of the construct being measured (Hair et al., 2021).

Table 1
Outer Loading Values and Average Variance Extracted (AVE)

Variable	Item	Loading Factor	AVE	Status
Actual Use	AU 1	0.932	0.861	Valid
	AU 2	0.924		Valid
Perceived Ease of Use	PEU 1	0.862	0.745	Valid
	PEU 2	0.853		Valid
	PEU 3	0.873		Valid
	PEU 4	0.865		Valid
Perceived Usefulness	PU 1	0.746	0.571	Valid
	PU 2	0.588		Valid
	PU 3	0.808		Valid
	PU 4	0.854		Valid
Behavioral Intention	BI 1	0.857	0.612	Valid
	BI 2	0.762		Valid
	BI 3	0.842		Valid
	BI 4	0.652		Valid

As shown in Table 1, the convergent validity results indicate that the highest outer loading value was observed for item AU 1 (0.932). The majority of items met the required threshold. While item PU 2 produced a loading value of 0.588 below the commonly applied threshold of 0.70 it was retained in the analysis because, according to Hair et al. (2019), a factor loading of 0.55 or above remains acceptable for samples of 100 respondents or more. Given that the present sample comprised 195 respondents, PU 2 with a loading of 0.588 is considered valid by this criterion and was therefore retained. Moreover, all AVE values exceeded the minimum threshold of 0.50, confirming that all construct indicators are valid and suitable for use in this study.

Table 2
Fornell-Larcker Criterion Values for Discriminant Validity

	AU	BI	PEU	PU
AU	0.928			
BI	0.623	0.783		
PEU	0.318	0.586	0.863	
PU	0.478	0.682	0.662	0.756

Table 2 presents the Fornell-Larcker criterion values for discriminant validity assessment. Discriminant validity was evaluated by examining the square root of the AVE for each construct relative to its correlations with other constructs. The Fornell-Larcker criterion is satisfied when the square root of a construct's AVE exceeds its highest correlation with any other construct (Ariyanto et al., 2023). As shown in Table 2, all variables demonstrate AVE square roots that are higher than their inter-construct correlations, indicating that each construct shares more variance with its own indicators than with those of other constructs. This confirms that adequate discriminant validity is achieved at the construct level.

In addition to the Fornell-Larcker criterion, discriminant validity was assessed through cross-loading values. Cross-loadings were evaluated by comparing each indicator's loading on its

designated construct against its loadings on all other constructs (Saputra et al., 2023). Discriminant validity through cross-loadings is considered acceptable when each indicator loads more strongly on its own construct than on any other construct. Discriminant validity was further assessed using the Heterotrait-Monotrait Ratio (HTMT), which evaluates discriminant validity by comparing the average inter-construct correlations. The HTMT criterion is satisfied when values remain below the threshold of 0.900, indicating that a model possesses adequate discriminant validity (Purwanto & Sudargini, 2021).

Table 3
Heterotrait-Monotrait Ratio (HTMT) Values

Construct Pair	HTMT Value
BI <-> AU	0.762
PEU <-> BI	0.686
PU <-> BI	0.858
PU <-> PEU	0.778

As demonstrated in Table 3, all HTMT values in this study fall below the threshold of 0.900. This indicates that no discriminant validity issues exist among the constructs tested, and that each construct in the model is clearly distinguishable from the others without measurement overlap. The research model therefore satisfies the criteria for adequate discriminant validity and is suitable for further analysis.

Reliability was assessed through two primary methods: composite reliability and Cronbach's alpha. Reliability testing was conducted to ensure that the data obtained from the measured variables are dependable and internally consistent (Darma, 2021). A construct is deemed reliable when both composite reliability and Cronbach's alpha values reach ≥ 0.70 (Hair & Alamer, 2022). Table 4 presents the reliability assessment results.

Table 4
Reliability Assessment Results

	Cronbach's alpha	Composite reliability (rho a)	Composite reliability (rho c)	Average variance extracted (AVE)
AU	0.839	0.841	0.926	0.861
BI	0.786	0.810	0.862	0.612
PEU	0.887	0.892	0.921	0.745
PU	0.749	0.786	0.840	0.571

As shown in Table 4, all composite reliability values exceed 0.700, indicating that the indicators within each construct function effectively and collectively measure the same underlying construct. Similarly, all Cronbach's alpha values exceed 0.700, further confirming that indicators within each construct are mutually supportive. In aggregate, these reliability results demonstrate that all constructs exhibit satisfactory consistency and are acceptable for use in subsequent analysis.

Inner model evaluation was conducted by examining the coefficient of determination (R^2). R^2 values of approximately 0.10 indicate a weak model, values around 0.30 indicate a moderate model, and values exceeding 0.50 indicate a strong model (Hair & Alamer, 2022). Table 5 presents the R-square results.

Table 5
R-Square (R^2)

	R-square	R-square adjusted
AU	0.389	0.385
BI	0.497	0.492
PU	0.439	0.436

As presented in Table 5, the R^2 results indicate the following: (1) The R^2 value for AU is 0.389, placing it at the moderate level, indicating that 38.9% of the variance in AU is explained by BI, while the remaining 61.1% is attributable to factors outside the model. (2) The R^2 value for BI is 0.497, placing it at the moderate level, indicating that 49.7% of the variance in BI is explained by PU and PEU, while the remaining 50.3% is attributable to external factors. (3) The R^2 value for PU is 0.439, placing it at the moderate level, indicating that 43.9% of the variance in PU is explained by PEU, while the remaining 56.1% is attributable to factors outside the model.

Effect size (f^2) was used to measure the magnitude of one variable's influence on another within the model. The criteria for interpreting effect size are as follows: 0.02 indicates a small effect, 0.15 indicates a moderate effect, and 0.35 indicates a large effect on the endogenous latent variable (Husaeni & Mardiana, 2022). Table 6 presents the effect size results.

Table 6
Effect Size

	AU	BI	PEU	PU
AU				
BI	0.635			
PEU		0.064		0.782
PU		0.305		

As shown in Table 6, the effect size results indicate the following: (1) The f^2 value for PEU on PU is 0.782, indicating a large effect, meaning that PEU substantially explains variance in PU. (2) The f^2 value for PU on BI is 0.305, indicating a moderate effect on BI. (3) The f^2 value for PEU on BI is 0.064, indicating a small effect. (4) The f^2 value for BI on AU is 0.635, indicating a large effect, demonstrating that BI substantially explains variance in AU.

Predictive relevance (Q^2) was used to evaluate the model's predictive capability. A Q^2 value greater than zero indicates that the model possesses adequate predictive capability (Husaeni & Mardiana, 2022). The classification criteria are: 0.02 represents small, 0.15 represents medium, and 0.35 represents large predictive relevance (Arham et al., 2021). Table 7 presents the Q^2 results.

Table 7
Predictive Relevance (Q^2)

Variable	Q^2_{predict}
PU	0.425
BI	0.484
AU	0.378

As presented in Table 7, the predictive relevance results indicate the following: (1) The Q^2 value for PU is 0.425, indicating large predictive capability, whereby the model explains 42.5% of variability in PU, with the remaining 57.5% attributable to factors outside the model. (2) The Q^2 value for BI is 0.484, indicating large predictive capability, whereby the model explains 48.4% of variability in BI, with 51.6% attributable to external factors. (3) The Q^2 value for AU is 0.378, indicating large predictive capability, whereby the model explains 37.8% of variability in AU, with 62.2% attributable to factors outside the model. These results collectively indicate that the model demonstrates effective predictive quality for all dependent variables.

Multicollinearity assessment examined whether indicators within the model exhibited excessively high inter-correlations (Hair & Alamer, 2022). High levels of multicollinearity can render parameter estimates unstable and complicate model interpretation. Multicollinearity was detected using the Variance Inflation Factor (VIF); a VIF value below 5.0 indicates the absence of multicollinearity concerns (Sofyani, 2025). Tables 8 and 9 present the outer and inner VIF values, respectively.

Table 8*Output Outer VIF*

AU	VIF	BI	VIF	PEU	VIF	PU	VIF
AU 1	2.096	BI 1	1.930	PEU 1	2.182	PU 1	1.500
AU 2	2.096	BI 2	1.581	PEU 2	2.479	PU 2	1.249
		BI 3	1.811	PEU 3	2.713	PU 3	1.621
		BI 4	1.321	PEU 4	2.289	PU 4	1.892

Table 9*Output Inner VIF*

	VIF
BI -> AU	1.000
PEU -> BI	1.782
PEU -> PU	1.000
PU -> BI	1.782

As demonstrated in Tables 8 and 9, no multicollinearity was detected among indicators or variables. This is evidenced by the absence of any VIF value exceeding 5.0 across all indicators and variables. Consequently, all indicators for each respective variable are confirmed to measure their corresponding constructs in a valid and reliable manner.

Hypothesis testing in this study was conducted via a bootstrapping procedure applied to the sample data. A hypothesis is considered statistically significant when the t-statistic value exceeds 1.96 (Husaeni & Mardiana, 2022). A hypothesis is additionally accepted when the p-value is less than 0.05 (Hair & Alamer, 2022). A hypothesis is confirmed when the original sample value is positive, indicating a positive directional relationship between the respective variables. Table 10 presents the hypothesis testing results.

Table 10*Hypothesis Testing Results (Bootstrapping)*

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
PEU -> PU	0.662	0.664	0.048	13.745	0.000
PU -> BI	0.523	0.524	0.066	7.982	0.000
PEU -> BI	0.240	0.239	0.070	3.436	0.001
BI -> AU	0.623	0.625	0.057	11.024	0.000

Based on the hypothesis testing results presented in Table 10, the following conclusions are drawn: (1) H1: PEU on PU – The p-value is 0.000 (< 0.05) and t-statistic is 13.745 (> 1.96), confirming statistical significance. The original sample value of 0.662 indicates that each unit increase in PEU corresponds to a 0.662 standard unit increase in PU, reflecting a positive directional relationship. H1 is therefore accepted: PEU exerts a significant positive effect on PU of QRIS payment method usage among PAP FKIP UNS students. (2) H2: PU on BI – The p-value is 0.000 (< 0.05) and t-statistic is 7.982 (> 1.96). The original sample value of 0.523 indicates that each unit increase in PU corresponds to a 0.523 standard unit increase in BI, reflecting a positive directional relationship. H2 is therefore accepted: PU exerts a significant positive effect on BI to use QRIS among PAP FKIP UNS students. (3) H3: PEU on BI – The p-value is 0.001 (< 0.05) and t-statistic is 3.436 (> 1.96). The original sample value of 0.240 indicates that each unit increase in PEU corresponds to a 0.240 standard unit increase in BI, reflecting a positive directional relationship. H3 is therefore accepted: PEU exerts a significant positive effect on BI to use QRIS among PAP FKIP UNS students. (4) H4: BI on AU – The p-value is 0.000 (< 0.05) and t-statistic is 11.024 (> 1.96). The original sample value of 0.623 indicates that each unit increase in BI corresponds to a 0.623 standard unit increase in AU, reflecting a positive directional relationship. H4 is therefore accepted:

BI exerts a significant positive effect on AU of QRIS payment method usage among PAP FKIP UNS students.

Discussion

H1: The Effect of Perceived Ease of Use on Perceived Usefulness. Based on the hypothesis testing results, H1 is accepted, with a t-statistic of 13.745 and a p-value of 0.000. The effect size (f^2) of PEU on PU is 0.782, indicating a large explanatory capacity. The original sample value of 0.662 confirms a positive directional relationship between PEU and PU. These results demonstrate that Perceived Ease of Use exerts a significant positive effect on Perceived Usefulness, indicating that the more easily QRIS technology can be used, the more strongly PAP students perceive QRIS as a beneficial tool for their daily transactions.

This finding is consistent with Türker et al. (2022), who found that PEU has a significant positive effect on PU in the context of QR code-based payment methods, concluding that greater ease of use corresponds to heightened perceived utility. Caroline and Hastuti (2021) similarly reported a positive effect of PEU on PU in the M-Banking context, with higher perceived ease of use corresponding to greater perceived usefulness of M-Banking. Natasia et al. (2022) also confirmed a significant positive effect of PEU on PU, observing that users who comprehend and operate technology with ease are more inclined toward sustained use. The present study demonstrates that ease of understanding features, clarity of the transaction flow, and operational simplicity are critical factors in shaping QRIS' perceived usefulness. When users encounter no technical difficulties in using QRIS, they more readily appreciate its benefits, thereby reducing hesitation or fear associated with using the technology. Without ease of use, the benefits of any technology cannot be optimally realised. Accordingly, service providers should continuously improve the usability of QRIS to foster satisfaction, loyalty, and sustained use, particularly among PAP students.

H2: The Effect of Perceived Usefulness on Behavioural Intention. H2 is accepted, with a t-statistic of 7.982 and a p-value of 0.000. The effect size (f^2) of PU on BI is 0.305, indicating a moderate explanatory capacity. The original sample value of 0.523 confirms a positive directional relationship between PU and BI. These results demonstrate that Perceived Usefulness exerts a significant positive effect on Behavioural Intention, indicating that the more students perceive QRIS as useful, the greater their intention to continue using it.

This finding aligns with Sajili and Wiadi (2025), who demonstrated that PU exerts a significant positive effect on BI for QRIS usage in Jakarta, noting that users perceived multiple benefits including transactional convenience across various merchants. Arifin et al. (2025) similarly found that PU had a highly significant positive effect on BI for QRIS transaction services, concluding that higher perceived utility corresponds to a greater likelihood of continued technology adoption. Gunawan et al. (2023) also confirmed a significant positive influence of PU on BI in QRIS transactions, highlighting how QRIS facilitates transactional activities and raises public awareness for daily payment adoption. The present study demonstrates that higher perceived usefulness manifested through convenience, speed, and practicality directly enhances students' confidence and willingness to adopt and maintain QRIS usage. Accordingly, high perceived usefulness directly translates to stronger behavioural intention and usage intensity among PAP FKIP UNS students.

H3: The Effect of Perceived Ease of Use on Behavioural Intention. H3 is accepted, with a t-statistic of 3.436 and a p-value of 0.001. The effect size (f^2) of PEU on BI is 0.064, indicating a small explanatory capacity. The original sample value of 0.240 confirms a positive directional relationship between PEU and BI. These results demonstrate that Perceived Ease of Use exerts a significant positive effect on Behavioural Intention, indicating that the greater the ease of QRIS usage, the stronger students' intention to continue using it.

This finding is consistent with Rukmana et al. (2025), who reported that PEU significantly and positively influenced BI for BCA Mobile usage, indicating that ease of use is a critical determinant of users' intention to continue using digital financial applications. Rahimi et al. (2024) similarly found that PEU had a significant positive effect on BI for QRIS usage among micro, small, and medium enterprises (MSMEs), noting QRIS' flexibility in accommodating diverse non-cash

payment methods including ShopeePay, DANA, GoPay, and mobile banking through a single QR code. However, the present finding contrasts with Türker et al. (2022), who found that PEU did not significantly influence BI in QR code-based payment usage. This discrepancy is likely attributable to differences in respondent characteristics: the present study's respondents are university students who are active digital technology users, for whom ease of use remains a salient determinant of QRIS adoption intention. The analysis confirms that the greater the ease with which QRIS can be used, the stronger the user's intention to adopt it on a sustained basis.

H4: The Effect of Behavioural Intention on Actual Use. H4 is accepted, with a t-statistic of 11.024 and a p-value of 0.000. The effect size (f^2) of BI on AU is 0.635, indicating a large explanatory capacity. The original sample value of 0.623 confirms a positive directional relationship between BI and AU. These results demonstrate that Behavioural Intention exerts a significant positive effect on Actual Use, indicating that the stronger students' intention to use QRIS, the higher their actual usage of the technology.

This finding is consistent with Suganda and Suharto (2024), who demonstrated that behavioural intention to use QRIS significantly predicts actual usage among millennial employees at financial service institutions. Rahimi et al. (2024) similarly found that BI had a significant positive effect on AU in the QRIS-MSME context, indicating that positive QRIS adoption intentions among MSMEs encouraged sustained actual usage. Almaiah and Alismaiel (2019) further confirmed that BI has a significant positive effect on AU, emphasising that behavioural intention must be strengthened to drive actual usage. The present study demonstrates that students' intention to use QRIS contributes substantially to actual adoption in their daily lives. This intention is typically shaped by prior positive experiences, perceived usefulness, and ease of use all of which motivate users toward continued QRIS adoption. The stronger students' intention, the higher the actual frequency of QRIS usage in daily transactions. Consequently, it is important to reinforce behavioural intention through enhanced user experience, system usability, and perceived benefits, as these elements directly increase actual QRIS adoption among students, particularly those in the PAP FKIP UNS programme.

Notably, the coefficient of determination (R^2) for the AU variable is 0.389 classified at the moderate level suggesting that the TAM model employed in this study does not fully account for all variation in actual QRIS usage behaviour. A substantial 61.1% of the variation in AU remains attributable to factors external to the model. In the context of digital payment technology, variables such as trust, perceived security, and financial incentives (e.g., cashback or discounts) may represent relevant additional predictors of QRIS adoption, particularly among students who tend to prioritise transactional security and economic benefits when selecting digital payment services.

Conclusion

Based on the analysis of the research results, the following conclusions are drawn. First, Perceived Ease of Use (PEU) exerts a significant positive effect on Perceived Usefulness (PU) in the context of QRIS payment method adoption among PAP FKIP UNS students (t-statistic = 13.745, $p = 0.000$). Second, Perceived Usefulness (PU) exerts a significant positive effect on Behavioural Intention (BI) to use QRIS among PAP FKIP UNS students (t-statistic = 7.982, $p = 0.000$). Third, Perceived Ease of Use (PEU) exerts a significant positive effect on Behavioural Intention (BI) to use QRIS among PAP FKIP UNS students (t-statistic = 3.436, $p = 0.001$). Fourth, Behavioural Intention (BI) exerts a significant positive effect on Actual Use (AU) of QRIS among PAP FKIP UNS students (t-statistic = 11.024, $p = 0.000$).

Taken together, this study confirms that QRIS adoption among PAP FKIP UNS students follows the psychological pathway described in the Technology Acceptance Model (TAM): perceived ease of use shapes perceived usefulness, both constructs jointly shape behavioural intention, and behavioural intention subsequently drives actual QRIS usage. The findings also reveal that the effect of PEU on BI is comparatively smaller than the effect of PU on BI, suggesting that ease of use operates primarily through an indirect pathway enhancing perceived usefulness before subsequently influencing adoption intention.

This study is subject to several limitations. It is restricted to the TAM variables of PEU, PU, BI, and AU, and therefore does not incorporate other potentially relevant external factors. In the context of digital payment technologies such as QRIS, variables including trust, perceived security, financial incentives, habit, and social influence may additionally influence actual usage. Furthermore, the study is limited to PAP FKIP UNS students as its research object, which constrains the generalisability of findings to broader populations.

The findings of this study contribute to the TAM literature, corroborating the framework introduced by Venkatesh and Davis (1996) as an effective model for understanding technology adoption, and enriching it within the specific context of QRIS payment technology. On the basis of these findings, service providers are encouraged to continuously improve the quality and usability of QRIS systems to enhance accessibility for example, by developing user-friendly application interfaces and supporting features such as NFC capability, easily accessible transaction history, and real-time payment notifications. Universities are encouraged to support QRIS payment technology adoption by recommending the provision of QRIS payment options alongside cash payments, and by collaborating with digital payment service providers to facilitate QR code availability. Students are encouraged to utilise QRIS digital payment technology more optimally and responsibly across various transactions. Future researchers are encouraged to expand this study by incorporating additional variables relevant to QRIS adoption, and by extending the research population to broader contexts.

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