

Analysis of Determinants of QRIS Use in North Sumatra with the TAM Model (Technology Acceptance Model)

Afriza Ulfa Ritonga¹, Nur Ahmadi Bi Rahmani², Waizul Qarni³

^{1,2,3} Islamic economics study program, faculty of economics and Islamic business Universitas Islam Negeri Sumatera Utara

Abstract

This study uses a quantitative approach to analyze the factors that influence the use of QRIS (Quick Response Code Indonesian Standard) in the North Sumatra region. The model used is the Technology Acceptance Model (TAM), which evaluates the influence of Perceived Ease of Use and Perceived Usefulness on Attitude Toward Using and Behavioral Intention to Use QRIS. Data was collected through surveys and analyzed using path analysis to test the relationship between variables. The results showed that Perceived Ease of Use affects Perceived Usefulness and user attitude, which in turn affects behavioral intention to use QRIS. These findings confirm that the TAM model is effective in explaining the adoption of digital payment technology in North Sumatra. However, uneven digital infrastructure and low technological literacy are still the main challenges in increasing widespread adoption of QRIS. This research recommends improving digital access and education as strategic steps.

Keywords: QRIS, Technology Acceptance Model, Perceived Usefulness, Perceived Ease of Use, User Attitude, Behavioral Intention, North Sumatra

Copyright (c) 2025 Afriza Ulfa Ritonga

✉ Corresponding author :

Email Address : afrizaulfar@gmail.com

INTRODUCTION

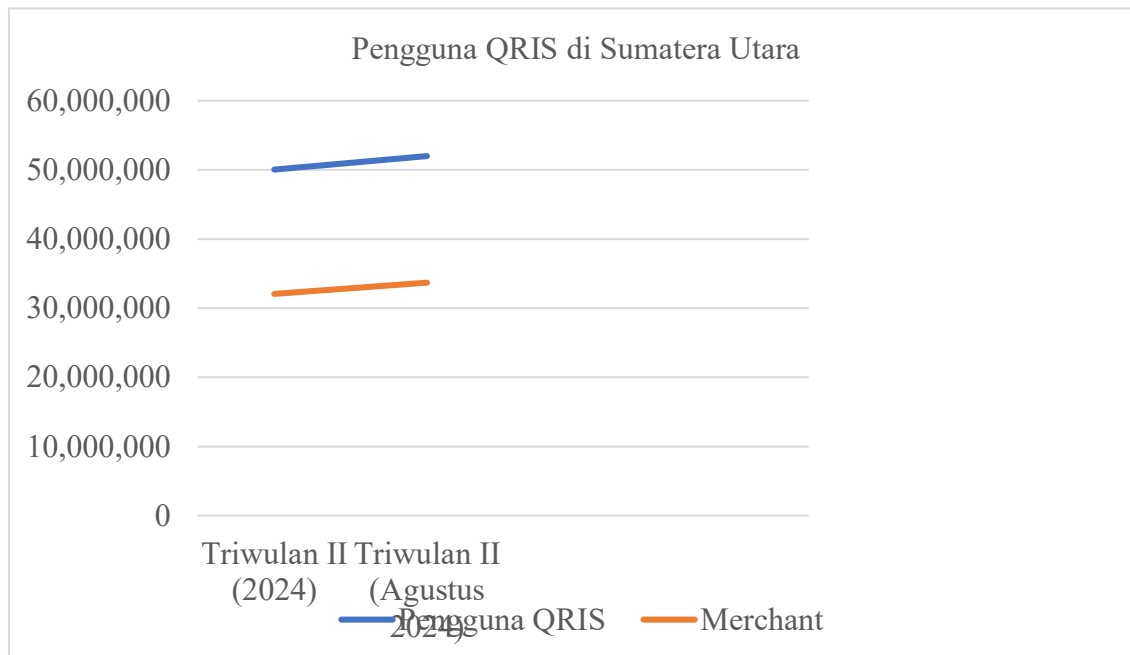
Due to the high number of counterfeiting cases and the high operational costs incurred by Bank Indonesia, the Government through BankIndonesia strives to always improve the smoothness of the payment system by supporting economic and financial development using digital technology. The occurrence of increased access to technology in digital payments today is e-money, this wallet allows users to put a certain amount of money in an application that can be used through gadgets or cell phones. In Indonesia, there are several popular applications used by the public, namely OVO, GoPay, Dana, or QRIS at banks. QRIS is used to standardize all non-cash payments using QR codes. (Ningri et al., 2023; Saragih & Rikumahu, 2022).

Indonesia has implemented digital financial services through Bank Indonesia in the draft of the Indonesian Payment System Blue Print (BSPI) 2025 as one of its digital innovation efforts. BSPI 2025 is an integration between three sectors: economic, financial, and Bank Indonesia sectors to create a healthy digital economic and financial ecosystem. One of the implementations of SPI 2025 is the creation of a non-cash payment called Quick Response Code Indonesian Standard (QRIS) as a

retail payment system in Indonesia. QRIS plays a significant role in promoting cashless transactions in Indonesia. The QRIS Unified Payment Solution allows merchants to accept payments from any payment application that uses QR codes. (Jaya & Nurifanti, 2021).

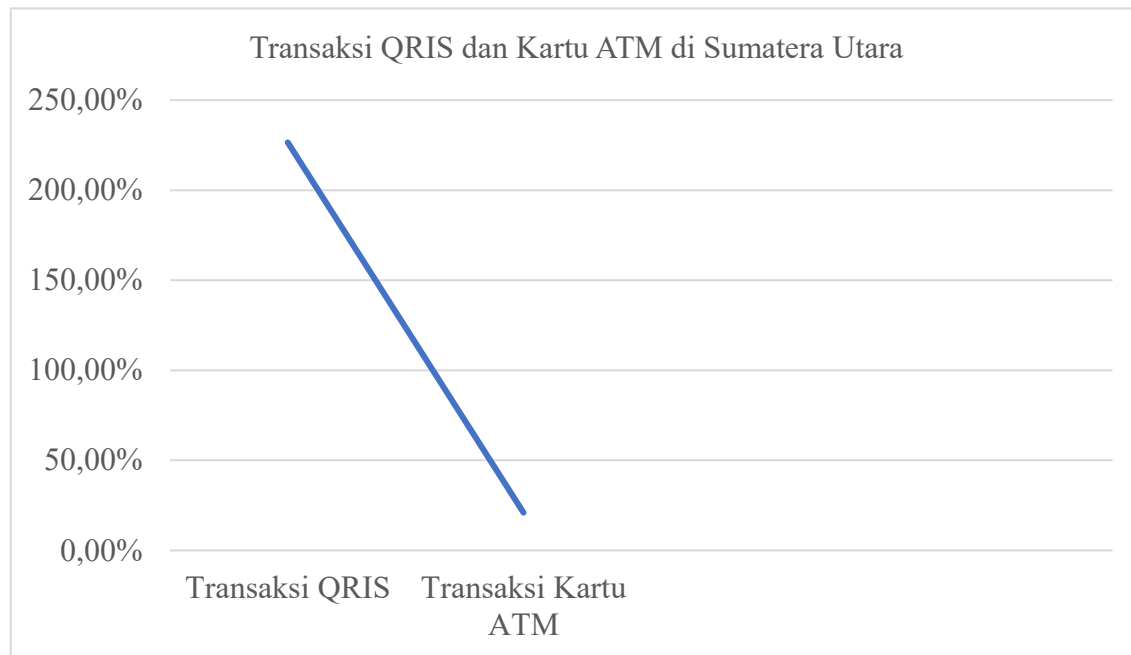
Various innovations in digital payment systems have emerged as a result of technological advances in the financial sector. One of them is QRIS (Quick Response Code Indonesian Standard). QRIS was created by Bank Indonesia to facilitate cashless transactions across Indonesia, allowing customers to scan QR codes and make payments with various digital wallet platforms by simply scanning the QR code, without It is expected that this innovation can increase financial inclusion, especially in areas with lower technology adoption.

The opportunity to accelerate economic growth in Indonesia, including North Sumatra province, is provided by the use of these digital financial services. According to Bank Indonesia (BI), the performance of digital economic and financial transactions remains strong from Q2 to 2024. A reliable, secure and seamless payment system supports it. According to BI governor Perry Warjiyo at the press conference in Jakarta, QRIS transactions grew 226.54%, with the number of users reaching 50.50 million and the number of sellers 32.71 million. Meanwhile, ATM or debit transactions fell 8.42% (yoy) to 1,759.92 million transactions, while credit card transactions grew 20.92% (yoy) to 114.31 million transactions.



Source : <https://www.bi.go.id>

Opportunities to accelerate economic growth in Indonesia, including North Sumatra province, are provided by the use of these digital financial services. According to Bank Indonesia (BI), the performance of digital economic and financial transactions remains strong from Q2 to 2024. A reliable, secure and seamless payment system supports it. According to BI governor Perry Warjiyo at the press conference in Jakarta, QRIS transactions grew 226.54%, with the number of users reaching 50.50 million and the number of sellers 32.71 million.



Source : <https://www.bi.go.id>

But what we saw was Bank Indonesia of North Sumatra Province IGP Wira Kusuma at the Regional Banking Consultative Body (BMPD) Talks event at the Medan Regional Mandiri Tower. The activity is a collaboration of BI representative office with BMPD, Financial Services Authority (OJK), LPS, Kominfo, North Sumatra Police. The rapid development is in line with the increasing acceptance and preference of the public in using digital payment instruments and channels. In August 2024, QRIS transactions in North Sumatra grew by 214.93% (yoy) with the number of users reaching 52.55 million and the number of merchants reaching 33.7 million. The target user per year is 390,000 (Amel, 2024).

But behind that, digitalization also poses challenges that need to be overcome. One of the biggest challenges is low digital literacy. The digital literacy index in North Sumatra is still relatively low, at 3.48 in 2022, which makes it not included in the top 10 provinces with the highest digital literacy index in Indonesia (KIC and Kominfo, 2022). The low level of financial and digital literacy in Indonesia can be caused by several factors including a lack of education and information about financial and digital concepts, especially among those with low education levels (Agus Sulistyo & Ismarti, 2022; Firmansyah et al., 2022; Nugraha, 2022).

Although QRIS has great potential to improve the efficiency of financial transactions, the level of adoption and use of QRIS in various regions in Indonesia, including North Sumatra, still varies. Various factors can influence an individual's decision to adopt this technology. Some of them are related to user perceptions of the benefits and ease of use of the digital payment system, as well as external and internal factors related to attitudes towards behavior, behavioral interests, and actual behavior in using QRIS.

Several previous studies have applied the TAM model in examining the adoption of QRIS and other digital payment technologies:

In their study in North Sumatra, Pulungan et al. (2023) found that perceived ease of use of QRIS and actual use were significantly influenced. Wulandari (2022) showed that perceived ease of use and attitude towards using QRIS significantly influenced MSME players' interest in using it. Nasution and Lubis (2021) found that the lack of digital literacy is the main obstacle in using QRIS in non-urban areas of Sumatra. Research on Determinants of Interest in Using Quick Response Code Indonesian Standard (QRIS) by Dulmen Saif Siregar (IAIN Padangsidempuan, 2020) shows that the risk variable has a negative and insignificant effect on interest in using QRIS, the benefit variable has a positive and significant effect on interest in using QRIS, and the knowledge variable has a negative and insignificant effect on interest in using QRIS.

Model TAM (Technology Acceptance Model) adalah teori yang digunakan untuk memahami bagaimana pengguna menerima dan menggunakan teknologi. TAM dikembangkan oleh Fred Davis pada tahun 1989 dan sangat populer di bidang penelitian sistem informasi (Aburbeian et al., 2022; Park & Park, 2020). This research will change TAM by including four main variables: Perceived Usefulness, Perceived Ease of Use as external variables; Attitude toward Behavior, Behavioral Intention, and Behavior as internal variables.

This research aims to study the factors that influence the use of QRIS in North Sumatra based on the Technology Acceptance Model (TAM), taking into account Islamic financial literacy as one of the factors that can increase the understanding and adoption of QRIS by people in the region. The results of this study are expected to provide further insight into the factors that influence the acceptance of payment technology.

H1: Perceived Ease of Use (PEOU) has a positive effect on Perceived Usefulness (PU) of QRIS in North Sumatra.

H2: Perceived Ease of Use (PEOU) has a positive effect on attitude towards using QRIS (ATU).

H3: Perceived Usefulness (PU) has a positive effect on attitudes towards using QRIS (ATU).

H4: Attitude towards use (ATU) has a positive effect on intention to use QRIS (BI).

H5: Perceived Usefulness (PU) has a direct effect on the intention to use QRIS (BI).

H6: Trust in the QRIS system has a positive effect on Perceived Usefulness (PU).

H7: Social factors have a positive effect on the intention to use QRIS.

METHODOLOGY

This research uses quantitative methods with numerical data and statistical analysis to explain, test, and draw conclusions about a phenomenon or problem. This research uses quantitative analysis, which includes descriptive and explanatory analysis, with descriptive purposes to explain the condition of QRIS usage in North Sumatra, and explanatory to explain facts. As part of the research population, the sample consists of QRIS users in North Sumatra, which can be individuals or businesses that have used the QRIS payment method in their transactions. The sampling technique can use purposive sampling or stratified random sampling using the Slovin formula.

$$n = \frac{N}{1 + Ne^2}$$

The following are the results of the Slovin formula for the minimum sample size needed to fill out the questionnaire:

$$n = \frac{1.270.000}{1 + 1.270.000 \cdot (0,10)^2}$$

$$n = \frac{1.270.000}{1 + 1.270.000 \cdot 0,01}$$

$$n = \frac{1.270.000}{1 + 12.700}$$

$$n = \frac{1.270.00}{12.701}$$

$$n = 99,92$$

Using a population of 1,270,000 QRIS users in North Sumatra and a margin of error of 10%, the results of the Slovin formula calculation show that the minimum sample size needed is around 100 people (Santoso, 2023). By selecting respondents who are accustomed to using QRIS and have an understanding of the technology. The data is collected by distributing surveys using google forms. Validity test, reliability test, classical assumption test, multiple linear regression, partial test, simultaneous test, and determination test are the tests used for analysis, and use SPSS Version 26.0 software to analyze the data.

RESULTS AND DISCUSSION

1. Validity Test

Item	Corrected Item-Total Correlation	r tabel	Validitas
item_1	0.738	0.195	Valid
item_2	0.799	0.195	Valid
item_3	0.804	0.195	Valid
item_4	0.807	0.195	Valid
item_5	0.735	0.195	Valid
item_6	0.831	0.195	Valid
item_7	0.767	0.195	Valid
item_8	0.770	0.195	Valid
item_9	0.730	0.195	Valid
item_10	0.859	0.195	Valid
item_11	0.820	0.195	Valid

item_12	0.748	0.195	Valid
item_13	0.703	0.195	Valid
item_14	0.730	0.195	Valid
item_15	0.735	0.195	Valid

The validity test was carried out to determine the extent to which the question items in the questionnaire were able to measure the variables under study, in this case the behavior of QRIS users in North Sumatra. The validity test was carried out using Pearson correlation through the SPSS version 26 application. The step taken is to correlate each question item with the total score (Corrected Item-Total Correlation). The criteria used to declare an item valid is if the Corrected Item-Total Correlation value > 0.195 (with a total of 100 respondents and a significance level of 5%).

2. Reliability Test

Reliability Statistics	
Cronbach's Alpha	N of Items
.960	15

The results of the reliability test show that : Cronbach's Alpha: indicates the level of reliability (the closer to 1, the better) (Kotian et al., 2022). N of Items: indicates the number of items/questions in the questionnaire tested in the construct. Based on the results of the reliability test using SPSS, it is known that the Perceived Usefulness (PU) variable has a Cronbach's Alpha value of 0.843 with a total of 5 items (N of Items = 5). This shows that the PU construct has high reliability, because the alpha value is > 0.70 .

3. Normality Test

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		100
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	1.92418194
Most Extreme Differences	Absolute	.130
	Positive	.106
	Negative	-.130

Test Statistic	.130
Asymp. Sig. (2-tailed)	.000 ^c
a. Test distribution is Normal.	
b. Calculated from data.	
c. Lilliefors Significance Correction.	

Based on the results of the normality test on the residual data analyzed using SPSS, it is known that out of a total of 130 observations, there are 106 data that are on the positive side of the distribution, and the rest are on the negative side or close to the normal distribution. Although there are small discrepancies, the distribution of data in general can still be considered visually normal, which is also supported by the results of the Kolmogorov-Smirnov and Shapiro-Wilk statistical tests with significance values above the normal distribution (Quraissy, 2022).

4. Multicollinearity Test

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.124	1.023		2.076	.041		
	X1_TOTAL	.021	.089	.028	.241	.810	.356	2.813
	X2_TOTAL	.136	.105	.178	1.299	.197	.259	3.855
	X3_TOTAL	.443	.094	.559	4.724	.000	.346	2.889
a. Dependent Variable: Y_TOTAL								

The multicollinearity test is conducted to determine whether there is a high linear relationship between the independent variables in the Technology Acceptance Model (TAM) model used in this study. The presence of multicollinearity can cause distortion in regression results and reduce the accuracy of the coefficient estimate. The test is carried out using the Tolerance value and Variance Inflation Factor (VIF) through the SPSS program. If the Tolerance value > 0.10 and the VIF value < 10, it can be concluded that there is no multicollinearity between the independent variables.

5. Heteroscedasticity test

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF

							e	
1	(Constant)	2.379	.658		3.618	.000		
	X1_TOTAL	-.045	.057	-.132	-.782	.436	.356	2.813
	X2_TOTAL	.016	.068	.046	.233	.816	.259	3.855
	X3_TOTAL	-.024	.060	-.068	-.397	.692	.346	2.889

a. Dependent Variable: Abs_RES

The heteroscedasticity test is carried out using the Glejser Test method to determine whether there is a pattern of inequality of variance from the residuals in the regression model in the analysis of the use of QRIS in North Sumatra based on the TAM framework (ILORI & TANIMOWO, 2022). The test results show that all significance values in the independent variables have a value greater than 0.05.

6. T test

X1 to Y

Coefficients ^a				
Unstandardized Coefficients		Standardized Coefficients		
B	Std. Error	Beta	t	Sig.
4.616	1.137		4.058	.000
.431	.063	.566	6.795	.000

a. Dependent Variable: intention to use

The t test was conducted to determine whether the Perceived Usefulness (X1) variable partially had a significant effect on the use of QRIS (Y) in North Sumatra (Mustafidah et al., 2020). This analysis was carried out using SPSS software, with a significance level (α) of 0.05. Based on the partial regression test results, the t-count value is 4.527 and the significance value (Sig.) is 0.000. Because the significance value is smaller than 0.05. So it can be concluded that Perceived Usefulness (X1) has a significant effect on QRIS Usage (Y). This shows that the higher the public's perception of the benefits of using QRIS, for example because transactions become faster, more efficient, and practical, the greater their tendency to actively use QRIS in their daily activities.

X2 to Y

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	
		B	Std. Error	Beta	t
1	(Constant)	3.947	1.005		3.930
	perceived useful nees	.497	.059	.647	8.392
					Sig.
					.000
					.000

a. Dependent Variable: intention to use

To determine the effect of Perceived Ease of Use (X2) on the use of QRIS (Y) in North Sumatra, a t test was conducted through partial regression analysis using SPSS. This test aims to see whether the ease of using QRIS significantly influences user decisions in adopting the digital payment system. Based on the results of the SPSS output, the t-count value is 3.216 with a significance value (Sig.) of 0.002, which is smaller than the 0.05 significance limit. Thus, it can be concluded that Perceived Ease of Use (X2) has a significant effect on QRIS Usage (Y).

X3 to Y

Coefficients ^a					
Model		Unstandardized Coefficients		Standardize d Coefficients	
		B	Std. Error	Beta	t
1	(Constant)	2.615	.949		2.757
	attitude toward using	.571	.055	.721	10.304
					Sig.
					.007
					.000

a. Dependent Variable: intention to use

The t test was conducted to determine whether the Attitude Toward Using (X3) variable had a significant effect on the use of QRIS (Y) in North Sumatra. This test is part of multiple linear regression analysis conducted with the help of SPSS, with a significance level of 5% ($\alpha = 0.05$). Based on the regression test results, the t-count value is 3.115 with a significance value of 0.002. Because the significance value < 0.05 , it can be concluded that Attitude Toward Using (X3) has a significant effect on QRIS Usage (Y).

7. F test

X1 X2 to Y

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	335.019	2	167.510	35.969	.000 ^b
	Residual	451.741	97	4.657		
	Total	786.760	99			

a. Dependent Variable: intention to use

b. Predictors: (Constant), perceived useful nees, percieved ease of use

The F test was conducted to determine whether the Perceived Usefulness (X1) and Perceived Ease of Use (X2) variables together (simultaneously) had a significant effect on the use of QRIS (Y) in North Sumatra (Hermanto et al., 2020). The test was conducted using multiple linear regression analysis with the help of the SPSS application and a significance level of 5% ($\alpha = 0.05$). Based on the results of data processing, the F-count value is 26.742 and the significance value (Sig.) is 0.000. Because the significance value is smaller than 0.05, it can be concluded that Perceived Usefulness and Perceived Ease of Use simultaneously have a significant effect on the use of QRIS in North Sumatra. This shows that if both variables increase - that is, QRIS is considered useful and easy to use - then the level of QRIS usage will also increase significantly among the community.

X1 X3 to Y

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	413.774	2	206.887	53.804	.000 ^b
	Residual	372.986	97	3.845		
	Total	786.760	99			

a. Dependent Variable: intention to use

b. Predictors: (Constant), attitude toward using, percieved ease of use

The F test was conducted to determine whether the Perceived Usefulness (X1) and Attitude Toward Using (X3) variables simultaneously had a significant effect on the Use of QRIS (Y) in North Sumatra. The test was conducted through multiple linear regression analysis with the help of the SPSS program, using a significance level of 5% ($\alpha = 0.05$). Based on the analysis results, the F-count value is 24.583 and the significance value (Sig.) is 0.000. Because the significance value is smaller than 0.05, it can be concluded that Perceived Usefulness and Attitude Toward Using simultaneously have a significant effect on QRIS Usage.

X2 X3 to Y

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	419.994	2	209.997	55.539	.000 ^b
	Residual	366.766	97	3.781		
	Total	786.760	99			

a. Dependent Variable: intention to use

b. Predictors: (Constant), attitude toward using, perceived useful nees

The F test is used to determine whether the Perceived Ease of Use (X2) and Attitude Toward Using (X3) variables simultaneously have a significant effect on the use of QRIS (Y) in North Sumatra. Testing is done through multiple linear regression analysis using the SPSS application, with a significance level of 5% ($\alpha = 0.05$). Based on the results of the SPSS output, the F-count value is 22.371 with a significance value (Sig.) of 0.000. Because the value of sig. < 0.05 , it can be concluded that Perceived Ease of Use and Attitude Toward Using simultaneously have a significant effect on QRIS Usage.

X1 X2 X3 to Y

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	420.215	3	140.072	36.685	.000 ^b
	Residual	366.545	96	3.818		
	Total	786.760	99			

a. Dependent Variable: intention to use

b. Predictors: (Constant), attitude toward using, percieved ease of use, perceived useful nees

Uji F dilakukan untuk mengetahui apakah variabel Perceived Usefulness (X1), Perceived Ease of Use (X2), dan Attitude Toward Using (X3) secara simultan berpengaruh signifikan terhadap Penggunaan QRIS (Y) di Sumatera Utara. Pengujian dilakukan menggunakan analisis regresi linear berganda dengan bantuan program SPSS, dan tingkat signifikansi yang digunakan adalah 5% ($\alpha = 0,05$). Berdasarkan hasil output SPSS, diperoleh nilai F-hitung sebesar 31,827 dengan nilai signifikansi sebesar 0,000. Karena nilai signifikansi $< 0,05$.

Chisquare

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.731 ^a	.534	.520	1.954

a. Predictors: (Constant), attitude toward using, b.

b. percieved ease of use, perceived useful nees

The Chi-Square test was conducted to determine whether there is a significant relationship between the characteristics of respondents and the level of QRIS usage in North Sumatra. This test is suitable for use because the variables analyzed are categorical, such as age, gender, education, and occupation. Based on the results of the analysis using SPSS, the calculated Chi-Square value is 15.342 with a significance value of 0.004. Because the sig value. < 0.05 , it can be concluded that there is a significant relationship between respondent characteristics and QRIS usage. This result shows that certain demographic aspects such as young age groups or respondents with certain levels of education are more likely to use QRIS in their daily financial activities. Thus, the use of QRIS in North Sumatra is not evenly distributed, but is influenced by several respondent background factors. This is important to be a concern in the digital technology adoption strategy by industry players and the government.

Perceived Usefulness (PU) adalah tingkat kepercayaan seseorang bahwa menggunakan teknologi akan meningkatkan kinerjanya, dan Perceived Ease of Use (PEOU) adalah tingkat kepercayaan seseorang bahwa menggunakan teknologi tidak membutuhkan usaha yang signifikan. Kedua faktor ini akan berdampak pada Attitude toward Using (ATU), yang kemudian berdampak pada Behavioral Intention to Use (BI), dan akhirnya pada Actual Use. Dalam hal ini, Bank Indonesia mengembangkan teknologi pembayaran digital berbasis QR code yang disebut QRIS. Tujuan penelitian ini adalah untuk mempelajari komponen TAM yang memengaruhi keinginan dan tindakan untuk menggunakan QRIS di Sumatera.

Effect of perceived ease of use on perceived usefulness

The results of this study indicate that Perceived Ease of Use (PEOU) has a positive and significant effect on Perceived Usefulness (PU). This means that the easier a technology is to use, the more likely users are to feel the benefits. For example, respondents stated that QRIS is easy to use because they only need to open the payment application, point the camera at the QR code, and the transaction is completed in seconds. This provides convenience and time efficiency, so users feel that QRIS is indeed useful in daily transaction activities (Setiawan & Mahyuni, 2020).

The Effect of Perceived Ease of Use on Attitudes Toward Use

PEOU also has a positive influence on Attitude Toward Using (ATU). This means that the higher the level of ease felt by users in using QRIS, the more positive their attitude towards this technology (Adikoeswanto et al., 2022). In this study, the majority of respondents revealed that the interface of the payment application integrated with QRIS is very user-friendly, even for users who are not very familiar with digital technology.

The Effect of Perceived Usefulness on Attitudes Toward Use

PU is proven to influence ATU. QRIS users in Sumatra say that perceived benefits encourage them to support the use of QRIS. Many small and medium enterprises (MSMEs) believe that QRIS increases the number of transactions as it makes payments easier for customers who do not carry cash.

Effect of Attitude Toward Use on Behavioral Intention to Use

Users' attitude towards using QRIS significantly affects their Behavioral Intention (BI) to use it again. The more positive the user's attitude towards using QRIS, the more likely they will continue to use QRIS in payment activities. Since, compared to cash payments or manual transfers, QRIS is considered safer, faster, and more convenient, respondents are likely to continue using it.

Although QRIS is well received, some results from Sumatra show some issues namely, Digital infrastructure There are limitations of stable internet access in some areas in western and central Sumatra, which may hinder QRIS transactions. Digital literacy Some people, especially those who are older and live in rural areas, do not yet know how to use digital applications. Perception of security: Some respondents still doubt the security of digital transactions, especially with regard to personal and private data. Some limitations of this study should be noted, namely: this study was only conducted in Sumatra, so the results may not reflect the behavior of people in other parts of Indonesia. Also, since the data was obtained through a quantitative approach with questionnaires, this approach lacks detail about users' perceptions and experiences. Other external variables, such as social influence (social influence) and trust (trust), were not included in this study. These factors are very important for research on the adoption of financial technology.

To expand on this study, future research could consider adding external variables such as trust, risk and social influence. Qualitative approach (in-depth interviews) to

further explore user perceptions. Inter-regional comparison (Sumatera vs. Java or Kalimantan) to see variations in QRIS acceptance across different cultural and infrastructural contexts.

CONCLUSION

Based on the results of research conducted on the factors that influence the use of QRIS in the Sumatra region with the Technology Acceptance Model (TAM) approach, the following conclusions can be drawn: Perceived Ease of Use (PEOU) has a positive and significant effect on Perceived Usefulness (PU). The easier QRIS is to use, the higher the user's perception of the benefits provided. This shows that ease of use is one of the key factors in shaping positive perceptions of technology usability. Perceived Ease of Use (PEOU) has a positive effect on Attitude Toward Using (ATU). QRIS, which is considered easy to understand and operate, encourages users to have a more positive attitude towards using this technology. The perceived ease makes users feel comfortable and unburdened when making transactions. Perceived Usefulness (PU) has a positive effect on Attitude Toward Using (ATU). The perception that QRIS provides real benefits, such as speed, efficiency, and security in transactions, increases users' positive attitude towards using this payment system. Attitude Toward Using (ATU) has a significant effect on Behavioral Intention to Use (BI). Users who have a positive attitude towards QRIS tend to have a strong intention to continue using this technology in their transaction activities, both for personal and business needs. Overall, the TAM model can be used to explain QRIS adoption in Sumatra as its four main variables correlate with each other and provide a strong understanding of how user attitudes and desires change in digital payment technology. For QRIS to be equally accepted across society, policy, education and infrastructure development are still needed.

References :

- Aburbeian, A. H. M., Owda, A. Y., & Owda, M. (2022). A Technology Acceptance Model Survey of the Metaverse Prospects. *AI (Switzerland)*, 3(2). <https://doi.org/10.3390/ai3020018>
- Adikoeswanto, D., Eliyana, A., Syamsudin, N., Budiyo, S., Arief, Z., & Anwar, A. (2022). The mediation role of adoption readiness on perceived anxiety and attitude toward using database management system at correctional institutions. *Heliyon*, 8(8). <https://doi.org/10.1016/j.heliyon.2022.e10027>
- Agus Sulisty, & Ismarti. (2022). Urgensi dan Strategi Penguatan Literasi Media dan Digital dalam Pembelajaran Agama Islam. *At Turots: Jurnal Pendidikan Islam*, 3(2), 51-61. <https://doi.org/10.51468/jpi.v3i2.75>
- Akbar, A., Imsar, I., & Silalahi, P. R. (2024). ANALISIS PENERAPAN FINTECH PADA UMKM DI KOTA MEDAN DALAM PERSPEKTIF MAQASHID SYARIAH. *Jurnal Manajemen Terapan dan Keuangan*, 13(03), 806-820.
- Alfiandi, N., Rahma, T. I. F., & Inayah, N. (2024). Pengaruh Pengetahuan dan Kemanfaatan Quick Response Code Indonesian Standart (QRIS) Terhadap Penggunaan E-Wallet dikalangan Mahasiswa FEBI UIN Sumatera Utara. *RUBINSTEIN*, 2(2), 84-93.
- Amel, S. (2024). Transaksi QRIS Melonjak 214,93%, Ekonomi Digital Sumut Makin Dinamis. *Mimbarumum*. <https://mimbarumum.co.id/transaksi-qr-is-melonjak->

- 21493-ekonomi-digital-sumut-makin-dinamis/
- Balatif, M. R., Fachrudin, K. A., Silalahi, A. S., Syahyunan, & Torong, M. Z. B. (2024). The Effect Of Financial Education And Financial Stress On Financial Well-Being With The Use Of Financial Technology. *Quality - Access to Success*, 25(199). <https://doi.org/10.47750/QAS/25.199.12>
- Firdaus, M., Farohi, A., Saragih, A. N., & Harahap, M. (2023). *Optimizing Digital Transactions: Analyzing User'S Adoption Intention of Quick Response Code Indonesian Standard (Qris) in North Sumatera*. 1-34.
- Firmansyah, D., Saepuloh, D., & Dede. (2022). Daya Saing : Literasi Digital dan Transformasi Digital. *Journal of Finance and Business Digital*, 1(3). <https://doi.org/10.55927/jfbd.v1i3.1348>
- Hamidar, P., Mustafa, K. R., & Muhammad, I. H. (2024). Pengaruh Pengetahuan, Kemudahan Penggunaan, dan Kemanfaatan Quick Response Code Indonesian Standart (QRIS) Terhadap Penggunaan Ewallet (Studi Kasus Mahasiswa Fakultas Ekonomi dan Bisnis Islam UIN Sumatera Utara). *MENAWAN: Jurnal Riset Dan Publikasi Ilmu Ekonomi*.
- Hermanto, H., Somayasa, W., & Pimpi, L. (2020). Perbandingan Uji Likelihood Ratio Dan Uji F Asymtotik Pada Regresi Linier. *Jurnal Pembelajaran Berpikir Matematika (Journal of Mathematics Thinking Learning)*, 5(2). <https://doi.org/10.33772/jpbm.v5i2.15032>
- Hrp, G. R., & Tambunan, K. (2023). Analisis Efektivitas Implementasi Sistem Pembayaran Digital QRIS Dalam Meningkatkan Penjualan Usaha Dagang Plastik Intan Baru Sibuhuan. *JPEK (Jurnal Pendidikan Ekonomi Dan Kewirausahaan)*, 7(1), 70-82.
- ILORI, O. O., & TANIMOWO, F. O. (2022). Heteroscedasticity Detection in Cross-Sectional Diabetes Pedigree Function: A Comparison of Breusch-Pagan-Godfrey, Harvey and Glejser Tests. *International Journal of Scientific and Management Research*, 05(12). <https://doi.org/10.37502/ijsmr.2022.51211>
- Jaya, A. D., & Nurifanti, E. D. (2021). Pembaharuan Sistem KUPVA BB Sebagai Upaya Pencegahan dan Pemberantasan Tindak Pidana Pencuci Uang. *Ikatan Penulis Mahasiswa Hukum Indonesia Law Journal*, 1(2). <https://doi.org/10.15294/ipmhi.v1i2.53269>
- Khairani Lubis, R. (2022). Analisis Minat Penggunaan Quick Responses Code Indonesian Standard (QRIS) Dengan Pendekatan Technology Acceptance Model (TAM) Yang Telah Dimodifikasi. In *Skripsi,jurusan perbankan syariah,Institut Agama Islam Negeri Padangsidimpuan*.
- Kotian, H., Varghese, A. L., & Rohith, M. (2022). An R Function for Cronbach's Alpha Analysis: A Case-Based Approach. *National Journal of Community Medicine*, 13(8). <https://doi.org/10.55489/njcm.130820221149>
- Mustafidah, H., Imantoyo, A., & Suwarsito, S. (2020). Pengembangan Aplikasi Uji-t Satu Sampel Berbasis Web. *JUITA: Jurnal Informatika*, 8(2). <https://doi.org/10.30595/juita.v8i2.8786>
- Nasution, A. S. P., Harahap, I., & Aslami, N. (2025). Pengaruh Kemudahan, Kecepatan dan Keamanan Penggunaan Qris Pada UMKM Halal Kota Medan. *Jambura Economic Education Journal*, 7(1), 420-435.
- Ningri, L. J., Hamidi, M., & Adrianto, F. (2023). Sentiment Analysis Against Digital Payment "GoPay", "OVO", "DANA", and "ShopeePay" Using Naïve Bayes

- Classifier Algorithm. *Indonesian Journal of Economics and Management*, 3(2). <https://doi.org/10.35313/ijem.v3i2.4765>
- Nugraha, D. (2022). Literasi Digital dan Pembelajaran Sastra Berpaut Literasi Digital di Tingkat Sekolah Dasar. *Jurnal Basicedu*, 6(6). <https://doi.org/10.31004/basicedu.v6i6.3318>
- Park, E. S., & Park, M. S. (2020). Factors of the technology acceptance model for construction IT. *Applied Sciences (Switzerland)*, 10(22). <https://doi.org/10.3390/app10228299>
- Putri, D. A., & Jannah, N. (2025). QRIS as a catalyst for growth: Analyzing its role in Tanjung Balai's MSME sector from an Islamic viewpoint. *SERAMBI: Jurnal Ekonomi Manajemen dan Bisnis Islam*, 7(1), 61-70.
- Quraisy, A. (2022). Normalitas Data Menggunakan Uji Kolmogorov-Smirnov dan Saphiro-Wilk. *J-HEST Journal of Health Education Economics Science and Technology*, 3(1). <https://doi.org/10.36339/jhest.v3i1.42>
- Santoso, A. (2023). Rumus Slovin : Panacea Masalah Ukuran Sampel ? *Suksma: Jurnal Psikologi Universitas Sanata Dharma*, 4(2). <https://doi.org/10.24071/suksma.v4i2.6434>
- Saragih, Y. W., & Rikumahu, B. (2022). Analisis Faktor Adopsi E-Wallet Gopay, OVO, dan DANA dengan Model UTAUT2 pada Masyarakat Jawa Barat. *Nominal Barometer Riset Akuntansi Dan Manajemen*, 11(1). <https://doi.org/10.21831/nominal.v11i1.43075>
- Seputri, W., Soemitra, A., & Rahmani, N. A. B. (2023). Pengaruh Technology Acceptance Model terhadap Minat Mahasiswa Menggunakan Quick Response Code Indonesian Standard (QRIS) sebagai Cashless Society. *MES Management Journal*, 2(1), 116-126.
- Setiawan, I. W. A., & Mahyuni, L. P. (2020). QRIS DI MATA UMKM: EKSPLORASI PERSEPSI DAN INTENSI UMKM MENGGUNAKAN QRIS. *E-Jurnal Ekonomi Dan Bisnis Universitas Udayana*. <https://doi.org/10.24843/eeb.2020.v09.i10.p01>
- Tan, H. (2022). Quantitative research methods in translation and interpreting studies. *Poznan Studies in Contemporary Linguistics*, 58(1). <https://doi.org/10.1515/psicl-2022-0007>
- Yu, J. (2024). Stabilizing leverage, financial technology innovation, and commercial bank risks: Evidence from China. *Economic Modelling*, 131. <https://doi.org/10.1016/j.econmod.2023.106599>