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The Intention to Use QRIS Among MSMEs in Rempoa Subdistrict, South Tangerang: The Influence of Perceived Ease of Use and Perceived Security with User Attitude as a Mediating Variable

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ABSTRACT
This study investigates the influence of perceived ease of use and perceived security on the intention to use QRIS (Quick Response Code Indonesian Standard) among micro, small, and medium enterprises (MSMEs) in Rempoa Subdistrict, South Tangerang, with user attitude as a mediating variable. Using a quantitative approach and Partial Least Squares–Structural Equation Modeling (PLS-SEM) via SmartPLS, data were collected from 50 MSME respondents selected through purposive sampling. The research instrument was based on the Technology Acceptance Model (TAM) and tested for validity and reliability. The findings reveal that both perceived security and perceived ease of use positively and significantly influence user attitude and intention to use QRIS. User attitude significantly mediates these relationships, especially between perceived security and intention. The R^2 and Q^2 values indicate strong explanatory and predictive power of the model. These results suggest the need for strategies that enhance security perceptions and promote positive user attitudes to support wider QRIS adoption among MSMEs.

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INTRODUCTION

In today's digital era, financial transactions are undergoing a fundamental transformation, driven by the increasing integration of technology into daily business activities. One of the most prominent innovations in the Indonesian financial sector is the introduction of the Quick Response Code Indonesian Standard (QRIS), developed by Bank Indonesia to unify various QR code-based payment systems under a single, interoperable platform. The goal of QRIS is to create an inclusive, efficient, and easily accessible digital payment ecosystem for all, particularly for micro, small, and medium enterprises (MSMEs), which are the backbone of the national economy (Bank Indonesia, 2023).

Despite its potential, the adoption rate of QRIS among MSMEs remains relatively low. According to data released by the Ministry of Cooperatives and Small and Medium Enterprises, only about 38% of MSMEs in Indonesia have integrated digital payment tools

such as QRIS into their operations (Kemenkop UKM & BI, 2023). This indicates that there are still significant barriers, including digital literacy, technological trust, and user perceptions, that hinder wider adoption.

In Rempoa Subdistrict, South Tangerang, MSMEs are flourishing across various sectors, including culinary, fashion, and services. However, preliminary field observations and interviews suggest that many business owners are reluctant to fully adopt QRIS, preferring conventional payment methods such as cash or manual bank transfers. These choices are often driven by a lack of trust in the security of digital systems and a perception that the technology is too complex or unnecessary (Frimayasa, 2022).

This behavioral resistance can be better understood through the lens of the Technology Acceptance Model (TAM), introduced by Davis (1989), which identifies two key factors influencing technology adoption: perceived ease of use and perceived usefulness. In the context of QRIS, these translate into how easy users perceive the system to operate and how secure they believe their financial and personal data will be when using the service.

Perceived ease of use refers to the extent to which a user believes that using a particular system will be free of effort. According to Nasution (2025), when a digital platform is seen as user-friendly and intuitive, the likelihood of adoption increases significantly. Conversely, if the system is perceived as complicated or unfamiliar, users, especially those in the MSME sector, are less inclined to engage with it.

Similarly, perceived security plays a critical role in shaping user behavior. Featherman and Pavlou (2003) argue that trust in data protection and transactional integrity is a major determinant in the adoption of e-services. MSME actors, who may not have prior experience with digital systems, are particularly sensitive to risks such as data breaches or financial loss. Therefore, enhancing perceptions of security can significantly improve adoption rates. Yet, both perceived ease of use and perceived security do not directly determine behavior. There is an important mediating factor: user attitude. In TAM, attitude reflects the individual's positive or negative feelings about using a particular technology. A favorable attitude often leads to greater behavioral intention, which eventually translates into actual usage (Jogiyanto, 2007). Thus, the user's attitude acts as a psychological bridge between perception and intention.

Understanding this psychological mechanism is essential for policymakers and stakeholders aiming to promote QRIS adoption. If MSME actors can be encouraged to develop positive attitudes through tailored education and effective communication strategies, then even those with low digital experience may become more willing to integrate QRIS into their business operations (Hair et al., 2021).

Given these considerations, this study aims to empirically investigate the influence of perceived ease of use and perceived security on the intention to use QRIS among MSMEs in Rempoa, with user attitude as a mediating variable. The research not only provides valuable insights into user behavior in the digital finance landscape but also offers practical recommendations for improving the implementation of digital payment solutions in Indonesia's MSME sector.

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METHODS

This study adopts a quantitative research approach to examine the influence of perceived ease of use and perceived security on the intention to use QRIS among micro, small, and medium enterprises (MSMEs) in Rempoa Subdistrict, South Tangerang. The research design is causal-explanatory, aiming to assess the relationships among variables as proposed in the conceptual model, including the mediating role of user attitude.

The population of this study consists of MSME owners or operators in Rempoa who are aware of QRIS, regardless of whether they have adopted the system. The selection of respondents was carried out using purposive sampling, based on specific criteria such as awareness of QRIS, access to smartphones, and potential or current engagement in digital transactions. A total of 50 respondents were selected to participate in the study. Data collection was conducted using a structured questionnaire designed to measure the constructs derived from the Technology Acceptance Model (TAM), including perceived ease of use, perceived security, user attitude, and intention to use. The questionnaire employed a five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5), and was distributed through a combination of online forms and direct visits to the respondents.

To ensure construct validity and reliability, the questionnaire items were adopted and adapted from previous studies (Davis, 1989; Featherman & Pavlou, 2003; Nasution, 2025). Before full-scale data collection, a pilot test was conducted to evaluate the clarity and consistency of the items. The results showed acceptable reliability scores, which allowed the researchers to proceed with formal data gathering. The collected data were analyzed using Partial Least Squares–Structural Equation Modeling (PLS-SEM), facilitated by the SmartPLS 3.0 software. This method was chosen due to its capability to analyze complex models involving latent constructs and mediating relationships, especially with relatively small sample sizes (Hair et al., 2021). PLS-SEM is also well-suited for exploratory studies that aim to predict target constructs and assess model fit.

The analysis followed a two-step process: measurement model evaluation (outer model) and structural model evaluation (inner model). The outer model assessment included tests for convergent validity, discriminant validity, composite reliability, and Cronbach's alpha. The inner model assessment evaluated the path coefficients, t-statistics, p-values, R^2 values, effect size (f^2), and predictive relevance (Q^2) using a bootstrapping procedure with 5,000 resamples. The mediating role of user attitude was tested using indirect effect analysis, which evaluated whether user attitude significantly transmitted the effects of perceived ease of use and perceived security onto usage intention. The significance of these indirect paths was determined through bootstrapping, as suggested by Preacher and Hayes (2008), to ensure robust mediation analysis.

RESULTS AND DISCUSSION

Convergent validity is a crucial aspect of measurement model assessment in PLS-SEM, aimed at determining whether indicators within a construct are strongly correlated and effectively represent the latent variable. This ensures that indicators used for constructs such as

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perceived ease of use, perceived security, intention, and QRIS usage decisions among MSMEs accurately capture the underlying concept.

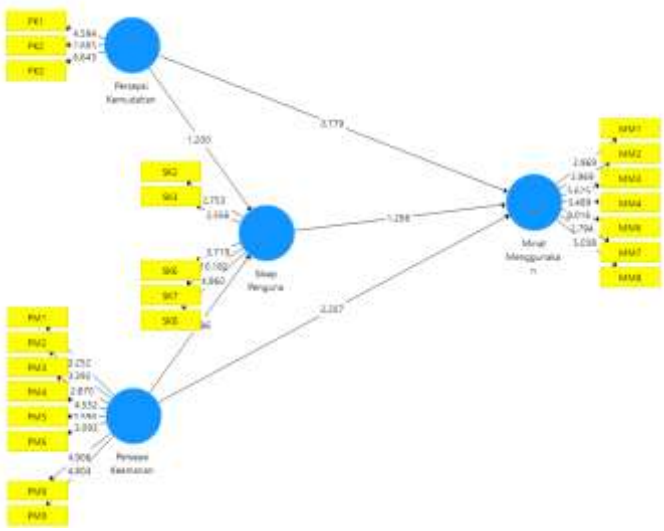

Figure 1. Outer Loading

Table 1. Outer Loading

Indicator	Intention to Use	Perceived Security	Perceived Ease of Use	User Attitude
MM1	0.739			
MM2	0.730			
MM3	0.764			
MM4	0.723			
MM6	0.815			
MM7	0.716			
MM8	0.750			
PK1			0.826	
PK2			0.789	
PK3			0.858	
PM1		0.798		
PM2		0.763		
PM3		0.737		
PM4		0.766		
PM5		0.759		
PM6		0.740		
PM8		0.706		
PM9		0.742		
SK2				0.703
SK3				0.714
SK6				0.781

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Indicator	Intention to Use	Perceived Security	Perceived Ease of Use	User Attitude
SK7				0.836
SK8				0.777

The outer loading results show that all indicators meet the convergent validity criteria, with loading values above 0.70, indicating strong construct validity. This supports the continuation of the analysis to the structural model stage in PLS-SEM. Additionally, the AVE values for each construct exceed the 0.50 threshold, confirming adequate convergent validity (Sarstedt et al., 2021).

Table 2. Average Variance Extracted Results

Construct	Average Variance Extracted (AVE)
Intention to Use	0.561
Perceived Security	0.565
Perceived Ease of Use	0.680
User Attitude	0.583

The AVE results show that all constructs Intention to Use (0.561), Perceived Security (0.565), Perceived Ease of Use (0.680), and User Attitude (0.583) exceed the 0.50 threshold, indicating that each construct explains over 50% of the variance in its indicators. Thus, all constructs meet the criteria for convergent validity, confirming that the indicators reliably represent their respective latent variables and reinforcing the validity of the measurement model for further structural analysis.

Table 3. Composite Reliability Results

Construct	Composite Reliability
Intention to Use	0.899
Perceived Security	0.912
Perceived Ease of Use	0.864
User Attitude	0.875

The Composite Reliability (CR) results show that all constructs—Intention to Use (0.899), Perceived Security (0.912), Perceived Ease of Use (0.864), and User Attitude (0.875)—exceed the 0.70 threshold, indicating strong internal reliability. This confirms that the indicators consistently and reliably measure their respective constructs, further validating the measurement model and supporting its readiness for structural model analysis.

Table 4. Cronbach's Alpha Results

Construct	Cronbach's Alpha
Intention to Use	0.869
Perceived Security	0.890
Perceived Ease of Use	0.765
User Attitude	0.820

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Cronbach's Alpha results show that all constructs exceed the 0.70 threshold—Intention to Use (0.869), Perceived Security (0.890), Perceived Ease of Use (0.765), and User Attitude (0.820)—indicating strong internal consistency. Thus, all indicators are reliable in measuring their respective constructs, confirming the instrument's validity and its suitability for further structural model analysis.

Table 5. R Square Results

Construct	R Square	R Square Adjusted
Intention to Use	0.708	0.689
User Attitude	0.749	0.738

The R Square results show that User Attitude (0.749) and Intention to Use (0.708) have strong explanatory power. Specifically, 74.9% of the variance in User Attitude is explained by Perceived Ease of Use and Perceived Security, while 70.8% of the variance in Intention to Use is explained by the same variables plus User Attitude. The adjusted R Square values—0.738 and 0.689, respectively—confirm the model's robustness. Additionally, the F Square (f^2) test in PLS-SEM assesses the effect size of each predictor on its respective dependent variable.

Table 6. F Square results

	Intention to Use	Perceived Security	Perceived Ease of Use	User Attitude
Perceived Security	0.210	—	—	1.262
Perceived Ease of Use	0.025	—	—	0.055
User Attitude	0.070	—	—	—

The F Square (f^2) results reveal varying effect sizes among the variables. Perceived Security has a moderate effect on Intention to Use ($f^2 = 0.210$), while Perceived Ease of Use ($f^2 = 0.025$) and User Attitude ($f^2 = 0.070$) show small effects. Notably, Perceived Security has a large effect on User Attitude ($f^2 = 1.262$), indicating its crucial role in shaping positive user perceptions. In contrast, Perceived Ease of Use exerts only a small effect on User Attitude ($f^2 = 0.055$). These findings confirm that each independent variable contributes differently, with f^2 values above 0.02 considered meaningful.

Table 7. Effect Size (f^2) Results

Relationship	f^2 Value	Effect Size
Perceived Security → Intention to Use	0.210	Medium
Perceived Ease of Use → Intention to Use	0.025	Small
User Attitude → Intention to Use	0.070	Small
Perceived Security → User Attitude	1.262	Very Large
Perceived Ease of Use → User Attitude	0.055	Small

The effect size (f^2) test reveals that each variable contributes differently to the dependent variables. Perceived Security has a moderate effect on Intention to Use ($f^2 = 0.210$)

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and a very large effect on User Attitude (f^2 = 1.262), indicating its strong influence. User Attitude shows a small effect on Intention to Use (f^2 = 0.070), while Perceived Ease of Use has small effects on both Intention to Use (f^2 = 0.025) and User Attitude (f^2 = 0.055).

The predictive relevance (Q^2) results, obtained through blindfolding, show Q^2 values of 0.421 for Intention to Use and 0.367 for User Attitude, both exceeding the 0.35 threshold, indicating strong predictive power. This suggests that the model has high practical relevance in predicting QRIS usage behavior among MSMEs in Kelurahan Rempoa.

Hypothesis testing was conducted using SmartPLS, with hypotheses accepted when the t-statistic exceeds the critical value and the p-value is below 0.05 (Nasution, 2025). These criteria confirm the significance and reliability of both direct and indirect relationships in the model.

Table 8. Direct Effect Testing Results

	Original Sample (o)	Sample Mean (M)	Standart Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Perceived Security → Intention to Use	0,498	0,526	0,226	2,207	0,028
Perceived Security → User Attitude	0,753	0,687	0,168	4,486	0,000
Perceived Ease of Use → Intention to Use	0,117	0,077	0,150	2,779	0,000
Perceived Ease of Use → User Attitude	0,157	0,172	0,131	2,440	0,000
User Attitude → Intention to Use	0,286	0,263	0,226	2,226	0,000

The direct effect testing using the bootstrapping method in SmartPLS shows that all variable relationships are positive and statistically significant, with t-values > 1.96 and p-values < 0.05. Perceived Security significantly influences Intention to Use (t = 2.207; p = 0.028) and strongly affects User Attitude (t = 4.486; p = 0.000), highlighting its key role in adoption and attitude formation. Perceived Ease of Use also significantly impacts Intention to Use (t = 2.779; p = 0.000) and User Attitude (t = 2.440; p = 0.000), confirming its relevance in shaping positive user perceptions.

Table 9. Indirect Effect Testing Results

	Original Sample (O)	Sample Mean (M)	Standart Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Perceived Security → User Attitude	0,215	0,176	0,164	3,126	0,000

→ Intention to Use					
Perceived Ease of Use → User Attitude → Intention to Use	0,045	0,048	0,058	2216,000	0,000

The mediation analysis using bootstrapping in SmartPLS reveals that User Attitude significantly mediates the effects of both Perceived Security and Perceived Ease of Use on Intention to Use QRIS. The indirect effect from Perceived Security to Intention to Use through User Attitude is significant (coefficient = 0.215; t = 3.126; p = 0.000), indicating that a strong perception of security fosters a positive attitude, which enhances usage intention. Similarly, the mediation path from Perceived Ease of Use shows a significant effect (coefficient = 0.045; t = 2.216; p = 0.000), suggesting that ease of use positively influences intention through improved user attitude.

CONCLUSION

This study provides clear empirical evidence that both perceived security and perceived ease of use significantly influence the intention to use QRIS among MSME actors in Rempoa, either directly or indirectly through user attitude. Perceived security emerged as the strongest factor, not only having a direct impact on user intention but also playing a dominant role in shaping a positive user attitude, which further reinforces the intention to adopt QRIS. On the other hand, although perceived ease of use demonstrated a relatively smaller effect, it still contributed significantly to both user attitude and behavioral intention, indicating that ease and simplicity remain relevant considerations for MSMEs in adopting digital payment systems. User attitude, as an intervening variable, acts as a psychological bridge that strengthens the connection between perception and intention. A positive attitude is found to be crucial in encouraging behavioral change, particularly in technology adoption. These findings align well with the Technology Acceptance Model (TAM) and highlight the importance of psychological readiness in digital transformation. Therefore, enhancing users' perception of security and delivering a user-friendly experience, supported by continuous education and awareness campaigns, is essential for increasing QRIS adoption. Policymakers and service providers should focus on these psychological aspects to create a more inclusive and confident digital financial ecosystem for MSMEs.

REFERENCE

Annisa, A. (2025). *Cerita pedagang UMKM yang omzetnya melesat karena pakai QRIS*. Ukmindonesia.id. https://ukmindonesia.id/baca-deskripsi-posts/cerita-pedagang-umkm-yang-omzetnya-melesat-karena-pakai-qris

Barat.go.id, J. (2024). *1.695 pelaku UMKM binaan pakai QRIS hingga September 2024*. Jakarta Barat.go.id. https://barat.jakarta.go.id/berita/1695-pelaku-umkm-binaan-pakai-qris-hingga-september-2024

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, *13*(3), 319–340. https://doi.org/10.5962/bhl.title.33621

Dewi, N. M. A. P., & Warmika, I. G. K. (2016). Peran persepsi kemudahan penggunaan, persepsi manfaat dan persepsi resiko terhadap niat menggunakan mobile commerce di kota Denpasar.

Featherman, M. S., & Pavlou, P. A. (2003). Predicting e-services adoption: A perceived risk facets perspective. *International Journal of Human-Computer Studies*, *59*(4), 451–474. https://doi.org/10.1016/S1071-5819(03)00111-3

Frimayasa, A. (2022). Pengaruh persepsi kegunaan dan persepsi kemudahan terhadap keputusan pembelian online shop Tokopedia. *Eqien: Jurnal Ekonomi dan Bisnis*, *11*(03), 941–945.

Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). An introduction to structural equation modeling. In J. F. Hair et al. (Eds.), *Partial least squares structural equation modeling (PLS-SEM) using R* (pp. 1–29). Springer. https://doi.org/10.1007/978-3-030-80519-7_1

Ibnu Haris Nasution, Y. H. P. (2025). *Analisis keputusan penggunaan QRIS pada UMKM di Kelurahan Tanjung Duren Utara dengan perspektif persepsi kemudahan dan persepsi kegunaan melalui minat sebagai variabel mediasi*.

Jogiyanto, H. (2007). *Sistem informasi keperilakuan*. Andi Offset.

Nainggolan, R., Gosal, G. G., & Sitorus, L. (2023). Financial A ttitudes and Behaviors Mediate the Impact of Financial Literacy on the Effectiveness of QRIS Use of MSME Owners in Indonesia: Technology Acceptance Model as Moderation.

Riskawati, I. (2025). The Effect of Perceived Ease, Risk and Financial Literacy on the Use of QRIS as a Digital Payment in MSMEs. *AL-ARBAH: Journal of Islamic Finance and Banking*, *7*(1), 155-176.

Sarstedt, M., Ringle, C. M., & Hair, J. F. (2021). Partial least squares structural equation modeling. In *Handbook of Market Research* (pp. 587–632). Springer.

Shofi, A. (2024). Pengguna QRIS didominasi oleh UMKM. *Antara News*. https://www.antaranews.com/berita/4236307/pengguna-qris-didominasi-oleh-umkm

Sugiyono. (2014). *Memahami penelitian kualitatif*. Alfabeta.

Suputra, I. D. G. D. (n.d.). Pengaruh persepsi manfaat, persepsi kemudahan penggunaan, dan tingkat kepercayaan pada minat menggunakan uang elektronik.

Wibowo, A. (2008). Kajian tentang perilaku pengguna sistem informasi dengan pendekatan Technology Acceptance Model (TAM). *Konferensi Nasional Sistem Informasi*, *9*.

Widanengsih, E. (2022). Penerapan model Technologi Acceptance Model untuk mengukur adopsi penggunaan aplikasi pembukuan akuntansi dan keuangan rumah tangga. *Jurnal Akuntansi dan Manajemen Bisnis*, *2*(1), 86–95.