



The Influence of Risk Perception, Trust, Ease of Use, and Benefits on the Decision to Use QRIS in Agricultural Commodity Purchases

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Abstract

The rapid expansion of digital payment systems in Indonesia has positioned QRIS (Quick Response Code Indonesian Standard) as a strategic instrument to accelerate financial inclusion, particularly in traditional markets. However, consumer adoption remains uneven, requiring deeper investigation into the behavioral factors that shape household decision-making. This study aims to examine the influence of perceived risk, trust, perceived ease of use, and perceived benefits on household consumers' decisions to adopt QRIS in the context of traditional market transactions. Data were collected from household consumers at Pasar Anyar, Tangerang, using a structured questionnaire. The responses were analyzed with SPSS to test the significance of the proposed variables in influencing QRIS adoption decisions. The findings reveal that trust and perceived benefits significantly affect consumers' decisions to use QRIS, while perceived risk and ease of use show no meaningful impact. Among the variables, perceived benefits emerge as the most dominant factor, as consumers value transaction speed and improved expenditure management. Trust also plays a critical role, reflecting the necessity of security assurance before shifting from cash-based payments. The study highlights that strengthening consumer trust and emphasizing tangible benefits are essential to enhance QRIS adoption in traditional markets. Policy recommendations include targeted consumer education, merchant incentives, and sustainable payment infrastructure to ensure smooth and secure digital transactions.

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INTRODUCTION

The level of QRIS usage by merchants in Tangerang City has reached 50.60 percent, or around 1,152,167 active users (Bank Indonesia, 2025). Traditional markets are generally dominated by households that make small, high-frequency transactions. The Anyar Tangerang Market is an important example, as thousands of transactions for basic necessities and agricultural commodities take place there every day, particularly in the spice, vegetable, and meat sections ([Lapak Terus Terisi Di Pasar Anyar Tangerang, 2025](#)). To date, there is no official data on the extent to which market consumers use QRIS. This situation raises the question of whether household consumers in traditional markets are following the trend of QRIS usage at the city level or whether they are different due to their habit of using cash and limited digital literacy.

Since 2021, the Tangerang City Government and Bank Indonesia have been implementing the Healthy, Innovative, and Safe to Use (SIAP) QRIS program to increase cashless transactions at Pasar Anyar. More than 70 percent of merchants from 522 stalls have used QRIS in their buying and selling activities ([Pedagang Pasar Anyar Tangerang Terapkan Pembayaran QRIS, 2023](#)). Although this figure shows the readiness of merchants, the success of the implementation still depends on consumer acceptance. Perceptions of security, convenience, and benefits are important factors that influence the decision to adopt QRIS. This is in line with consumer behavior theory, where purchasing decisions are formed through stages ranging from recognition of needs to post-purchase evaluation and are influenced by psychological, social, and cultural aspects ([Kotler & Keller, 2021](#)). In digital transactions, the younger generation's preference for cashless methods is also increasing because they are considered safer and more practical ([Reza & Suastrini, 2023](#)).

Understanding of technology acceptance is strongly explained through the Technology Acceptance Model, which emphasizes two main constructs, namely perceived usefulness and perceived ease of use ([Davis, 1989](#)). Both determine attitudes and intentions to use technology, which then influence actual behavior. The development of TAM incorporates additional factors such as job relevance and social influence [Davis, \(1989\)](#) as well as external variables such as risk and trust, which are key in the context of digital payments. In risk perception theory, every purchasing decision involves uncertainty and potential loss ([Bauer, 1960](#)). Technical risk, financial risk, and data security risk are important considerations for users of digital systems ([Featherman & Pavlou, 2003](#)).

Recent research distinguishes between trust in technology and trust in service providers ([Kuen et al., 2023](#)). Both forms of trust are directly related to decisions to use digital financial services. In digital payment theory, ([Sistem Pembayaran Indonesia & Pengelolaan Uang Rupiah, 2020](#)) emphasizes that non-cash payments increase the efficiency and security of the national payment system. Consumers also tend to choose digital methods because they reduce the risk of carrying cash ([Wulandari et al., 2025](#)), and security and trust are the main drivers of digital service usage.

QRIS is a national QR-based payment standard that facilitates the integration of all payment services ([Sistem Pembayaran Indonesia & Pengelolaan Uang Rupiah, 2020](#)). Research shows that user knowledge, convenience, security, and attitudes influence the decision to use QRIS ([Rahmawati & Arfiansyah, 2024](#)), and can increase financial inclusion and business performance ([Carera & Gunawan, 2022](#)). For household consumers, consumption behavior is influenced by income, perception, preferences, and

social context (Muna et al., 2025). Functional attributes and experience also shape product value perception (Hasan et al., 2022).

In the context of agricultural commodities, products are perishable, volatile, and seasonal (Beierlein et al., 2025). Agricultural commodities also have low demand elasticity, so purchasing decisions are more influenced by perceptions of quality and risk (Siahaan & Bila, 2024). Previous studies have consistently shown that perceptions of benefits, convenience, trust, and risk have a strong influence on the decision to use QRIS (Alfani & Ariani, 2023; Rahimi et al., 2024; Rayhan et al., 2025). However, most studies have focused on Micro, Small, and Medium Enterprises or merchants, thus failing to provide a comprehensive picture of household consumers in traditional markets. Bank Indonesia data shows that QRIS transactions in traditional markets are growing, but active users on the consumer side are not increasing as fast as merchants. Many buyers are still hesitant to use QRIS due to perceived risks, lack of understanding, and cash payment habits. This situation creates a gap between merchant readiness and consumer response, especially when transacting agricultural commodities, which are often purchased quickly and depend on product availability.

This condition confirms the existence of a research gap related to consumer perceptions of QRIS use in traditional markets. With a high level of merchant adoption, but no clear data on consumer behavior, this study is relevant because it offers novelty through an analysis of perceptions of benefits, convenience, risks, and trust in decisions to use QRIS for purchasing agricultural commodities. This focus differs from previous studies that have placed greater emphasis on business actors, thereby enriching the literature on consumer behavior in traditional markets and providing a basis for strengthening policies on the adoption of cashless payments.

METHODS

This study uses a quantitative method with a survey approach to examine the relationship between risk perception, trust, convenience, and benefits on the decision to use QRIS. Respondents consisted of household consumers who shop for agricultural commodities at Pasar Anyar Tangerang. The sample was determined using the Lemeshow formula and consisted of 100 people using accidental sampling techniques. The main instrument was a Google Form questionnaire with a 1 to 5 Likert scale covering independent variables such as risk, trust, convenience, and benefits, as well as dependent variables such as purchasing decisions. Primary data was collected through questionnaires, while secondary data was obtained from journals, books, and official publications. Data collection was followed by a validity test using Pearson Product Moment and a reliability test using Cronbach Alpha. The data was processed using Excel and further analyzed with SPSS through descriptive analysis, classical assumption tests, and multiple linear regression. The testing procedure included normality, multicollinearity, heteroscedasticity, t-test, F-test, coefficient of determination, and Standardized Beta tests to determine the most influential variables. All of these stages provided a comprehensive overview of the research methods, instruments, data sources, analysis techniques, and workflow used in this study (Engkizar et al., 2022, 2025; Sari et al., 2025).

RESULT AND DISCUSSION

Pasar Anyar Tangerang is a long-standing traditional market that serves as the community's economic center and remains the main place for fulfilling daily needs. This market is located in a strategic location in the city center, has large trading facilities, and is inhabited by a community with a demographic structure dominated by productive ages and secondary education levels. Most purchasing activities are carried out by housewives who regularly shop for basic necessities, with weekly frequency and medium purchase value. The socioeconomic conditions of the surrounding community show stable consumption capacity and active involvement in market activities. The survey results also describe a consumer profile that tends to be rational and ready to adopt digital payment technology, as seen from the increasing use of QRIS even though cash payments are still dominant. These characteristics are an important basis for understanding the behavior of Pasar Anyar consumers, especially in evaluating the factors that influence the use of QRIS in agricultural commodity transactions in traditional markets.

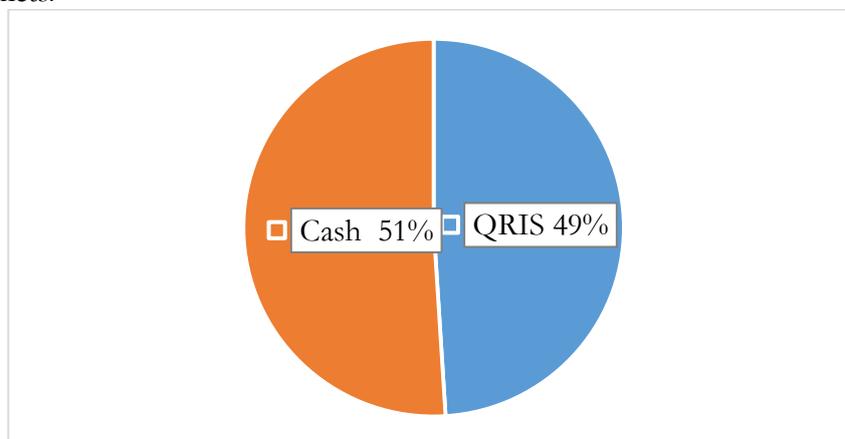


Fig 1. Types of Payment at Pasar Anyar

Based on Figure 1, it can be concluded that the use of QRIS at Pasar Anyar Tangerang continues to grow, even though cash payments are still dominant.

Regression Model

Table 1. Multiple regression results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.781	1.835		.971	.334
Risk	-.011	.055	-.011	-.191	.849
Trust	.299	.139	.229	2.151	.034
Convenience	.122	.103	.138	1.181	.241
Benefits	.601	.150	.517	4.009	.001

The regression coefficient test results show variations in the influence of variables on the decision to use QRIS. Risk perception has a significance value of 0.849 and a negative coefficient, so it does not have a significant influence. Increased concern only slightly reduces the use of QRIS because consumers continue to transact as long as the payment process runs smoothly. Perceived trust has a significance value of 0.034 and has a significant effect on purchasing decisions. Increased confidence in the security and reliability of the system encourages consumers to choose QRIS. Perceived ease has a significance value of 0.241 and has no significant effect. Users consider QRIS easy to use, but this factor has not become the basis for transaction decisions. The perception of

benefits has a significance value below 0.001 and is the variable that most influences the decision to use QRIS. Benefits such as speed, practicality, and efficiency have a strong influence on the choice of payment method. This variable is recorded as the dominant factor with the highest beta coefficient value.

The resulting regression equation is:

$$Y = 1,781 - 0,011X_1 + 0,299X_2 + 0,122X_3 + 0,601X_4$$

The constant value indicates that purchasing decisions remain unchanged even when all perception variables are considered non-existent. The negative coefficient on risk illustrates a tendency for QRIS usage to decline when risk perception increases, although this is not significant. The coefficients for trust and convenience indicate that increases in both perceptions encourage the use of QRIS in varying amounts. The largest coefficient is for the perception of benefits, which illustrates the magnitude of the impact of functional benefits on consumer decisions in the Anyar Market in Tangerang.

Hypothesis Testing

1. F Test

The F test is used to see whether all independent variables collectively influence the dependent variable. The results of this test provide an overview of the model's suitability.

Table 2. F Test Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.857.585	4	464.396	60.042	.000b
Residual	734.775	95	7.734		
Total	2.592.360	99			

The calculated F value of 60.042 is greater than the F table value of 2.47, and the significance of 0.000 indicates that benefits, risks, trust, and convenience have a significant combined effect on purchasing decisions. This condition indicates that the regression model used is appropriate because it is able to describe the relationship between all variables comprehensively. The findings show that consumers' decisions to use QRIS arise from assessments of various aspects simultaneously, namely the benefits obtained, the level of risk, trust, and ease of transaction.

2. t-test

The t-test is used to examine the effect of each independent variable separately. The results of this test show which variables have a real effect and which do not.

Table 3. t-test Results

Variable	T Calculated	T Table	Sig.	Description
Risk	-.191	1.988	.849	Not significant
Trust	2.151	1.988	.034	Significant
Ease	1.181	1.988	.241	Not significant
Benefits	4.009	1.988	.001	Significant

The testing criteria indicate that a variable is considered to have a significant effect if the t-value is greater than the t-table value and the significance value is below 0.05. The analysis results show that risk perception and perceived ease of use do not meet these criteria and therefore do not have a significant effect on purchasing decisions. Conversely, perceived trust and perceived benefits have t-values greater than the t-table value and significance below 0.05, thus proving to have a positive and significant effect. This condition confirms that the decision to use QRIS is more influenced by trust in the security of the system and the functional benefits received by consumers.

The findings show that increased consumer confidence and positive experiences are important factors in encouraging the use of QRIS at Pasar Anyar Tangerang. Market managers, the government, and payment service providers can strengthen QRIS adoption through education on security, transaction reliability, and the practical benefits of use. Outreach programs that highlight the benefits and provide hands-on experience are considered effective in increasing consumer acceptance of digital payment methods. A study at Beringharjo Market in Yogyakarta [Rahmawati, \(2021\)](#) shows that direct education and merchant assistance increase QRIS usage. Research at BSD Modern Market [Tirtayasa et al., \(2020\)](#) found that fast and accurate transaction experiences strengthen user trust. Findings at Anyar Market in Tangerang show similar results. The driving factors remain trust, experience, and evidence of tangible benefits.

The policy implications of this study emphasize the importance of strategies to improve consumer experience and confidence in QRIS. The government, banks, and payment service providers need to strengthen their outreach efforts regarding system security, transaction reliability, and personal data protection in order to build user trust. Educational campaigns that highlight concrete benefits such as convenience, speed, and efficiency can improve consumers' positive perceptions of QRIS. Strategies that can be implemented in Pasar Anyar Tangerang focus on consumer education, hands-on trials, and providing transaction security guarantees that are easy for users to understand.

CONCLUSION

This study found that only perceptions of trust and perceived benefits influence the decision to use QRIS at Pasar Anyar Tangerang. Perceptions of risk and perceived ease of use have no effect because consumers do not consider either of these to be barriers to transactions in traditional markets. The F test shows that all variables remain influential when tested together because consumer decisions are formed from a combination of complementary perceptions. This study is useful because it provides a clear picture of the factors that truly influence consumer decisions. The results help market managers, the government, and service providers to develop appropriate strategies. The focus can be directed at increasing trust and communicating real benefits, rather than on aspects that have no impact. The implications of these findings emphasize the need to strengthen system security education, improve supporting facilities, and provide a smooth transaction experience. These efforts can increase consumer confidence in using QRIS for transactions in traditional markets.

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