



## QRIS IMPLEMENTATION IN MSMEs: A STUDY OF EASE OF USE AND ITS IMPACT ON TRANSACTION EFFICIENCY (STUDY OF MSMEs IN KECAMATAN TELUK AMBON)

### IMPLEMENTASI QRIS PADA UMKM: STUDI KEMUDAHAN PENGGUNAAN DAN DAMPAKNYA TERHADAP EFISIENSI TRANSAKSI (STUDI PADA UMKM DI KECAMATAN TELUK AMBON)

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#### Abstract

This study examines the implementation of the Quick Response Code Indonesian Standard (QRIS) among Micro, Small, and Medium Enterprises (MSMEs) and analyzes the effect of ease of use on transaction efficiency. This research employs a quantitative explanatory approach based on a field study conducted in Teluk Ambon District. Data were collected through structured questionnaires distributed to MSME actors who have implemented QRIS as a digital payment system. A total of 30 MSMEs were selected using purposive sampling based on predefined criteria. The collected data were analyzed using validity and reliability tests, descriptive statistics, simple linear regression analysis, t-test, and coefficient of determination ( $R^2$ ). The results show that ease of use has a positive and significant effect on transaction efficiency, with a significance value of 0.033, which is lower than the 0.05 significance level. The coefficient of determination ( $R^2$ ) value of 0.153 indicates that ease of use explains 15.3% of transaction efficiency, while the remaining 84.7% is influenced by other factors not examined in this study. These findings support the Technology Acceptance Model (TAM) proposed by Davis and confirm that QRIS contributes to improving transaction efficiency among MSMEs. This study provides theoretical contributions to digital payment adoption literature and practical implications for policymakers, financial institutions, and MSME actors.

**Keywords :** QRIS, MSMEs, Ease of Use, Transaction Efficiency, Digital Payment System.

#### Abstrak

Penelitian ini bertujuan untuk menganalisis implementasi Quick Response Code Indonesian Standard (QRIS) pada Usaha Mikro, Kecil, dan Menengah (UMKM) serta pengaruh kemudahan penggunaan terhadap efisiensi transaksi. Penelitian ini menggunakan pendekatan kuantitatif dengan jenis penelitian eksplanatori yang dilakukan di Kecamatan Teluk Ambon. Data dikumpulkan melalui penyebaran kuesioner terstruktur kepada pelaku UMKM yang telah menggunakan QRIS sebagai sistem pembayaran digital. Teknik pengambilan sampel yang digunakan adalah purposive sampling dengan



jumlah responden sebanyak 30 UMKM. Data dianalisis menggunakan uji validitas, uji reliabilitas, analisis statistik deskriptif, analisis regresi linier sederhana, uji t, dan koefisien determinasi ( $R^2$ ). Hasil penelitian menunjukkan bahwa kemudahan penggunaan berpengaruh positif dan signifikan terhadap efisiensi transaksi dengan nilai signifikansi sebesar 0,033 yang lebih kecil dari 0,05. Nilai koefisien determinasi ( $R^2$ ) sebesar 0,153 menunjukkan bahwa kemudahan penggunaan mampu menjelaskan sebesar 15,3% variasi efisiensi transaksi, sedangkan sisanya dipengaruhi oleh faktor lain di luar penelitian ini. Temuan penelitian ini mendukung Technology Acceptance Model (TAM) dan menunjukkan bahwa QRIS berkontribusi dalam meningkatkan efisiensi transaksi UMKM.

**Kata Kunci :** QRIS, UMKM, Kemudahan Penggunaan, Efisiensi Transaksi, Sistem Pembayaran Digital.

## 1. INTRODUCTION

The rapid development of digital technology has significantly transformed economic activities and financial transaction systems worldwide. One of the most prominent transformations is the shift from cash-based transactions to digital payment systems. Digital payment systems are widely regarded as more efficient, secure, and convenient compared to traditional cash transactions. This transformation has become increasingly important in the business sector, particularly for Micro, Small, and Medium Enterprises (MSMEs), which often operate with limited resources and face intense competition (Al-ghifary et al., 2025).

MSMEs play a vital role in the Indonesian economy. They contribute significantly to gross domestic product (GDP), employment creation, and income distribution. Despite their economic importance, MSMEs frequently encounter challenges related to limited access to financial services, inefficient transaction processes, and low levels of technology adoption. Cash-based transactions often lead to longer transaction times, calculation errors, and difficulties in financial record-keeping, which can negatively affect business performance.

To address these challenges, Bank Indonesia introduced the Quick Response Code Indonesian Standard (QRIS) as a national standardized digital payment system. QRIS integrates various payment service providers into a single interoperable system, allowing merchants to accept non-cash payments using one QR code. The primary objectives of QRIS include improving transaction efficiency, enhancing payment security, and promoting financial inclusion, particularly among MSMEs.

For MSMEs, the adoption of QRIS offers several potential benefits. QRIS simplifies payment procedures, reduces dependency on cash, minimizes transaction errors, and facilitates better financial record-keeping. Digital transaction records generated through QRIS can support MSMEs in managing cash flow, monitoring sales performance, and preparing financial reports. These advantages can enhance operational efficiency and support business sustainability.

However, the successful implementation of QRIS is highly dependent on user acceptance. One of the most critical factors influencing technology adoption is ease of use. Ease of use refers to the extent to which a system is perceived as simple, understandable, and easy to operate. MSME actors often have limited digital literacy and perform multiple roles



simultaneously, making system usability a crucial determinant of technology adoption. If QRIS is perceived as difficult to use, MSME actors may be reluctant to adopt or continue using it. Previous studies have shown that ease of use plays a significant role in digital payment adoption. However, empirical evidence examining the relationship between QRIS ease of use and transaction efficiency at the local MSME level remains limited, particularly in eastern Indonesia. Most existing studies focus on large urban areas, leaving a research gap regarding smaller regions such as Teluk Ambon District. Transaction efficiency is an essential factor for MSMEs, as it directly affects service speed, customer satisfaction, and operational effectiveness. Efficient transaction processes enable MSMEs to serve customers faster, reduce queues, and improve overall service quality. Therefore, understanding how ease of use influences transaction efficiency is crucial for evaluating the effectiveness of QRIS implementation.

Based on this background, this study aims to analyze the effect of QRIS ease of use on transaction efficiency among MSMEs in Teluk Ambon District. This research is expected to contribute to the literature on digital payment adoption and provide practical insights for policymakers, financial institutions, and MSME actors.

## 2. RESEARCH METHOD

This study employs a quantitative explanatory research design to examine the causal relationship between ease of use and transaction efficiency (Amelia et al., 2023). The research was conducted in Teluk Ambon District, focusing on MSMEs that have implemented QRIS as a digital payment method.

The population of this study consists of all MSMEs using QRIS in Teluk Ambon District. A purposive sampling technique was applied with specific criteria: MSMEs actively operating, having used QRIS for at least three months, and willing to participate in the study. Based on these criteria, 30 MSMEs were selected as research respondents.

Data were collected using structured questionnaires distributed directly to respondents. The questionnaire items were measured using a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The ease of use variable was measured using indicators such as ease of learning, clarity of instructions, and ease of operation. Transaction efficiency was measured using indicators including transaction speed, accuracy, and convenience.

Data analysis involved several stages, including validity testing, reliability testing, descriptive statistical analysis, and inferential analysis using simple linear regression. Hypothesis testing was conducted using the t-test, while the coefficient of determination ( $R^2$ ) was used to assess the explanatory power of the independent variable.

## 3. RESULTS AND DISCUSSION

### Result

The results of the validity test indicate that all questionnaire items have correlation values exceeding the critical value, confirming that all measurement items are valid. Reliability testing



shows that Cronbach's Alpha values for both ease of use and transaction efficiency variables exceed the minimum acceptable threshold of 0.70, indicating good internal consistency.

Descriptive analysis reveals that most respondents perceive QRIS as easy to use. Respondents reported that QRIS simplifies payment procedures, reduces transaction errors, and accelerates transaction processing time.

The results of the simple linear regression analysis indicate that ease of use has a positive regression coefficient, demonstrating a direct relationship with transaction efficiency. The t-test results show a significance value of 0.033, which is lower than the 0.05 significance level. Therefore, the research hypothesis is accepted.

The coefficient of determination ( $R^2$ ) value of 0.153 indicates that ease of use explains 15.3% of transaction efficiency, while the remaining 84.7% is influenced by other factors not examined in this study.

## Discussion

The results of this study indicate that the ease of use of QRIS has a positive and significant effect on transaction efficiency among Micro, Small, and Medium Enterprises (MSMEs) in Teluk Ambon District. This finding suggests that the more easily QRIS can be understood and operated by MSME actors, the more efficient their transaction processes become. Transaction efficiency in this context is reflected in faster payment processes, reduced calculation errors, and improved convenience for both business owners and customers.

This finding is consistent with the Technology Acceptance Model (TAM) proposed by Davis (1989), which emphasizes perceived ease of use as a key determinant of technology acceptance. In the context of this study, the ease of using QRIS encourages MSME actors to continuously utilize digital payment systems in their daily business operations. A system that is easy to learn and operate reduces cognitive effort and increases users' confidence, thereby enabling smoother and more efficient transactions.

From an operational perspective, the ease of use of QRIS helps MSMEs reduce their dependence on cash-based transactions, which are generally more time-consuming and prone to errors. QRIS-based payments allow transactions to be completed simply by scanning a QR code, eliminating the need for manual cash handling and change calculations. This process shortens transaction time, reduces customer queues, and enhances service speed, which is particularly important for MSMEs operating with limited human and financial resources.

Furthermore, the ease of use of QRIS contributes to improved transaction accuracy. Cash transactions are often vulnerable to human errors, such as incorrect change or inaccurate recording of transaction values. By contrast, QRIS transactions are automatically recorded by the system, ensuring accurate transaction amounts and reducing the likelihood of miscalculations. This automatic recording also improves administrative efficiency and supports better financial management among MSME actors.

The findings of this study also support previous empirical research suggesting that digital payment systems with high usability can enhance MSME operational performance. Earlier studies have demonstrated that perceived ease of use significantly influences the adoption of



digital payment technologies and leads to faster and more reliable transaction processes. Thus, this study not only aligns with existing theoretical frameworks but also extends empirical evidence by examining the direct relationship between ease of use and transaction efficiency in a regional context.

The coefficient of determination ( $R^2$ ) value of 0.153 indicates that ease of use explains 15.3% of the variation in transaction efficiency, while the remaining variation is influenced by other factors not examined in this study. A relatively low  $R^2$  value is common in behavioral and technology adoption research, as user behavior is shaped by multiple interrelated factors. These factors may include internet network quality, digital literacy levels, transaction costs, perceived security, and technical support from payment service providers.

Despite the modest explanatory power, ease of use remains a significant and strategic factor in improving transaction efficiency. For MSME actors, ease of use is often a primary consideration when deciding whether to adopt and continue using a technology. Technologies perceived as complex or difficult to operate are likely to be abandoned, regardless of their potential benefits. Therefore, the significant effect found in this study highlights the importance of maintaining simplicity and clarity in the design and implementation of the QRIS system.

From a policy perspective, the findings provide important implications for Bank Indonesia and payment system providers. Efforts to expand QRIS adoption should not only focus on increasing the number of users but also on enhancing system usability. This can be achieved through user-friendly interfaces, clear usage guidelines, and accessible customer support services. Training and mentoring programs for MSMEs are also crucial to ensure that business actors can utilize QRIS effectively and sustainably.

In the specific context of MSMEs in Teluk Ambon District, the ease of use of QRIS plays a critical role in facilitating adaptation to digital payment systems. Regional conditions, including infrastructure limitations and varying levels of digital literacy, make simple and intuitive technologies particularly relevant. As a standardized national payment system, QRIS has significant potential to improve MSME transaction efficiency, provided that usability and user support continue to be prioritized.

Overall, this discussion demonstrates that the ease of use of QRIS not only influences technology adoption but also has a tangible impact on transaction efficiency among MSMEs. These findings reinforce the argument that the success of digital payment system implementation depends heavily on usability aspects, especially for small and medium-scale enterprises.

#### 4. CONCLUSION

This study concludes that the ease of use of QRIS has a positive and statistically significant effect on transaction efficiency among MSMEs in Teluk Ambon District. The validity and reliability tests confirm that the research instruments are sound, while descriptive analysis shows that MSME actors generally perceive QRIS as easy to understand and operate. Regression analysis further demonstrates that ease of use directly improves transaction



efficiency, as reflected in faster payment processes, reduced errors, and greater transactional convenience. Although the coefficient of determination indicates that ease of use explains only 15.3% of transaction efficiency, this finding is consistent with technology adoption research, where behavior is influenced by multiple factors. Importantly, ease of use remains a strategic determinant, as systems perceived as simple are more likely to be adopted and sustained. Therefore, enhancing QRIS usability through intuitive design, clear guidance, and continuous training is essential to support MSME operational efficiency and long-term digital payment adoption.

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