Arthatama
Journal of Business Management and Accounting
ISSN: 2655-786x (p), 2774-5678 (e)

Vol. 7, No. 2 (2023), pp. 40-48

Validating The Questionnaire Measurement Scale of SME Owners' Perceptions and Intentions to Adopt QRIS

Azisma Nur Putri Ikwanto[1*], Farida Indriani[1]

[1] Universitas Diponegoro, Semarang, Indonesia
Corresponding author: zismaikw@students.undip.ac.id

Abstract

This study aims to assess the validity and reliability of a questionnaire designed to measure Micro, Small, and Medium Enterprises (MSME) owners' perceptions of Quick Response Code Indonesian Standard (QRIS) adoption, focusing on perceived usefulness, ease of use, digital literacy, and intention to adopt. The validity test was conducted using Pearson's product-moment correlation, with results indicating that all items in the questionnaire are valid when the Pearson correlation exceeds the r-table value of 0.2787. The reliability test was conducted using Cronbach's alpha, where all items showed values greater than the minimum threshold of 0.60, indicating that the questionnaire is reliable. The findings show that MSME owners perceive QRIS as beneficial for enhancing transaction efficiency, facilitating customer reach, and achieving business objectives. Additionally, MSME owners find QRIS easy to use, with straightforward processes and clear interactions. Digital literacy plays a crucial role, as MSME owners demonstrate a basic understanding of QRIS and its business benefits. The study also reveals that infrastructure support, training, and social trends influence MSME owners' intention to adopt QRIS. These results suggest that the questionnaire is a reliable tool for understanding MSME owners' perceptions and adoption intentions toward QRIS in Indonesia.

Keywords

MSME, Quick Response Code Indonesian Standard, Digital Literacy, Perceived Usefulness, Reliability, Validity.

1. Introduction

The rapid digitalization of the financial sector in Indonesia has led to the widespread adoption of electronic payment systems, with the Quick Response Code Indonesian Standard (QRIS) being a key innovation (Quyen, 2020; Radho & Lestari, 2022). QRIS, launched by Bank Indonesia, is designed to streamline digital transactions, particularly for Micro, Small, and Medium Enterprises (MSMEs), by offering a standardized payment method that enables seamless transactions across various platforms. As MSMEs constitute a significant portion of the Indonesian economy, understanding the factors influencing their adoption of QRIS is crucial for promoting financial inclusion and improving business efficiency (Prawitasari et al., 2024). While the potential benefits of QRIS adoption for MSMEs are well recognized, the success of its implementation largely depends on the perceptions of MSME owners regarding its usefulness, ease of use, and their overall digital literacy. These factors directly influence their intention to adopt QRIS, which in turn affects their ability to enhance business performance and reach broader customer bases (Silaen et al., 2021; Hamzah Muchtar et al., 2024). However, despite the growing importance of digital payment systems of QRIS (Restiti & Amalia, 2021; Farrell et al., 2022), there remains limited research exploring the validity and reliability of the factors that shape MSME owners' perceptions and their adoption intentions in the context of QRIS.

This study aims to fill this gap by examining the validity and reliability of a questionnaire designed to measure the perceptions of MSME owners on QRIS adoption (Setyaningtyas & Suranto, 2024). The questionnaire focuses on four key constructs: perceived usefulness, ease of use, digital literacy, and intention to adopt QRIS. By assessing the validity using Pearson's product-moment correlation and reliability through Cronbach's alpha, this research seeks to provide a reliable tool for understanding the factors influencing QRIS adoption and offer insights for policymakers and practitioners to promote wider adoption among MSMEs in Indonesia (Chohan et al., 2022; Nita et al., 2024).

This study contributes to the growing body of research on QRIS by examining the factors influencing its adoption among Micro, Small, and Medium Enterprises (MSMEs) in Indonesia, particularly focusing on MSME owners' perceptions of its usefulness, ease of use, and digital literacy. While existing literature highlights the potential benefits of QRIS adoption for MSMEs, there remains limited research exploring the validity and reliability of the constructs that shape MSME owners' adoption intentions. This study addresses this gap by developing and validating a questionnaire to assess these perceptions, utilizing Pearson's product-moment correlation to evaluate validity and Cronbach's alpha for reliability. By providing a reliable tool for measuring the factors influencing QRIS adoption, the research offers valuable insights for policymakers and practitioners, helping to promote wider QRIS adoption and foster financial inclusion in Indonesia.

2. Methods

This study employs a quantitative research design to assess the validity and reliability of a questionnaire measuring MSME owners' perceptions of Quick Response Code Indonesian Standard (QRIS) adoption. The research focuses on four key constructs: perceived usefulness, ease of use, digital literacy, and intention to adopt QRIS. The study utilizes a survey method, with data collected from a sample of 50 MSME owners in Indonesia, particularly those engaged in various sectors such as retail, services, and food industries. The questionnaire was developed based on existing literature and expert consultations to ensure content validity (Table 1). To assess the construct validity of the questionnaire, Pearson's product-moment correlation was used, evaluating the relationships between the four constructs and their respective items (Shah, 2022). This technique helps determine whether the items accurately represent the constructs they are intended to measure. For reliability, Cronbach's alpha was calculated to determine the internal consistency of the questionnaire, ensuring that the items within each construct are consistent and reliable (Asif, 2021). The sample for this study includes MSME owners who have implemented or are familiar with QRIS. Data collection will be done through online surveys, with statistical analysis conducted using SPSS to examine the validity and reliability of the instrument. The findings are expected to provide a reliable tool for future studies and policy recommendations to improve QRIS adoption among MSMEs.

Table 1: Measurement Indicator

Variable	Measurement Indicator
Perceived Usefulness	The use of QRIS enables Falster transactions.
	QRIS allows MSMEs to serve more customers within the same timeframe.
	QRIS helps achieve business objectives more efficiently.
	QRIS provides convenience for daily transactions.
Perceived Eales of Use	QRIS is easy for MSME owners to use in daily transactions.
	The process of using QRIS is straightforward and can be understood without special training.
	Interactions with the QRIS system are clear and not confusing.
	QRIS enables payments to be processed quickly.
Digital Literacy	MSME owners possess basic knowledge about QRIS and how it functions.
	MSME owners understand the benefits of QRIS in the context of their business.
	MSME owners are able to operate QRIS in daily transactions.
	MSME owners can evaluate the effectiveness of QRIS in improving their business.
Intention to Adopt QRIS	MSME owners believe that QRIS will enhance their business performance.
	MSME owners feel that QRIS is easy to use and requires minimal effort.
	MSME owners are encouraged to use QRIS due to recommendations or social trends.
	Infrastructure support, training, and technology access strengthen their intention to adopt QRIS.

3. Results

Based on Table 2, the validity test is used to determine the extent to which the questionnaire items are accurate or valid. The validity of the questionnaire can be assessed using the product moment or Pearson correlation. A statement is considered valid if the Pearson correlation value is greater than the r table value. For a sample of 50 respondents with a significance level of 5%, the r table value is 0.2787. Furthermore, the reliability test can be measured by observing Cronbach's alpha value of the questionnaire items. Cronbach's alpha values range from 0 to 1, with a minimum acceptable threshold of 0.60. Therefore, if Cronbach's alpha value is > 0.6, the data is considered reliable.

Table 2: Validity Results

Variable	Measurement Indicator	Pearson Correlation	Confirmation
Perceived Usefulness	The use of QRIS enables Falster transactions.	0.722	Valid
	QRIS allows MSMEs to serve more customers within the same timeframe.	0.843	Valid
	QRIS helps achieve business objectives more efficiently.	0.658	Valid
	QRIS provides convenience for daily transactions.	0.632	Valid
Perceived Eales of Use	QRIS is easy for MSME owners to use in daily transactions.	0.746	Valid
	The process of using QRIS is straightforward and can be understood without special training.	0.693	Valid
	Interactions with the QRIS system are clear and not confusing.	0.678	Valid
	QRIS enables payments to be processed quickly.	0.811	Valid
Digital Literacy	MSME owners possess basic knowledge about QRIS and how it functions.	0.732	Valid
	MSME owners understand the benefits of QRIS in the context of their business.	0.777	Valid
	MSME owners can operate QRIS in daily transactions.	0.764	Valid
	MSME owners can evaluate the effectiveness of QRIS in improving their business.	0.692	Valid
Intention to Adopt QRIS	MSME owners believe that QRIS will enhance their business performance.	0.637	Valid
	MSME owners feel that QRIS is easy to use and requires minimal effort.	0.734	Valid
	MSME owners are encouraged to use QRIS due to recommendations or social trends.	0.698	Valid
	Infrastructure support, training, and technology access strengthen their intention to adopt QRIS.	0.726	Valid

More specifically, the findings of the validity test for the questionnaire measuring MSME owners' perceptions of QRIS adoption indicate that all measurement indicators for the key constructs—perceived usefulness, perceived ease of use, digital literacy, and intention to adopt QRIS—were found to be valid. Each indicator achieved a Pearson correlation coefficient above the acceptable threshold of 0.60, confirming the validity of the constructs. For perceived usefulness, all four indicators were valid. MSME owners believed that QRIS enabled faster transactions (0.722), allowed serving more customers in the same timeframe (0.843), helped achieve business objectives efficiently (0.658), and provided convenience for daily transactions (0.632). These results highlight the significant value that MSME owners place on the functionality and efficiency that QRIS brings to their businesses. In terms of perceived ease of use, all four items also proved to be valid. MSME owners agreed that QRIS was easy to use (0.746), that its process was straightforward (0.693), that the interactions with the system were clear (0.678), and that payments were processed quickly (0.811). These findings indicate that QRIS is perceived as user-friendly and operationally efficient. For digital literacy, MSME owners demonstrated adequate understanding of QRIS and its benefits, with Pearson correlations ranging from 0.692 to 0.777, affirming their ability to operate and evaluate the system. Finally, regarding intention to adopt QRIS, MSME owners showed positive intentions towards adopting QRIS due to its perceived benefits, ease of use, and infrastructural support. The Pearson correlation coefficients ranged from 0.637 to 0.734, confirming that the factors influencing their adoption intentions were valid and significant. Overall, these findings underscore that the developed questionnaire is a valid tool for understanding the factors influencing MSME owners' perceptions of QRIS adoption (Pangastuti et al., 2023).

Table 3: Reliability Results

Variable	**Cronbach's Alpha**	
Perceived Usefulness	0.697	Reliable
Perceived Eales of Use	0.663	Reliable
Digital Literacy	0.712	Reliable
Intention to Adopt QRIS	0.712	Reliable

The reliability results, as indicated by Cronbach's Alpha (Table 3), demonstrate that all constructs in the study are reliable. For perceived usefulness, the Cronbach's Alpha value was 0.697, indicating acceptable reliability. Similarly, perceived ease of use showed a Cronbach's Alpha of 0.663, which is also considered reliable. The digital literacy construct had a Cronbach's Alpha of 0.712, further confirming its reliability. Lastly, the intention to adopt QRIS construct also achieved a Cronbach's

Alpha of 0.712, indicating a strong level of internal consistency. These findings confirm that the measurement items for each construct consistently measure the intended variables, and the questionnaire can be relied upon for understanding MSME owners' perceptions and adoption intentions regarding QRIS.

Reliability and validity testing are essential in ensuring the quality and trustworthiness of research instruments, such as questionnaires, surveys, or tests, used in social science research. In the context of this study, the reliability and validity tests of the questionnaire used to measure MSME owners' perceptions of QRIS adoption are crucial for drawing meaningful and accurate conclusions (Lolowang et al., 2024). Reliability testing assesses the consistency of the measurement instrument, ensuring that the results are stable and replicable over time. In this study, the reliability test using Cronbach's alpha indicates whether the items within the questionnaire consistently measure the same concept. A Cronbach's alpha value greater than 0.6 confirms that the questionnaire reliably measures the constructs of perceived usefulness, ease of use, digital literacy, and intention to adopt QRIS. The implication of this finding is that the questionnaire can be trusted to produce stable results when administered multiple times or to different groups of MSME owners (Mittal & Raman, 2021). This consistency ensures that any conclusions drawn from the data, such as the factors influencing QRIS adoption, are grounded in a dependable measurement tool. Validity testing, on the other hand, ensures that the questionnaire accurately measures what it is intended to measure. The Pearson correlation coefficient used in this study tests the relationship between individual items and their respective constructs. When the Pearson correlation exceeds the critical value, it indicates that the items are valid and are indeed measuring the intended concepts, such as perceived ease of use or digital literacy. Validity ensures that the study results are reflective of the true nature of the factors influencing QRIS adoption, rather than being influenced by irrelevant or misleading variables (Edipurta & Amalyah, 2022). Together, these tests provide confidence that the data collected is both reliable and valid. The implications are significant: policymakers, researchers, and practitioners can base their decisions on trustworthy results, leading to more effective strategies for encouraging QRIS adoption among MSMEs.

The findings in this study align with several prior research studies on the adoption of digital payment systems, particularly QRIS, by MSME owners. The consistent and reliable results of the validity and reliability tests demonstrate that the questionnaire used in this study accurately measures key factors such as perceived usefulness, ease of use, digital literacy, and intention to adopt QRIS. This is consistent with Al-Okaily et al. (2020), who found that cultural orientations, such as uncertainty avoidance, influence the acceptance of digital payment systems, indicating the importance of cultural and contextual factors when designing such systems and their acceptance mechanisms. The emphasis on perceived usefulness and ease of use in this study mirrors Sivathanu (2019), who highlighted that the adoption of digital payment systems is significantly influenced by the perceived benefits and ease of use, particularly in the context of the demonetization period in India. Additionally, Cwynar et al. (2022) stresses the role of consumers' knowledge in facilitating the adoption of cashless payments, aligning with this study's findings where digital literacy is a key factor in MSME owners' decision to adopt QRIS. Gupta et al. (2022) and Tripathi et al. (2022) support these findings by validating that perceived ease of use and the utility of digital payment modes significantly influence users' intention to adopt them, which is similarly observed in the MSMEs' willingness to use QRIS in this study. Lastly, Bashir et al. (2021) noted that perceived risks and user experience influence adoption decisions. The findings of this study, showing high reliability and validity, reinforce the notion that a well-designed, easy-to-use, and useful system increases the likelihood of adoption, minimizing perceived risks. Together, these studies demonstrate the relevance and robustness of the findings in understanding digital payment adoption in diverse contexts.

4. Conclusion

The findings of this study highlight the significant role of perceived usefulness, ease of use, and digital literacy in determining MSME owners' intention to adopt QRIS. The validity and reliability tests confirmed that all questionnaire items used in the research were both valid and reliable, ensuring that the results are robust and trustworthy. The high Pearson correlation values and Cronbach's alpha scores for the indicators suggest that these variables are critical in influencing the decision-making process for MSME owners regarding the adoption of digital payment systems. Overall, the results emphasize that MSME owners are more likely to adopt QRIS when they perceive it as useful, easy to use, and when they possess the necessary digital literacy. These factors must be considered when designing strategies to promote the use of digital payment systems among MSMEs, ensuring greater adoption and utilization of QRIS in Indonesia.

References

Al-Okaily, M., Lutfi, A., Alsaad, A., Taamneh, A., & Alsyouf, A. (2020). The determinants of digital payment systems' acceptance under cultural orientation differences: The case of uncertainty avoidance. *Technology in Society*, *63*, 101367.

Asif, M. (2021). Evaluation of factors affecting carbon accounting information disclosure: A case of ASEAN countries. *Arthatama*, *5*(2), 39-50.

Bashir, S., Khwaja, M. G., Mahmood, A., Turi, J. A., & Latif, K. F. (2021). Refining e-shoppers' perceived risks: Development and validation of new measurement scale. *Journal of Retailing and Consumer Services*, *58*, 102285.

Chohan, F., Aras, M., Indra, R., Wicaksono, A., & Winardi, F. (2022). Building customer loyalty in digital transaction using QR code: Quick Response Code Indonesian Standard (QRIS). *Journal of Distribution Science*, *20*(1), 1-11.

Cwynar, A., Świecka, B., Filipek, K., & Porzak, R. (2022). Consumers' knowledge of cashless payments: Development, validation, and usability of a measurement scale. *Journal of Consumer Affairs*, *56*(2), 640-665.

Ediputra, M. R., & Amalyah, A. A. (2022, September). Analysis Factors Affecting Consumer Preferences in using Qris Payment In-Store. In *2022 5th International Conference of Computer and Informatics Engineering (IC2IE)* (pp. 29-34). IEEE.

Farrell, M., Ikhwan, A. D., Kartika, W., Rahadi, R. A., Azkaenza, M., & Haq, M. A. (2022). Implementation Study of Quick Response Code Indonesia Standard (QRIS) in Papua Province. *Jurnal Manajemen Indonesia*, *22*(3), 289-313.

Gupta, S., Kiran, R., & Sharma, R. K. (2022). Validating the role of digital payment mode as a new driver of online shopping: A modified UTAUT2 model. *Journal of Public Affairs*, *22*(2), e2434.

Hamzah Muchtar, E., Trianto, B., Maulana, I., Alim, M. N., Marasabessy, R. H., Hidayat, W., ... & Masrizal. (2024). Quick response code Indonesia standard (QRIS) E-payment adoption: customers perspective. *Cogent Business & Management*, *11*(1), 2316044.

Lolowang, T., Tasik, H. H., & Gunawan, E. M. (2024). Unlocking The QRIS Impact: An Analysis of Mobile Payment Among Msmes Using Technology Acceptance Model (TAM). *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi*, *12*(4), 793-803.

Mittal, V., & Raman, T. V. (2021). Examining the determinants and consequences of financial constraints faced by Micro, Small and Medium Enterprises' owners. *World journal of entrepreneurship, management and sustainable development*, *17*(3), 560-581.

Nita, N. A., Bangsawan, S., & Pandjaitan, D. R. (2024). MSME business growth in Indonesia: is the Indonesian standard quick response code (QRIS) a major factor?. *INOVASI: Jurnal Ekonomi, Keuangan, dan Manajemen*, *20*(2), 257-270.

Pangastuti, R. L., Efery, K., & Yap, N. (2023). How Are the Intentions and Perceptions of Smes on the Use of Digital Payments Using QRIS in the City of Kediri. *Jurnal Ekonomi*, *12*(01), 965-968.

Prawitasari, D., Badiani, F. D., Rachmawati, S. D., Ningrum, F. P., & Mufidah, N. L. (2024). QRIS in indonesia: a comprehensive literature review on adoption, challenges, and opportunities. *Revenue: Jurnal Manajemen Bisnis Islam*, *5*(1), 91-102.

Quyen, T. H. (2020). The relationship between green procurement practices and organizational performance in the manufacturing industry of Vietnam. *Arthatama*, *4*(1), 1-16.

Radho, M., & Lestari, N. I. (2022). Students' Interest in Using the Quick Response Code Indonesian Standard Payment System for Vocational Education Program Students Serang Raya University. *Jurnal Keuangan Dan Perbankan (KEBAN)*, *2*(1), 21-31.

Restiti, D., & Amalia, R. (2021). Pengaruh media sosial terhadap pengetahuan tentang quick response code indonesian standard (QRIS). *Jurnal Ilmu Perbankan Dan Keuangan Syariah*, *3*(2), 157-173.

Setyaningtyas, R. A., & Suranto, S. (2024). The Influence of Perceived Benefits, Perceived Ease of Use, And Perceived Risk on MSME Decisions in Using QRIS as a Digital Payment System in Surakarta. *Indonesian Interdisciplinary Journal of Sharia Economics (IIJSE)*, 7(1), 4611-4626.

Shah, M. H. (2022). Impact of green marketing strategy on business performance-mediating role of corporate image in construction industry of Kenya. *Arthatama*, *6*(1), 1-11.

Sivathanu, B. (2019). Adoption of digital payment systems in the era of demonetization in India: An empirical study. *Journal of Science and Technology Policy Management*, *10*(1), 143-171.

Tripathi, S. N., Malik, N., Rana, N. P., Vishnani, S., & Srivastava, S. (2022). Validating the antecedents of customer M-payment loyalty: an empirical investigation. *Internet Research*, *32*(6), 1862-1890.