

# Optimizing Msme-Based Financial Information Through Qris Synergy and HR Competence

Wenny A. Ginting<sup>1</sup>, Shane A. Pangemanan<sup>2</sup>, Siti Aisyah Nasution<sup>3</sup>

wennyginting@polimdo.ac.id<sup>1</sup>, shanep0201@gmail.com<sup>2</sup>, sitiaisahnasution@unprimdn.ac.id<sup>3</sup>

<sup>1,2</sup>Department of Accounting, Manado State Polytechnic, Manado, Indonesia

<sup>3</sup>Department of Accounting, University of Prima Indonesia, Medan, Indonesia

Corresponding Email: wennyginting@polimdo.ac.id

## Abstract

This study analyzes the influence of QRIS adoption and human resource (HR) competence on the financial quality of UMKM in Manado City. Using a quantitative approach with survey data from 125 UMKM in the restaurant sector collected through a census method, multiple regression analysis was conducted. The results indicate that QRIS adoption has a positive and significant impact on financial quality, as it improves transaction management, cash flow, and the accuracy of financial reporting. This supports the *Technology Acceptance Model* (TAM), which emphasizes perceived usefulness and ease of use in technology adoption. HR competence also shows a positive and significant effect, consistent with the *human capital theory*, which highlights the importance of skilled HR in improving performance. Together, QRIS and HR competence significantly affect financial quality with an  $R^2$  of 0.592. The findings suggest that combining digital adoption and HR competence is more effective than each factor alone, with implications for practice, theory, and policy in strengthening UMKM financial sustainability.

**Keywords:** QRIS, Human Resource Competence, Financial Quality, UMKM, Manado

## Introduction

North Sulawesi's use of QRIS has sped up the digital transition, making the province a "Rising Star" of the digital economy in Eastern Indonesia (Ramayanti et al., 2025). QRIS adoption has been successful because of the cooperation between Bank Indonesia, local governments, and the banking sector. However, there are still big problems to solve when it comes to improving infrastructure and digital literacy among the general population (Gunawan et al., 2023). QRIS makes transactions easier and encourages people to use financial services, but not many small enterprises and communities in rural locations have adopted it (Setyaningtyas, 2024). Reliance on technology and inadequate digital preparedness are significant barriers to ensuring that QRIS deployment is not only a token of advancement but also yields a substantive effect on the community's economic welfare (Fauziah et al., 2025), as these issues prevent effective utilization of QRIS and limit access to its benefits for small enterprises and rural communities. To really help the digital economy grow, more needs to be done to strengthen it (Herlina et al., 2025).

**Figure 1.** Growth of QRIS Adoption in North Sulawesi

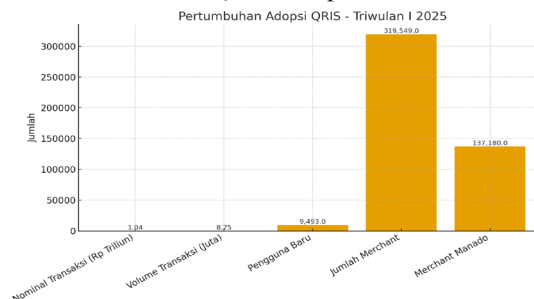


Figure 1 above shows a picture of macro data that shows growth. The nominal transaction value was IDR 1.04 trillion in the first quarter of 2025, which was 173.67% more than the same time last year. The transaction volume was 8.75 million (up 224.12%), and there were 9,493 new users (Primasari et al., 2025). There were 319,549 traders, and Manado City had the most, with 42.93% (137,180 merchants) (Nancy Tigauw, 2025). Field research suggests that MSMEs face big problems,



like low digital literacy and limited internet connectivity, even if macro data shows highly favorable growth (Nur Atika, 2024). This makes a difference between the big picture and the small picture that business people see (Mualifah & Muharrami, 2025). The fast rise in the use of QRIS does not automatically mean that the benefits of digitization will be maximized, especially when it comes to the quality of financial reports. QRIS can't reach its full potential to improve the financial health of MSMEs without skilled people to manage and evaluate digital transaction data (Khairani, Silaban, et al., 2025). Data collected via QRIS will stay unprocessed, preventing business entities from converting it into detailed financial reports (Jainuddin & Yovita, 2025).

Even though the economy as a whole is doing well, there are still big problems at the local level. MSMEs in Manado still have low digital literacy, poor infrastructure, and a lack of knowledge about how to keep digital financial records. This indicates that implementing QRIS may not necessarily make financial reports better (Nur Atika, 2024). To turn digital transaction data into accurate and meaningful financial reports, you need to have good human resources skills. While numerous studies have investigated QRIS adoption and human resource competency individually, none have thoroughly integrated these two criteria to evaluate their influence on the financial quality of MSMEs, especially in Manado City (Muhamad Taufik Kadir, 2024). Without enhancing human resource capability in the management of digital financial technology and data, QRIS adoption may persist as a simply technological application, failing to exert a substantial influence on financial outcomes.

The Technology Acceptance Model (TAM) helps explain why people utilize technologies like QRIS. It says that how beneficial and easy to use a technology is affects how people use it (Jee Sinha et al., 2024). Perceived utility and ease of use have a big effect on MSMEs in Pekanbaru's plans to utilize QRIS and how they actually use it (Hayatunnisah et al., 2025). But MSMEs need enough people to handle, record, and comprehend the data for QRIS to have its full effect on financial information. QRIS could become only a technical tool if it doesn't have this ability, which would mean it wouldn't have the most effect on financial efficiency and MSME growth (Djatnika & Kaltum, 2024). The Resource-Based View (RBV) perspective also stresses that having skilled workers is an internal resource that gives a company an edge over its competitors (Research & 2024, 2024). Using internal resources, such as people, has a positive effect on the success of MSME businesses. Information Quality Theory is useful for figuring out if the financial information that comes out is correct, useful, complete, and up to date (Qosim et al., 2025). QRIS makes MSME financial reports better, but if the people who work there aren't good at their jobs, it can have the opposite effect. The role of human resource competency in enhancing the impact of technology on the quality of financial reports. The combination of QRIS, MSME SAK, and human resources can account for 53.4% of the differences in the quality of financial reports (Lawita et al., 2025).

This research introduces a novel approach by concurrently investigating the synergy between QRIS and human resource skills in enhancing the quality of MSME financial information. This integrative perspective has not been extensively examined, however it is significantly pertinent in motivating MSMEs to not only embrace digital transactions but also enhance them as a source of reliable data beneficial for decision-making and business sustainability. Consequently, this study underscores the significance of analyzing the function of QRIS and human resource competences in relation to the financial quality of MSMEs in Manado City.

## Theoretical Review

### QRIS and Digital Transformation

Bank Indonesia came up with the Indonesian Standard Quick Response Code (QRIS) as a way to get people to use more than one payment system (Herlina et al., 2025). It has been shown that QRIS makes transactions more efficient by offering a quick and easy way to pay online (Manalu et al., 2025). This makes it easier for MSMEs to do business without cash and also opens up new markets, especially for people who like to pay with digital ways (Primasari et al., 2025). QRIS also helps MSMEs become more financially literate by helping them understand and keep track of transactions in real time (Mualifah & Muharrami, 2025). MSMEs may get to transaction data more readily with an integrated system. This makes finances more open and accountable (Khairani, Tantonno, et al., 2025).

The success of QRIS, on the other hand, depends a lot on how well people can manage and process transaction data (Nugraheni & Darma, 2025a).

In addition, the adoption of QRIS has had a positive impact on increasing MSME turnover by facilitating non-cash transactions and attracting digital consumers (Aliah et al., 2025). However, the main obstacle hindering the full potential of this system is the low level of technological understanding among micro-business owners (Nugraheni & Darma, 2025b). Without increased technological capacity and a profound understanding of QRIS, many MSMEs cannot fully utilize the features of this digital payment system. Reliance on basic technological understanding, while skilled human resources are still limited, causes QRIS to be little more than a transaction tool without providing a significant impact on operational efficiency and financial transparency (Muhammad Basri & Muarif Leo, 2023). To achieve optimal results, in-depth training on QRIS use and digital literacy must be a top priority (Ayuni et al., 2026). Without this step, QRIS risks becoming merely a symbol of technology adoption without delivering the expected real changes in MSME management and growth (Nanpitupulu, 2025).

### HR Competence

Human resource (HR) competency is a key determinant in how MSMEs handle their money (Inseng et al., 2026). Even though technology like QRIS can make transactions more efficient, it won't have a big effect if HR isn't good (Wang, Zuraina, et al., 2024). Managerial skills, financial literacy, and the capacity to use digital technologies are all important for making good financial reports (Papademetriou et al., 2023). If MSMEs don't know how to handle and analyze digital transaction data well, their financial reports will stay bad (Wang, Mansor, et al., 2024). This could lead to bad decisions, which could make financial situations worse and slow down corporate growth (Hubschmid-Vierheilig, 2021). QRIS can help things run more smoothly, but without skilled HR, the technology won't be able to do much (Supramaniam, 2021). So, making sure that HR can handle financial data and grasp digital technologies better should be a top focus (Hou, 2023). If not, MSMEs will continue to fall behind in the competitive digital economy, even as technology gets better (Harianto et al., 2024).

A lack of financial literacy among MSMEs makes it hard to manage money well, which could lead to more financial instability (Nasib et al., 2026). Even though technology like QRIS make transactions far more efficient, they won't have their full effect until people know how to handle their money well (Salqaura & Nasib, 2026). If the people who work with QRIS don't have the right skills, the data it collects could be inadequately managed, which could make financial reporting even more confusing and unclear (Nasib et al., 2024). So, learning how to manage people, how to handle money, and how to use digital technology should be the most important things to do (Sihombing et al., 2024). If these skills don't get better, MSMEs will keep relying on systems that aren't good enough (Ayuni et al., 2025). The full potential of QRIS and other technologies will only be realized if the people who work with them know how to use them to make clear and accurate financial reports (Fadli, 2021). If this strategic step isn't taken, digital technology will be wasted. It won't help MSMEs grow in a way that lasts, and it will just be a sign of progress without any real value (Razaq et al., 2024).

### Quality of Financial Information

When it comes to MSMEs' financial quality, it's not just about being reliable and open; it's also about having simple access to financial information that is important for making business decisions (Purnama Sari et al., 2025). As (Liu et al., 2023) says, using digital payment systems that are linked to financial records might greatly improve the accuracy of financial reports and make it easier to get funding. But these technologies should help MSMEs expand faster, the biggest problem is that people need to know how to use this technology well (Ismail et al., 2025). If you don't know how to manage financial data and read information correctly, you won't be able to fully enjoy the benefits of digital payment technology (Faizah et al., 2022). Advanced systems cannot supplant the essential function of human resource proficiency in information processing and decision-making (Siswanto & Aqdam, 2024).

But this potential is sometimes limited by a lack of skilled workers, which is an important part of managing digital finances (Christy et al., 2026). Business people who have skilled workers in accounting and digital technologies (Limcaryo et al., 2025) have better financial quality in MSMEs. Even if a digital payment system is put in place, it won't work as well without the right knowledge (Manurung et al., 2025). Poor financial reports that come from not being able to handle digital transaction data can lead to bad business choices that make it harder to get funding and expand a business (Khairani, Tantonio, et al., 2025). To get the most out of technologies like QRIS, it's important to quickly improve the skills of people who work in digital-based financial management (Djohan et al., 2025). Without it, digital transformation efforts at the micro level won't do much to help MSME growth (Lubis et al., 2023).

## Methodology

This study uses a quantitative method with an explanatory research approach, namely research that aims to explain the causal relationship between independent and dependent variables through hypothesis testing. The focus of the study is to analyze the influence of QRIS and HR Competence on MSME-based Financial Quality in Manado City. The study population includes all micro, small, and medium enterprises (MSMEs) in the restaurant sector in Manado City that have used QRIS as a digital payment instrument, totaling 125 MSMEs. Because the population is relatively small, the sampling technique uses a census method, so that all members of the population are used as research samples. Research data were obtained from two sources. Primary data were collected by distributing questionnaires with a Likert scale (1–5) to respondents, covering indicators of QRIS adoption, HR competency, and financial quality. Meanwhile, secondary data were obtained from official Bank Indonesia reports, publications from the Central Statistics Agency (BPS), and scientific literature relevant to the adoption of digital payments and the quality of MSME financial reports. Data analysis was carried out using multiple linear regression methods with the help of SPSS/SmartPLS software. The analysis stages include: (1) Validity and reliability testing, to ensure the questionnaire instrument is suitable for use; (2) Classical Assumption Test (3) Multiple linear regression analysis, the regression model used in this study, aims to examine the influence of QRIS and HR Competence on the Financial Quality of MSMEs. The regression equation constructed is:

$$Y = \beta_0 + \beta_1 \text{QRIS} + \beta_2 \text{HR} + \epsilon$$

where:

Y : Financial quality,

QRIS : Level of adoption of QRIS digital payments

HR : Human resource competency of business actors.

A : Constant

$\beta_1, \beta_2$  : Regression Coefficient

$\epsilon$  : Residual or Error

## Results and Discussions

### Results

#### Validity Test

The validity test findings in Table 1 above reveal that all of the items in the QRIS, HR Competence, and MSME Financial Quality variables have a computed r value that is greater than r table (0.175) at a significance level of 5% with n = 125. This shows that all of the indicators are legitimate and can accurately measure the constructions. This research instrument is appropriate for assessing the impact of QRIS and HR competency on the financial quality of MSMEs in Manado City.

**Table 1.** Validity Test Results

Variable	Item	r count	r table	Information
QRIS	QRIS1	0.685	0.175	Valid
	QRIS2	0.702	0.175	Valid
	QRIS3	0.678	0.175	Valid

HR Competence	SDM1	0.712	0.175	Valid
	SDM2	0.745	0.175	Valid
	SDM3	0.698	0.175	Valid
MSME Financial Information	KEU1	0.689	0.175	Valid
	KEU2	0.721	0.175	Valid
	KEU3	0.734	0.175	Valid

### Reliability Test

The reliability test results showed that all of the research variables had a Cronbach's Alpha value of more than 0.70. This means that the instrument utilized met the dependability standards. The QRIS variable had a value of 0.781, the HR Competence variable had a value of 0.812, and the MSME Financial Quality variable had a value of 0.796. These values show that the variable has strong internal consistency, which means that each item may consistently and stably measure the intended construct. So, this questionnaire is good for gathering data for this project.

**Table 2.** Reliability Test Results

Variable	Number of Items	Cronbach's Alpha	Information
QRIS	3	0.781	Reliable
HR Competence	3	0,812	Reliable
Financial Quality of MSMEs	3	0.796	Reliable

### Classical Assumption Test Results

#### Normality Test

The Kolmogorov-Smirnov test findings indicate a K-S value of 0.051 and a significance level of 0.888, which is greater than 0.05. This means that the residual is normally distributed. This result is in line with the histogram and Q-Q plot, which show a distribution pattern that is close to normal. So, the assumption of normality is met, and the regression model may be used to test hypotheses.

**Table 3.** Kolmogorov-Smirnov

Test Statistics	Value
Number of Samples (N)	125
Mean Residual	0.012
Std. Deviasi Residual	0.987
Kolmogorov-Smirnov (K-S)	0.051
Asymp. Sig. (2-tailed)	0.888

### Multicollinearity Test Results

The Tolerance value is greater than 0.10 and the VIF is less than 10 for both independent variables, which means that the multicollinearity test worked. This means that the model does not show any signs of multicollinearity. So, the regression model meets the premise that there is no multicollinearity, and it can be utilized for more research.

**Table 4.** Multicollinearity Test Results

Variable	Tolerance	VIF	Information
QRIS	0.812	1.232	There is no multicollinearity
HR Competence	0.799	1.251	There is no multicollinearity

### Heteroscedasticity Test Results

**Table 5.** Glejser Test

Variable	Sig. (p-value)	Information
QRIS	0.327	There is no heteroscedasticity
HR Competence	0.412	There is no heteroscedasticity

The Glejser test results indicate that the significance values for the QRIS variable (0.327) and HR Competence (0.412) exceed the significance level ( $\alpha = 0.05$ ). This indicates an absence of a substantial correlation between the independent variable and the absolute value of the residual, allowing for the conclusion that the regression model is devoid of heteroscedasticity symptoms

### Multiple Linear Regression Analysis

Based on the results of hypothesis testing using a multiple linear regression model, the equation obtained is ( $Y = 0.512 + 0.421X_1 + 0.367X_2$ ). This equation indicates that financial quality (Y) is positively influenced by the level of adoption of QRIS digital payment systems ( $X_1$ ) and the competence of human resources ( $X_2$ ) among business actors. The constant value of 0.512 implies that when both QRIS adoption and human resource competence are held constant (or equal to zero), financial quality still maintains a baseline value of 0.512. The regression coefficient of 0.421 for the QRIS variable shows that every one-unit increase in the level of QRIS adoption will lead to an increase in financial quality by 0.421 units, assuming other variables remain constant. This finding suggests that the utilization of QRIS digital payment systems contributes significantly to improving transparency, transaction efficiency, and financial record-keeping.

Meanwhile, the regression coefficient of 0.367 for the human resource competence variable indicates that every one-unit increase in competence will enhance financial quality by 0.367 units, assuming other variables are held constant. This result confirms that managerial skills, accounting knowledge, and financial literacy of business actors play an important role in producing more accurate and higher-quality financial reports. Therefore, both independent variables have a positive effect on financial quality, with QRIS adoption having a more dominant influence compared to human resource competence. This highlights that the digitalization of payment systems, combined with the improvement of human resource capacity, serves as a key factor in enhancing the financial quality of business actors.

### Simultaneous Test (F)

Based on the results of simultaneous testing, the calculated F value was 45.73, while the F table value was 3.07 at a significance level of  $\alpha = 0.05$ . Because the calculated F value is greater than the F table value and the significance value is  $0.000 < 0.05$ . These results indicate that the synergy between QRIS use and improving HR competencies can simultaneously explain variations in the quality of MSME financial information. In other words, the optimization of MSME financial information is not influenced by a single factor, but rather is the result of a combination of the use of digital payment technology and human resource capacity in managing financial information.

**Table 6.** F Test

Statistics	F count	F table	Sig.	Information
Simultan	45.73	3.07	0.000	Accepted

### Uji Parsial (T)

Both QRIS and HR Competence have been found to greatly help improve the quality of MSME financial information, but only in part. The t-value for QRIS (4.25) is a little higher than the t-value for HR Competence (3.92), which means that QRIS has a stronger effect on making MSME financial information better in this model.

**Table 7.** T Test

Variable	t count	t table	Sig.	Information
QRIS	4.25	1.98	0.000	Have a significant impact
HR Competence	3.92	1.98	0.000	Have a significant impact

### Coefficient of Determination ( $R^2$ )

The coefficient of determination ( $R^2$ ) of 0.592 shows that the independent variables, QRIS and HR Competence, can explain 59.2% of the changes in MSME financial information. The other 40.8% is due to things that aren't part of the research model, like financial literacy, manual record-keeping systems, and support for digital infrastructure. This reasonably high  $R^2$  value shows that the synergy between using QRIS and having good HR skills is very important for improving MSME financial information

**Table 8.** Coefficient of Determination ( $R^2$ )

Model	$R^2$
Multiple Linear Regression	0.592

## Discussions

### The Impact of QRIS Adoption on Financial Quality

The study's findings demonstrate that the implementation of QRIS positively and significantly influences the financial quality of MSMEs in Manado City. This finding aligns with studies (Manalu et al., 2025)(Primasari et al., 2025)(Herlina et al., 2025) indicating that the incorporation of digital payment systems markedly enhances the efficiency and financial performance of MSMEs. Research (Mualifah & Muharrami, 2025) also stresses that digital technology can make financial management more effective if it is used effectively. Nonetheless, many investigations indicate divergent results. For instance, (Hou et al., 2024) discovered that the use of digital payment technology does not consistently exert a substantial influence on the financial quality of MSMEs in the absence of sufficient digital literacy among human resources (Azman et al., 2026). This indicates that the efficacy of QRIS implementation is intrinsically linked to the proficiency of human resources in leveraging technology successfully (Chaniago et al., 2026).

The managerial implications of this study suggest that although QRIS implementation positively influences the financial quality of MSMEs in Manado City, its efficacy cannot be realized without enhancing human resource competence. QRIS will only make a big difference if MSMEs can handle and process digital transaction data correctly. If you don't know enough about computers, using QRIS can make things worse instead of better. So, MSME managers need to focus on two crucial things: making sure that their employees know how to use QRIS to its full potential and encouraging them to learn more about how to manage money online. QRIS will still only be a way to make transactions if it doesn't include both. In this sense, technology isn't a quick fix. Improving the skills of human resources is the best way to make sure that technology can have the most effect on the financial efficiency and openness of MSMEs in Manado City.

### The Influence of Human Resources Competence on Financial Quality

The results of hypothesis testing demonstrate that HR competency exerts a favorable and significant impact on the financial quality of MSMEs. This finding aligns with studies (Yennia et al., 2024)(Akbar & Choiriah, 2025)(Helmy & Silviana, 2024)(Susanti et al., 2025) that underscore the notion that enhancing HR expertise will lead to improved financial management and performance of MSMEs. Conversely, (Ismail et al., 2025) indicates that HR skill alone is insufficient to ensure an enhancement in financial quality if supporting technology is not utilized effectively. So, MSME managers need to make sure that advancements in digital technology, financial literacy, and managerial abilities are made in a complete way (Awaludin et al., 2024). Research (Hutahayan, 2021) also shows that using digital technology, like QRIS, can greatly improve financial quality, but only if HR skills are equally up to par. To make financial reports clear and efficient, technology and HR skills must work together (Azman et al., 2026).

The managerial implications of this study demonstrate that human resource competency exerts a favorable and substantial influence on the financial quality of MSMEs. So, MSME managers need to make building human resource skills a top priority. Strategies for managing human resources should focus on helping managers do better at their jobs, learn about money, and use digital technologies. Even if technology like QRIS is used, the effect on MSME financial quality won't be as good

if these skills aren't there. Managers must give continual training to enhance human resource competencies in managing digital transaction data, generating accurate financial reporting, and leveraging technology for improved decision-making. Also, investing in the right technology must be paired with hiring more people so that technology can be used effectively to make operations more efficient and finances more open.

### **The influence of QRIS adoption and HR Competency on Financial Quality**

The results of the simultaneous test (F-test) demonstrate that QRIS and HR competency collectively exert a significant impact on the financial quality of MSMEs in the restaurant industry in Manado City. This conclusion shows how important it is for digital technology adoption and HR quality to work together. QRIS will work best with good HR, and skilled HR will work best with QRIS (Bhastary et al., 2025)(Hou et al., 2024)(Harianto et al., 2025). Digital technology can help MSMEs save money and be more open about their finances, but it will only work if HR can handle digital transaction data (Hardiansyah et al., 2025). Using digital payment technology like QRIS makes financial reporting more accurate, but only if HR knows how to use it well (Khairumi et al., 2025). Also, HR's ability to manage digital finances and their knowledge of technology are important for getting the most out of QRIS (Nurbayan et al., 2025). The huge potential of this digital payment technology won't have a big effect on the financial health of MSMEs (Sari et al., 2025) unless HR capacity is improved.

The simultaneous F-test results indicate that QRIS and human resource competency greatly affect the financial quality of MSMEs in the restaurant industry in Manado City. This underscores the necessity of synergy between technology and human resource management. Restaurant managers in Manado City need to make sure that QRIS is not just used as a digital payment system, but also that their employees are better at using computers and managing money. So, it's very important to train employees on how to use QRIS, manage transaction data, and make digital financial reports. Also, managers will be able to make better, data-driven judgments if they know a lot about how to use technology to make operations run more smoothly and finances more open. If the people who work for the company don't have the right skills, even if QRIS is put into place, it won't do anything to improve the quality of financial reports or help the business develop. So, MSMEs in the restaurant business in Manado City should make it a top priority to have a human resource management plan that focuses on improving technical and financial skills. This will help them get the most out of QRIS and keep their businesses going.

### **Conclusions**

The study's findings show that QRIS has a big and good effect on the financial health of MSMEs in Manado City. The MSMEs will be better able to handle transactions, increase cash flow, and keep their financial reports accurate and transparent if more people use QRIS. Human resource competency is also very important for MSME financial management. Skilled workers who know how to use digital technology and understand finance can make the most of QRIS to make financial reports better and operations run more smoothly.

These results suggest that MSMEs in Manado City should use QRIS more and give their employees frequent training to make the most of the technology. QRIS will work best to help businesses grow if they get training in digital literacy, financial management, and technical skills. MSMEs also need to keep improving their human resources so they can better handle transaction data and make financial reports that are more precise and clear.

The conclusions of this study may not apply to other areas with various market characteristics because it only looked at MSMEs in Manado City. This study exclusively evaluated two criteria (QRIS and human resource competency) while neglecting other external influences, such government assistance, rules, and access to funding, that may affect the financial quality of MSMEs.

The managerial relevance of our findings is the significance of synergy between QRIS utilization and the enhancement of human resource competency to elevate the financial quality of MSMEs. MSME managers need to make sure that their employees know how to use digital technology and

handle finances that are based on technology. This is how MSMEs can get the most out of QRIS, speed up transactions, and make superior financial reports. The government and other relevant organizations also need to help MSMEs by giving them training and making rules that make it easier for them to use digital technology to its fullest.

## References

- Akbar, A., & Choiriah, S. (2025). The Effect of Good Corporate Governance, Internal Control System, and Human Resource Competence on Financial Reporting Quality. *Research Horizon*, 1(1), 1–19.
- Aliah, N., Rizkina, M., Susilawaty, T. E., & Nasution, N. (2025). Audit and Coaching Finance : The Role of Auditors as MSME Consultant. *Journal Intelektual*, 4(1), 29–34.
- Awaludin, M., Yasin, V., & Risyda, F. (2024). The Influence of Artificial Intelligence Technology , Infrastructure and Human Resource Competence on Internet Access Networks. *Inform : Jurnal Ilmiah Bidang Teknologi Informasi Dan Komunikasi*, 9(2), 111–120.
- Ayuni, T. W., Bhastary, M. D., Sari, D. P., Amelia, R., & Nasib. (2025). The Role of Micro, Small and Medium Enterprises (MSMEs) and Entrepreneurship in Reducing Poverty. *Outline Journal of Economic Studies*, 5(1), 66–80. <https://doi.org/10.61730/kw7ak231>
- Ayuni, T. W., Khairani, R., Tambunan, D., Sajaya, M., & Tanady, D. (2026). A Performance Model for MSMEs Based on Access to Financing and Its Impact on Community Welfare in Deli Serdang Regency. *Journal of Business Integration and Competitive*, 2(2), 47–59. <https://doi.org/10.64276/jobic.v2i2.83>
- Azman, N. S., Hassim, A. A., & Al-amrani, S. N. (2026). Consumer And Commercial Practices in International Business from An Economic Perspective. *Journal of Business Integration and Competitive*, 2(2), 1–15. <https://doi.org/10.64276/jobic.v2i2.74>
- Bhastary, M. D., Astuti, L., Silvana, E., Yuanda, F., Rico, R., & Antonio, S. (2025). Analisis Strategi Pemasaran pada Toko Sembako Zhafa di Kota Batam. *Applied Multidisciplinary Science –*, 1(2), 61–77. <https://doi.org/10.64276/ams.v1i2.56>
- Chaniago, S., Hou, A., Harianto, A., & Nabella, S. D. (2026). Enhancing Financial Behavior through Financial Awareness and Professional Advice : Insights from the Government Subsidized Housing Program for Lecturers in Medan. *Journal of Business Integration and Competitive*, 2(2), 16–25. <https://doi.org/10.64276/jobic.v2i2.75>
- Christy, V., Nasution, S. A., & Ginting, W. A. (2026). Pengaruh Literasi Keuangan, Tujuan Investasi, dan Influencer terhadap Keputusan Investasi Generasi Z. *Akuntansi Prima*, 8(1), 1–18.
- Djatnika, S., & Kaltum, U. (2024). Transformational Leadership and Knowledge Transfer Enhance MSME Employees ' Performance. *Asian Journal of Management Entrepreneurship and Social Science*, 04(02), 1337–1351.
- Djohan, D., Budiman, I., Nasib, Razaq, M. R., & Fathoni, M. (2025). Fintech , Digital Branding , and Customer Engagement to Enhance Gayo Arabica Coffee SMEs ' Performance. *Jurnal Ilmiah Manajemen Kesatuan*, 13(5), 3349–3360. <https://doi.org/10.37641/jimkes.v13i5.3540>
- Fadli, A. (2021). Efforts to Maximize the Performance of SMEs and Partnerships Through Experience and Business Capital. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, 5(2), 8605–8615. <https://doi.org/10.33258/birci.v5i2.4641> 8605
- Faizah, R., Irmadaryani, R., & Sulistiyo, A. B. (2022). Factors affecting the quality of mosque financial statements. *Keynesia : International Journal of Economy and Business*, 1(2), 53–71. <https://doi.org/10.55904/keynesia.v1i2.410>
- Fauziah, F., Made Sudarma, & Erwin Saraswati. (2025). MSMEs in Digital Transformation: Determinants of QRIS E-Payment Acceptance. *Jurnal Manajemen*, 29(2), 379–399. <https://doi.org/10.24912/jm.v29i2.2681>
- Gunawan, A., Fatikasari, A. F., & Putri, S. A. (2023). The Effect of Using Cashless (QRIS) on Daily Payment Transactions Using the Technology Acceptance Model. *Procedia Computer Science*, 227, 548–556. <https://doi.org/10.1016/j.procs.2023.10.557>

- Hardiansyah, H., Amelia, R., Harianto, A., & Syahlina, M. (2025). Digital Transformation and Its Impact on Production Improvement : A Case Study at PT Gajah Mada Plastik. *Journal of Business Integration and Competitive*, 1(2), 108–115. <https://doi.org/10.64276/jobic.v1i2.21>
- Harianto, A., Fali, I. M., Rivai, A., Ayuni, T. W., & Khairani, R. (2025). Behavioral and Knowledge-Based Determinants of Tax Compliance : A Study on SMEs in North Medan , Indonesia. *Journal of Finance Integration and Business Independence*, 1(2), 1–7. <https://doi.org/10.64276/jofibi.v1i2.36>
- Harianto, A., Honkley, T., Razaq, M. R., Nasib, & Junaidi. (2024). Peran Kinerja Keuangan dalam memediasi Pemasaran digital Terhadap Keberlangsungan Hidup Pelaku UKM Pada Mitra Binaan PT. Perkebunan Nusantara III. *Ekuivalensi*, 10(2), 1–15.
- Hayatunnisah, F., Chaerunnisa, A., Wiradinata, R., & Rusdiyana, R. (2025). Performance improvement through digital accounting for MSME sustainability. *Jurnal EDUCATIO: Jurnal Pendidikan Indonesia*, 11(1), 327–335. <https://doi.org/10.29210/1202525950>
- Helmy, A., & Silviana. (2024). Human Resource Competence Effect on the Quality of Regional Work Unit of Financial Reports with the Government’s Internal Control System. *Journal La Bisecoman*, 05(05), 1–19. <https://doi.org/10.37899/journallabisecoman.v5i5.1492>
- Herlina, Suhardi, Astuti, N., & Hamdan. (2025). Qris Adoption Determinants: Analysis Of The Role Of Ease Of Use, Trust, And Promotion With User Satisfaction As An Intervening. *Sebatik Journal*, 4(4), 289–306.
- Hou, A. (2023). The Influence Of Financial Literacy And Quality Of Financial Statements On The Performance Of Msmes In Medan Marelan. *IJAMESC*, 1(4), 281–290.
- Hou, A., Djohan, D., & Hastuty, W. (2024). The Influence of Business Networks and Perception of Product Quality on the Competitive Advantage of SME Products in Langkat. *Journal of Finance Integration and Business Independence*, 1(1), 1–8. <https://doi.org/10.64276/jofibi.v1i1.7>
- Hubschmid-Vierheilig, S. N. E. (2021). We need to learn how to love digital learning ‘again’: European SMEs response to COVID-19 digital learning needs. *Human Resource Development International*, 24(2), 123–132. <https://doi.org/10.1080/13678868.2021.1893503>
- Hutahayan, W. B. (2021). The relationships between market orientation, learning orientation, financial literacy, on the knowledge competence, innovation, and performance of small and medium textile industries in Java and Bali. *Asia Pacific Management Review*, 26(1), 39–46. <https://doi.org/10.1016/j.apmr.2020.07.001>
- Inseng, H., Radebe, N., & Chipangamate, N. (2026). The Extractive Industries and Society Impact of sustainable business model innovation and green competencies on business sustainability in the mining sector : Moderating role of green creativity. *The Extractive Industries and Society*, 25(June), 1–19. <https://doi.org/10.1016/j.exis.2025.101784>
- Ismail, M. I., Ritchi, H., & Adrianto, Z. (2025). Effectiveness Of Regional Financial Management: The Role Of Information Quality And Human Resources Competence. *Indonesian Interdisciplinary Journal of Sharia Economics (IJSSE)*, 8(2), 4923–4938.
- Jainuddin, & Yovita, M. (2025). The Role Of Financial Technology In Enhancing The Development Of Fisheries Msmes In Coastal East Kalimantan. *International Journal of Economics, Business and Accounting Research (IJEBAAR)*, 1(2), 1–11.
- Jee Sinha, K., Sinha, S., & Sinha, B. J. (2024). Micro, Small, and Medium-Sized Enterprises (MSMEs): The Significant Role and Challenges in Indonesia’s Economy. *International Journal for Multidisciplinary Research*, 6(3), 0–10. [www.ijfmr.com](http://www.ijfmr.com)
- Khairani, R., Silaban, P., & Edward, Y. R. (2025). Digital Financial Literacy and Inclusion as Determinants of Economic Sustainability Among Rural MSMEs. *Proceeding of the International Conference on Management, Entrepreneurship, and Business*, 2(2), 463–469.
- Khairani, R., Tantonio, E. A., Anderson, R., Munthe, H., & Purba, P. Y. (2025). Unlocking the Potential of Financial Inclusion, E-Commerce, and FinTech to Boost SME Performance. *Jurnal Ilmiah Manajemen Kesatuan*, 13(5), 3565–3576. <https://doi.org/10.37641/jimkes.v13i5.3786>
- Khairumi, D., Amelia, R., Martin, Siboro, L. B., & Bhastary, M. D. (2025). Strengthening Sales Through Brand Image and Product Quality : An Empirical Study at UD . UMEGA Roti Kang. *Journal of Business Integration and Competitive*, 1(2), 55–69.

- Lawita, F. I., Ario Wicaksono, D. D., Putri, V. R., & Orlanda, R. (2025). The Influence of Local Culture on MSME Accounting and SDG Attainment in Tangerang. *Jurnal Bisnis Dan Ekonomi*, 3(2), 202–211. <https://doi.org/10.61597/jbe-ogzrp.v3i2.104>
- Limcaryo, A., Nasution, S. A., & Ginting, W. A. (2025). Pengaruh Rasio keuangan terhadap Financial Distress pada perusahaan sub-sektor Non Siklis. *Jurnal Ekonomi & Ekonomi Syariah*, 8(1), 181–189.
- Liu, J., Zhou, K., Zhang, Y., & Tang, F. (2023). The Effect of Financial Digital Transformation on Financial Performance: The Intermediary Effect of Information Symmetry and Operating Costs. *Sustainability (Switzerland)*, 15(6), 1–22. <https://doi.org/10.3390/su15065059>
- Lubis, Z., Junaidi, Effendi, I., Nasib, & Fadli, A. (2023). The Model for Determining the Success of the Partnership Program in Improving the Performance of SMEs Fostered Partners PT. Perkebunan Nusantara III. *Quality - Access to Success*, 24(192), 35–43. <https://doi.org/10.47750/QAS/24.192.05>
- Manalu, N., Panjaitan, A. K., Rojeston, B., & Nainggolan, M. (2025). The Influence of Financial Literacy, Financial Inclusion, Internal Control, and Financial Performance on the Decision to Use QRIS among MSMEs in Medan City. *International Journal of Economic Social and Technology*, 4(1), 1–21.
- Manurung, S. A., Purba, P. Y., & Swardi, J. (2025). The Influence of Influencer Marketing, Flash Sale, and Product Quality in Increasing Consumer Trust on the Shopee Platform. *International Conference On Digital, Social, And Science*, 02(December), 760–769.
- Mualifah, I. E., & Muharrami, R. S. (2025). Service Quality, MDR, Ease of Use, QRIS User Satisfaction in Surakarta City Micro Businesses. *Proceeding ISETH (International Summit on Science, Technology, and Humanity)*, 2025, 145–156.
- Muhammad Basri, & Muarif Leo. (2023). Pengaruh Literasi Keuangan dan Digital Terhadap Preferensi Bank Digital. *Jurnal Publikasi Ilmu Manajemen*, 3(4), 421–427. <https://doi.org/10.47065/jtear.v3i4.659>
- Napitupulu, R. R. (2025). Optimasi Pemasaran Konten Digital untuk Meningkatkan Engagement Konsumen di Instagram. *Applied Multidisciplinary Science*, 1(2Napitupulu, R. R. (2025). Optimasi Pemasaran Konten Digital untuk Meningkatkan Engagement Konsumen di Instagram. *Applied Multidisciplinary Science*, 1(2), 78–84. <https://doi.org/10.64276/ams.v1i2.57>
- Nasib, Harianto, E. N. R. K. A. F. A., Albert, M. R. R., Martin, D. T., Satrianny, I. P., Hou, M. D. B. D. D. R. A. A., & Tamba, Z. R. D. D. P. A. I. F. U. (2024). *Mengenal bisnis 5.0*. PT. Pena Persada Kerta Utama.
- Nasib, Salqaura, S. A., Azman, N. S., & Fathoni, M. (2026). *Perilaku Konsumen Digital*. PT. Pena Persada Kerta Utama. [https://penapersada.id/buku/detail\\_buku.php?id=4124](https://penapersada.id/buku/detail_buku.php?id=4124)
- Nugraheni, P., & Darma, E. S. (2025a). *Adoption of Digital Technology and Financial Knowledge : Strategies for Achieving Sustainable Performance of MSMEs*. 2023, 1–15.
- Nugraheni, P., & Darma, E. S. (2025b). Adoption of Digital Technology and Financial Knowledge : Strategies for Achieving Sustainable Performance of MSMEs. *J. Risk Financial Manag*, 18(1), 1–15.
- Nurbayan, K., Amelia, R., Nazah, K., Fathoni, M., & Hernawati, M. (2025). Unlocking Buyer Intent : How the Marketing Mix Shapes Purchasing Decisions at Ummah Cahaya Restaurant. *Journal of Business Integration and Competitive*, 1(2), 18–30.
- Papademetriou, C., Ragazou, K., Garefalakis, A., & Passas, I. (2023). Green Human Resource Management: Mapping the Research Trends for Sustainable and Agile Human Resources in SMEs. *Sustainability (Switzerland)*, 15(7), 1–26. <https://doi.org/10.3390/su15075636>
- Primasari, N. S., Muttaqin, N., Putri, R., Budiarti, N., & Satrio, D. (2025). The Utilization of QRIS as a Digital Payment Innovation to Improve Operational Efficiency and Profitability of MSMEs with Digital Financial Literacy as a Moderating Variable. *Iconbit*, 1(1), 1327–1337.
- Purnama Sari, Ratih Amelia, Jessica Andre, Tina Linda, & Ahmad Fadli. (2025). A Critical Analysis of Marketing Strategies in Enhancing the Competitive Advantage of Cafe Pondok Rezeki Deli Tua. *Journal of Business Integration Competitive*, 1(2), 70–83. <https://doi.org/10.64276/jobic.v1i2.18>

- Qosim, N., Rukmana, A. Y., & Usup, U. (2025). The Impact of Digital Nomad Economy on Local Businesses Study of MSME Market Changes in Popular Destinations in Indonesia. *The East-south Journal of Social Science and Humanities*, 2(02), 113–118. <https://doi.org/10.58812/esssh.v2i02.474>
- Ramayanti, R., Azhar, Z., & Nik Azman, N. H. (2025). Factors influencing intentions to use QRIS: A two-staged PLS-SEM and ANN approach. *Telematics and Informatics Reports*, 17(July 2024), 100185. <https://doi.org/10.1016/j.teler.2024.100185>
- Razaq, M. R., Robin, Harianto, A., Fathoni, M., & Nasib. (2024). Analysis of Factors Affecting the Risk of Business Failure of Food Sector SMEs in Binjai City. *Primanomics : Jurnal Ekonomi & Bisnis*, 22(3), 1–14. <https://doi.org/10.31253/pe.v22i3.3222>
- Research, A. P.-I. J. O. S. S., & 2024, undefined. (2024). Assessing Accounting Practices in MSMEs: A Study of BMT Mazaya's Support Initiatives. *J-Innovative.Org*, 3(2), 261–284. <http://j-innovative.org/index.php/Innovative/article/view/15238>
- Salqaura, S. A., & Nasib. (2026). *AI- Driven Predictive Analytics in Neuromarketing: Unveiling Consumer Minds for Strategic Marketing Insights*. IGI Global Scientific Publishing. <https://doi.org/10.4018/979-8-3373-5997-7.ch002>
- Sari, W., Amelia, R., Handayani, C., & Hou, A. (2025). Service Quality as the Key to Customer Satisfaction : An Empirical Analysis of BTPN Syariah Bank Siantar Timur. *Journal of Business Integration and Competitive*, 1(2), 1–10.
- Setyaningtyas, R. A. (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 (IJJSE)*, 7(2), 4611–4626.
- Sihombing, E. H., Nasib, Harianto, A., Razaq, M. R., & Hou, A. (2024). Pengaruh Digital Marketing dan Penanganan Keluhan terhadap Loyalitas Pelanggan Coffe Shop di Kota Medan. *Arus Jurnal Sosial Dan Humaniora (AJSH)*, 4(2), 1–7.
- Siswanto, E., & Aqdam, A. A. (2024). The Impact of E-Commerce and Accounting Information Systems on Entrepreneurial Decision-Making in MSMEs: A Quantitative Study in the Digital Era. *Journal of Management and Informatics*, 3(1), 37–52. <https://jmi.stekom.ac.id/index.php/jmi/article/view/42>
- Supramaniam, S. (2021). Impact of Emotional Intelligence on Organisational Performance: An Analysis in the Malaysian Public Administration. *Administrative Sciences*, 11(76), 1–22.
- Susanti, N., Mahyudin, & Nasution, M. (2025). Bridging the Gap : Evaluating the Daily E-Financial Reporting System at Shopee Express and its Impact on Operational Precision. *Journal of Finance Integration and Business Independence*, 1(2), 15–24. <https://doi.org/10.64276/jofibi.v1i2.42>
- Wang, G., Mansor, Z. D., & Leong, Y. C. (2024). Linking digital leadership and employee digital performance in SMEs in China: The chain-mediating role of high-involvement human resource management practice and employee dynamic capability. *Heliyon*, 10(16), 1–19. <https://doi.org/10.1016/j.heliyon.2024.e36026>
- Wang, G., Zuraina, P., Mansor, D., Yee, P., & Leong, C. (2024). Jo ur f. *Heliyon*, 1(1), 1–19. <https://doi.org/10.1016/j.heliyon.2024.e36026>
- Yennia, E., Junaedia, A. T., & Wijaya, E. (2024). The Impact of Government Accounting Standards Implementation, Internal Control Systems, and Human Resource Competence on Regional Financial Report Quality. *Journal of Applied Business and Technology*, 5(3), 134–145.