

## THE IMPACT OF ONLINE SALES AND QRIS ON UMKM INCOME WITH FINANCIAL LITERACY AS A MEDIATING VARIABLE: A STUDY OF CULINARY UMKMS IN MALANG CITY



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### **ABSTRACT**

*This study aims to examine the impact of online sales and QRIS on the income of UMKMs in Malang City, with financial literacy as a mediating variable. The population of this study includes culinary UMKMs in Malang City, with a sample selected using random sampling from a total of 16,417 culinary UMKMs. The study used a quantitative approach and analyzed the data using PLS-SEM to evaluate the relationships between the variables. The findings indicate that both online sales and QRIS positively influence UMKM income, with financial literacy significantly mediating these relationships. The results suggest that integrating digital tools with financial literacy can enhance the financial performance of UMKMs. However, the study is limited to a specific sector in a single city, and future research could explore the long-term effects of digital tools on UMKM sustainability and evaluate additional factors influencing business performance in the digital economy.*

**Keywords:** *Online Sales; QRIS; Financial Literacy*

**Received :** 13-12-2024

**Revised :** 12-06-2025

**Approved :** 26-06-2025

**Published :** 02-07-2025



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## INTRODUCTION

The Indonesian economy demonstrated positive growth in the first quarter of 2024, with key sectors such as manufacturing, food processing, and trade showing strong performance. Manufacturing grew by 4.1% year-on-year, driven by high domestic demand and value-added processing of local products. The food and beverage sector expanded by 5.9%, bolstered by rising consumer consumption, especially during Ramadan. The trade sector grew by 4.6%, driven by high demand during the festive season, reflecting strong purchasing power and effective government policies (DJPB Kemenkeu RI, 2024a). This economic growth is not only concentrated in Java but is spreading across Indonesia, with regions like Sulawesi and Kalimantan experiencing growth rates of 6.35% and 6.17%, respectively, highlighting the broad-based recovery and economic resilience of the country (DJPB Kemenkeu RI, 2024b).

UMKM (Micro, Small, and Medium Enterprises) play a crucial role in Indonesia's economy, contributing 60.5% to the GDP and providing 97% of the national workforce (Kementrian Koordinator Bidang Perekonomian Republik Indonesia, 2021). Despite this, they face challenges such as limited access to funding, which hampers their growth. The global funding gap for MSMEs in developing countries is estimated at \$5.2 trillion annually (Mapfre, 2023). Indonesia's economy is transitioning to digital platforms, and digital payments like QRIS (Quick Response Code Indonesian Standard) offer a significant opportunity for MSMEs to expand their reach without needing large investments in physical infrastructure.

Online sales have become an essential tool for businesses, offering benefits such as reduced administrative costs, shorter business cycles, and stronger relationships with customers (Pradana, 2016). The rise of e-commerce in Indonesia, driven by a young and tech-savvy population, has made it one of the largest online markets in Southeast Asia (Erlando et al., 2020). Platforms like Shopee dominate the online sales sector, with millions of users relying on these platforms for everything from everyday needs to luxury items (Ahdiat, 2024). For MSMEs, online sales provide an opportunity to reach a broader audience across Indonesia and globally, fostering economic inclusion and business growth (Karyati, 2019).

The adoption of digital payments such as QRIS is also transforming the MSME landscape (Ahdiat, 2024). QRIS allows businesses to accept payments through a unified, efficient digital platform. In 2022, QRIS transactions reached a record 128 million, totaling Rp12.2 trillion, showing its increasing popularity (Hidayat, 2023). Research has shown that QRIS adoption positively impacts MSME income, with studies reporting an increase in daily income by 5-10% for traders using QRIS (Alifia et al., 2024; Sihalo et al., 2020). Additionally, financial literacy plays a key role in ensuring that MSMEs can manage digital tools effectively to enhance profitability (Yusuf, 2022).

Malang City, with its vibrant economic activity, particularly in the culinary sector, is an ideal location for this study. The city recorded a significant economic growth of 6.07% in 2023, and the number of UMKM in Malang grew exponentially, especially in the culinary sector, which accounts for over 56% of the total UMKM (Badan Pusat Statistik Kota Malang, 2024). The increasing adoption of QRIS and online sales platforms in the city offers a unique opportunity to study the relationship between these factors and their impact on UMKM income and financial literacy. By focusing on UMKM kuliner, this research will provide insights into how digital tools and financial literacy contribute to income growth in this key sector of the local economy.

## LITERATURE REVIEW AND HYPOTHESES

### Online Sales

Online sales refer to a system that utilizes the internet to market and sell products or services without physical interaction between buyer and seller (Ahdiat, 2024). This system involves digital platforms like websites, social media, and e-commerce sites, offering convenience and efficiency in transactions through electronic payment methods such as QRIS, e-wallets, and bank transfers (Nurrohman, 2023). It enables businesses, especially MSMEs, to reach wider markets with lower operational costs and provides customers the flexibility to shop anytime, anywhere (Renanda, 2024). This shift to online sales enhances business growth by offering tools like digital catalogs, secure payment systems, and customer reviews (Gao et al., 2023; Madanchian, 2024).

Online sales replace traditional stores with virtual ones, allowing for easier stock management, order processing, and delivery. With features such as secure payment options, analytics, and customer interaction tools, online platforms help MSMEs optimize operations and expand their reach, ultimately improving competitiveness and fostering growth in a global market (ISMAN, 2023; Renanda, 2024).

### QRIS

QRIS (Quick Response Code Indonesian Standard) is a digital payment standard that uses QR codes to facilitate secure, fast, and contactless transactions in Indonesia (Bank Indonesia, 2024). Introduced by Bank Indonesia, QRIS allows easy integration into mobile banking and payment apps, supporting the shift to a cashless society while ensuring security and health protocols (Nurdin et al., 2021; Sahriana & Rokan, 2022). By consolidating various QR codes into one standard, QRIS simplifies payments, reduces counterfeit risks, and offers businesses a streamlined, modern way to process transactions (Silalahi et al., 2022).

QRIS has made significant progress in supporting Indonesia's digital economy. Since its mandatory implementation in January 2020, it has facilitated secure transactions for both large and small businesses. The system provides easier merchant registration, improved financial monitoring, and wider access to digital payments, promoting competition and innovation across sectors (Putri et al., 2022).

### Financial Literacy

Financial literacy refers to understanding financial concepts and the ability to make informed decisions that improve financial well-being (Setiawan, 2024). Poor financial literacy is linked to bad financial behavior, leading to poor decision-making and long-term financial challenges. It empowers individuals to manage finances wisely, improving decision-making and overall economic welfare (Susetyo & Firmansyah, 2023). The OJK defines financial literacy as the knowledge, skills, and confidence to make better financial decisions, and the 2022 survey shows a significant increase in Indonesia's financial literacy index to 49.68% (Otoritas Jasa Keuangan, 2024).

Financial literacy includes understanding financial concepts, managing personal finances, and making sound financial decisions (Santiara & Sinarwati, 2023). It plays a crucial role in helping individuals achieve financial stability and make informed economic choices.

### MSMEs Income

Micro, Small, and Medium Enterprises (UMKM) are vital to Indonesia's economy, classified into Micro (assets  $\leq$  IDR 50 million or sales  $\leq$  IDR 300 million), Small (assets

IDR 50–500 million or sales IDR 300 million–2.5 billion), and Medium (assets IDR 500 million–10 billion or sales IDR 2.5 billion–50 billion) under Law No. 20 of 2008. UMKM stages include Livelihood Activities (informal sectors), Micro Enterprises (craft-focused), Small Dynamic Enterprises (entrepreneurial), and Fast Moving Enterprises (scaling up). UMKM contribute significantly to employment and GDP. Revenue comprises operational income (core business activities) and non-operational income (e.g., interests or royalties). Growth depends on factors like capital and education.

Studies by (Halim, 2020; Laili & Setiawan, 2020) emphasize these factors' role in income and regional economic development. The digital economy has expanded UMKM markets via online platforms like Facebook and Instagram. Government support focuses on fostering resilience, job creation, poverty reduction, and sustainable growth. Strengthening UMKM is key to inclusive economic progress (Sihaloho et al., 2020).

### **Hypotheses**

This study examines how Online Sales, QRIS, and Financial Literacy impact UMKM Income in Malang City. The first two hypotheses explore the direct effects of Online Sales and QRIS on income, while the next two examine their influence on Financial Literacy. The final three hypotheses investigate the mediating role of Financial Literacy, analyzing how it affects the relationship between Online Sales, QRIS, and UMKM Income.

Together, these hypotheses aim to shed light on the digital tools and financial knowledge driving UMKM growth.

*H1: Online Sales have a positive effect on UMKM Income.*

*H2: QRIS has a positive effect on UMKM Income.*

*H3: Online Sales have a positive effect on Financial Literacy.*

*H4: QRIS has a positive effect on Financial Literacy.*

*H5: Financial Literacy has a positive effect on UMKM Income.*

*H6: Online Sales have a positive effect on UMKM Income through Financial Literacy.*

*H7: QRIS has a positive effect on UMKM Income through Financial Literacy.*

### **METHOD**

This study uses a quantitative research method with an associative approach, aiming to examine the causal relationships between variables (Sugiyono, 2013). The scope of the study is focused on analyzing the impact of online sales and QRIS on UMKM income in Malang City, East Java, with financial literacy as an intervening variable. The population consists of 16,417 culinary UMKM in Malang, as reported by the Badan Pusat Statistik Kota Malang (2024). This study employs purposive sampling to identify micro-UMKM in Malang that meet specific inclusion criteria: usage of QRIS for payments, an online storefront on platforms like Shopee Food or GoFood, and micro-enterprise classification (Robinson, 2014). Once this eligible subpopulation is established, random sampling is applied to select the first 100 respondents, integrating the strengths of purposive selection with probabilistic sampling to balance relevance and reduce selection bias (Memon et al., 2024)

Data collection is conducted using a questionnaire distributed to UMKM owners in Malang City. The questionnaire employs a Likert scale to measure responses on a range from "strongly agree" to "strongly disagree." The data collected is both primary (via the questionnaire) and secondary (from sources such as the Malang City Cooperative and UMKM Agency, Central Statistics, and previous research). For data analysis, the study

uses SmartPLS 4 software to apply Partial Least Squares Structural Equation Modeling (PLS-SEM) (Chua, 2022). This method is used to test the relationships between latent variables and their indicators. The analysis includes validity and reliability tests (convergent, discriminant, and composite reliability), and the structural model is evaluated using coefficient determination ( $R^2$ ), predictive relevance ( $Q^2$ ), and F-square to determine the strength of relationships between the variables (Zeng et al., 2021). Hypothesis testing is performed through path coefficients, and mediation effects are tested to assess the role of financial literacy as a mediator between online sales, QRIS, and UMKM income (Wong, 2015).

## RESULTS AND DISCUSSION

### Data Analysis

The data analysis begins with validity and reliability tests to ensure measurement accuracy, using convergent validity, discriminant validity, and composite reliability (Zeng et al., 2021). Next, PLS-SEM is employed to assess the relationships between variables, with  $R^2$  evaluating the model's explanatory power,  $Q^2$  assessing predictive relevance, and F-square measuring the effect size (Zeng et al., 2021). Hypothesis testing is conducted through path coefficients, and significant relationships ( $p < 0.05$ ) support the hypotheses (Hair et al., 2021). Finally, mediation effects are tested by calculating the indirect effect of independent variables on the dependent variable through financial literacy. If the indirect effect is significant, it confirms the mediating role of financial literacy. This process provides a comprehensive analysis of how online sales and QRIS impact UMKM income through financial literacy.

As shown in Table 1, the measurement model was evaluated to confirm that each construct meets the required standards for reliability and validity.

**Table 1**  
**Measurement Model Assessment: Factor Loadings, Reliability, and R-Square Values**

	X1	X2	Y	Z
x1.1	0.906	0.834	0.877	0.862
x1.2	0.826	0.761	0.769	0.796
x1.3	0.902	0.831	0.846	0.901
x1.4	0.908	0.863	0.852	0.874
x1.5	0.877	0.788	0.811	0.833
x2.1	0.875	0.910	0.861	0.876
x2.2	0.596	0.729	0.628	0.634
x2.3	0.860	0.905	0.849	0.875
x2.4	0.796	0.867	0.789	0.808
y1.1	0.781	0.752	0.826	0.765
y1.2	0.647	0.643	0.732	0.665
y1.3	0.814	0.778	0.850	0.813
y1.4	0.867	0.856	0.900	0.886
y1.5	0.796	0.783	0.841	0.797
y1.6	0.818	0.808	0.881	0.826

z1.1	0.850	0.798	0.799	0.874
z1.2	0.947	0.921	0.940	0.965
z1.3	0.842	0.848	0.849	0.904
z1.4	0.923	0.898	0.900	0.946
z1.5	0.914	0.912	0.901	0.946
z1.6	0.876	0.831	0.854	0.908
Cronbach's alpha	0.930	0.876	0.916	0.966
Composite reliability	0.947	0.916	0.935	0.972
AVE	0.782	0.733	0.706	0.855
R-square			0.912	0.949

Source: Data Analyzed, 2024

The data presented in Tabel 1 are the results of an analysis concerning four variables: online sales (X1), QRIS usage (X2), financial literacy (Z), and UMKM income (Y), each measured across multiple sub-indicators labeled from x1.1 to z1.6. The values for each indicator reflect the degree of association between these variables. For example, the values for online sales (X1) range from 0.826 for the sub-indicator x1.2 to 0.908 for x1.4, indicating variability in the relationships between online sales and other factors across the measurement points. Similarly, the values for QRIS usage (X2) vary between 0.596 for x2.2 and 0.910 for x2.1, demonstrating fluctuations in the influence of QRIS on the other variables.

Additionally, the values for the financial literacy (Z) variable exhibit a higher level of consistency, ranging from 0.647 for z1.2 to 0.900 for z1.4. This suggests that financial literacy has a relatively stable effect across different measurements. On the other hand, the UMKM income (Y) variable consistently shows higher values, such as 0.947 for y1.2 and 0.946 for y1.4, indicating that financial literacy may have a significant impact on income generation for UMKM, particularly in relation to online sales and QRIS adoption.

In addition to the individual indicator values, the study incorporates various reliability measures. Cronbach's alpha, used to assess internal consistency across the variables, reveals very high values for each variable tested. For instance, X1 (online sales) has a Cronbach's alpha of 0.930, which suggests excellent internal consistency (Nunnally, 1994). A Cronbach's alpha value above 0.70 is generally considered indicative of good reliability, reinforcing that the data collected is trustworthy and suitable for further analysis. Similarly, the Composite Reliability values, which exceed 0.9 for all variables, further confirm the consistency of the indicators used to measure these variables (Fornell & Larcker, 1981).

Furthermore, the Average Variance Extracted (AVE) values for all variables are greater than 0.5, indicating that more than half of the variance in each variable is explained by the indicators used to measure it. For example, the AVE for online sales (X1) is 0.782, suggesting that the majority of the variance in online sales can be attributed to the indicators. This adds further support to the validity of the measurement model. Lastly, the R-squared values of 0.912 for UMKM income (Y) and 0.949 for financial literacy (Z) demonstrate that the model explains 91.2% and 94.9% of the variance in these dependent variables, respectively, underscoring the robustness of the model in explaining these factors.



Based on these findings, it can be concluded that the high reliability and validity measurements for all involved variables provide a strong foundation for testing the relationships between online sales, QRIS usage, financial literacy, and UMKM income. These results suggest that the model constructed in this study is robust and well-suited for further analysis and application.

Table 2 summarizes the results of hypothesis testing through path coefficients, including t-statistics and p-values, to evaluate the significance of both direct and indirect relationships among variables.

**Table 2**  
**Path Coefficients, T-Statistics, and P-Values for Hypothesis Testing**

	Original sample	Sample mean	Standard deviation	T statistics	P values
X1 -> Y	0.345	0.351	0.124	2777	0.006
X1 -> Z	0.662	0.659	0.069	9554	0.000
X2 -> Y	0.218	0.232	0.093	2347	0.019
X2 -> Z	0.329	0.333	0.072	4598	0.000
Z -> Y	0.408	0.390	0.142	2883	0.004
X1 -> Z -> Y	0.270	0.260	0.104	2606	0.009
X2 -> Z -> Y	0.135	0.127	0.050	2706	0.007

Source: Data Analyzed, 2024

The Table 2 presents the results of the path analysis, showing the relationships between the key variables in the study: online sales (X1), QRIS usage (X2), financial literacy (Z), and UMKM income (Y). These relationships are assessed through path coefficients, T-statistics, and P-values to determine the strength and significance of each relationship.

The path from online sales (X1) to UMKM income (Y) has a coefficient of 0.345, with a T-statistic of 2777 and a P-value of 0.006. This indicates a significant positive effect of online sales on UMKM income, suggesting that higher online sales contribute to increased income for UMKM. The result is statistically significant since the P-value is well below the conventional threshold of 0.05.

The relationship between online sales (X1) and financial literacy (Z) shows a higher path coefficient of 0.662, with a T-statistic of 9554 and a P-value of 0.000. This strong and highly significant path suggests that increased online sales are associated with higher financial literacy among UMKM owners. The very low P-value supports the conclusion that this relationship is robust.

The path from QRIS usage (X2) to UMKM income (Y) has a coefficient of 0.218, with a T-statistic of 2347 and a P-value of 0.019. Although it is a positive relationship, the effect of QRIS usage on UMKM income is weaker compared to online sales. However, the result remains statistically significant, indicating that QRIS usage does play a role in influencing UMKM income.

The QRIS usage (X2) to financial literacy (Z) relationship yields a coefficient of 0.329, a T-statistic of 4598, and a P-value of 0.000. This strong relationship highlights the importance of QRIS in enhancing financial literacy, which is statistically significant given the very low P-value.

The path from financial literacy (Z) to UMKM income (Y) shows a coefficient of 0.408, with a T-statistic of 2883 and a P-value of 0.004. This indicates that financial literacy has a moderate but significant positive effect on UMKM income, suggesting that better financial understanding leads to higher income generation for UMKM.

The indirect effect of online sales (X1) on UMKM income (Y) through financial literacy (Z) is also significant, with a path coefficient of 0.270, a T-statistic of 2606, and a P-value of 0.009. This indicates that financial literacy mediates the relationship between online sales and UMKM income, further reinforcing the role of financial knowledge in maximizing the benefits of online sales for UMKM income.

Similarly, the indirect effect of QRIS usage (X2) on UMKM income (Y) through financial literacy (Z) is positive, with a coefficient of 0.135, a T-statistic of 2706, and a P-value of 0.007. This suggests that financial literacy also mediates the relationship between QRIS usage and UMKM income, albeit the effect is weaker compared to the online sales pathway.

These findings collectively suggest that both online sales (X1) and QRIS usage (X2) positively influence UMKM income (Y), both directly and indirectly through financial literacy (Z). The analysis underscores the importance of financial literacy in optimizing the impacts of online sales and QRIS usage on the income of UMKM, with both relationships being statistically significant and supported by the provided coefficients, T-statistics, and P-values.

## Discussion

Hypothesis 1 in this study asserts that online sales (X1) have a positive and significant effect on UMKM income (Y). The path analysis confirms this hypothesis with a path coefficient of 0.345, a T-statistic of 2777, and a P-value of 0.006, demonstrating a significant relationship. This finding aligns with several studies. Sutejo et al., (2022) found that e-commerce positively influenced MSME income during the COVID-19 pandemic, confirming the value of online platforms in driving revenue growth. Similarly, Puspika & Purnomo (2023) reported that online transactions positively impacted MSME income in Jakarta, while Mandasari & Pratama (2020) highlighted that MSMEs using e-commerce platforms experienced income increases in Bali. Prawira & Dewi (2019) and Lubis & Rahman (2024) also supported the role of online sales in boosting MSME income, especially during challenging periods.

Hypothesis 2 in this study posits that QRIS usage (X2) has a positive and significant effect on UMKM income (Y). The path analysis supports this claim, with a path coefficient of 0.218, a T-statistic of 2347, and a P-value of 0.019, indicating the substantial role of QRIS in boosting UMKM income. Research corroborates these findings. Fauziah et al. (2024) observed that QRIS usage significantly increased MSME income by facilitating quicker, more secure, and more diverse payment options. Fatmawati et al. (2024) similarly reported that QRIS adoption was linked to income growth through improved transaction efficiency and customer satisfaction. Papalia et al. (2023) found QRIS helped expand customer reach, thereby increasing sales revenue for MSMEs in Purwokerto. Rahman et al. (2023) noted a positive effect of QRIS on MSME profitability in Medan City, emphasizing its role in promoting financial accessibility.

Hypothesis 3 suggests that online sales (X1) positively impact financial literacy (Z). The analysis supports this, with a path coefficient of 0.662 and a significant P-value of 0.000, indicating a strong relationship. Studies also back this finding. Sari et al. (2023) found that online business models in MSMEs in East Java improved financial literacy, particularly in financial management and digital payments. Angeles (2022) highlighted



that MSME owners engaging in online sales exhibited better financial literacy, supporting the role of digital sales in fostering financial knowledge. Similarly, Irikefe & Opusunju, (2021) noted that financial literacy facilitated by online sales contributed to MSME growth. These studies confirm that online sales enhance financial literacy, particularly in managing finances and adopting digital tools.

For Hypothesis 4, which posits that QRIS usage (X2) positively affects financial literacy (Z), the path analysis confirms a strong relationship, with a path coefficient of 0.329, a T-statistic of 4598, and a P-value of 0.000, indicating significant impact. Supporting studies align with this result. Putri et al. (2023) found that QRIS adoption improved financial literacy among MSME owners in South Denpasar, promoting better financial decision-making. Hamdan et al. (2024) highlighted that QRIS usage enhanced financial literacy and management in MSMEs, improving financial performance. Octavianingrum et al. (2023) further showed that higher financial literacy led to increased QRIS adoption, confirming that QRIS fosters better financial knowledge.

For Hypothesis 5, which suggests that financial literacy (Z) positively influences UMKM income (Y), the analysis indicates a clear and significant relationship. With a path coefficient of 0.408, a T-statistic of 2883, and a P-value of 0.004, the findings confirm that financial literacy plays an important role in enhancing UMKM income. Supporting research strengthens this conclusion. Nugraha et al. (2020) explored how financial literacy impacts financial satisfaction, demonstrating that improved financial literacy leads to better income and overall performance in MSMEs. In a similar vein, Nugroho et al. (2023) showed that financial literacy directly impacts MSME income, especially in the context of the financial strain caused by the COVID-19 pandemic. Additionally, Suryawan et al. (2024) found that financial literacy significantly contributes to MSME income by improving financial management and decision-making.

For Hypothesis 6, which asserts that online sales (X1) affect UMKM income (Y) through financial literacy (Z), the analysis supports this indirect effect with a path coefficient of 0.270, a T-statistic of 2606, and a P-value of 0.009, confirming that financial literacy mediates the relationship between online sales and UMKM income. Supporting studies also confirm this result. Sari et al (2023) showed that financial literacy plays a crucial role in translating the benefits of online sales into increased income, as it helps MSME owners better manage their finances and investments. Suryawan et al (2024) found that financial literacy facilitated by online business activities led to better financial decision-making, which directly impacted revenue growth in MSMEs. Lastly, Kartikasari et al (2023) showed that financial literacy, alongside digital payments, enabled MSMEs to make more informed financial decisions, leading to increased sales and profitability.

For Hypothesis 7, which asserts that QRIS usage (X2) positively influences UMKM income (Y) through financial literacy (Z), the analysis confirms this indirect effect with a path coefficient of 0.135, a T-statistic of 2706, and a P-value of 0.007, suggesting that financial literacy mediates the relationship between QRIS usage and income generation for MSMEs. Supporting studies reinforce this finding. Hamdan et al (2024) examined the relationship between QRIS usage and MSME income, showing that financial literacy played a crucial role in improving financial management and performance, thus increasing income. Papalia et al (2023) found that QRIS adoption positively affected sales profits, and financial literacy further enhanced the impact on MSME income. Additionally, Nainggolan et al (2023) highlighted that financial literacy mediates the effectiveness of QRIS in increasing MSME income by enabling better financial decision-making.

## CONCLUSION AND SUGGESTION

This study investigates the impact of online sales and QRIS on the income of UMKMs in Malang City, with financial literacy serving as a mediating variable. The findings indicate that both online sales and QRIS positively influence UMKM income, suggesting that digital tools significantly enhance business revenue. Furthermore, the results highlight the important role of financial literacy as a mediator, demonstrating that it strengthens the relationship between these digital platforms and income growth. Financial literacy helps UMKM owners manage their finances more effectively, thereby improving overall business performance.

This study contributes to understanding how digital tools and financial knowledge can work together to boost the financial outcomes of small businesses, particularly in emerging markets like Indonesia. In terms of future research, it would be valuable to explore how other factors, such as digital marketing strategies or government policies supporting UMKMs, further interact with online sales and QRIS in influencing business performance. Additionally, investigating the long-term impact of these digital tools on the financial sustainability of UMKMs could provide deeper insights into how businesses can better prepare for future challenges in an increasingly digital economy.

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