TRANSACTION EFFICIENCY AS A MEDIATOR IN THE RELATIONSHIP BETWEEN QRIS ADOPTION AND MSME PROFITABILITY: EVIDENCE FROM TRADING MSMEs IN PALANGKA RAYA

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KEMENTERIAN PENDIDIKAN TINGGI, SAINS, DAN TEKNOLOGI
UNIVERSITAS PALANGKARAYA
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LEMBAR PERSETUJUAN

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TRANSACTION EFFICIENCY AS A MEDIATOR IN THE RELATIONSHIP BETWEEN QRIS ADOPTION AND MSME PROFITABILITY: EVIDENCE FROM TRADING MSMES IN PALANGKA RAYA

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KATA PENGANTAR

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Artikel ilmiah ini disusun dan dipublikasikan sebagai bagian dari luaran akademik serta bukti nyata kontribusi ilmiah penulis guna meraih gelar Sarjana Manajemen pada Jurusan Manajemen, Fakultas Ekonomi dan Bisnis, Universitas Palangka Raya. Penelitian ini memfokuskan kajiannya pada peran krusial efisiensi transaksi sebagai variabel mediasi yang menghubungkan antara adopsi sistem pembayaran digital (QRIS) dengan peningkatan profitabilitas pelaku UMKM sektor perdagangan di Palangka Raya. Penulis berharap tulisan ini mampu menyajikan referensi akademis yang kokoh serta rekomendasi strategis, konkret, dan aplikatif bagi akselerasi transformasi digital serta penguatan manajemen keuangan pelaku usaha lokal.

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Transaction Efficiency as a Mediator in the Relationship between QRIS Adoption and MSME Profitability: Evidence from Trading MSMEs in Palangka Raya

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Abstract

This study aims to examine the effect of Quick Response Code Indonesian Standard (QRIS) adoption on the profitability of trading micro, small, and medium enterprises (MSMEs) in Palangka Raya City, with transaction efficiency positioned as a mediating variable, given the persistent gap between the rapid growth of QRIS merchants and the uncertain financial benefit felt by traders who bear the Merchant Discount Rate (MDR) cost. A quantitative associative-causal design was employed using a questionnaire survey distributed to 100 trading MSME respondents selected through purposive sampling across Jekan Raya, Pahandut, and Sebangau Districts, and the data were analyzed using Structural Equation Modeling based on Partial Least Squares (SEM-PLS) with SmartPLS 4.0. The measurement model met all validity and reliability criteria, and bootstrapping results show that QRIS adoption has a positive and significant effect on transaction efficiency and on profitability; transaction efficiency significantly affects profitability; and transaction efficiency partially and complementarily mediates the QRIS-profitability relationship, with all four hypotheses supported at the 95% confidence level. These findings imply that the profitability gain from QRIS is not automatic; it is optimized when MSME actors actively use QRIS features to build genuine operational efficiency, so that policy support should shift from merely expanding merchant registration toward strengthening MSME capacity to utilize digital cash-management features.

Keywords: *QRIS Adoption, Transaction Efficiency, MSME Profitability.*

Abstrak

Penelitian ini bertujuan untuk menganalisis pengaruh adopsi Quick Response Code Indonesian Standard (QRIS) terhadap profitabilitas Usaha Mikro, Kecil, dan Menengah (UMKM) sektor perdagangan di Kota Palangka Raya, dengan efisiensi transaksi diposisikan sebagai variabel mediasi, mengingat masih terdapat kesenjangan antara pesatnya pertumbuhan jumlah merchant QRIS dan manfaat finansial yang belum sepenuhnya dirasakan pedagang akibat beban biaya Merchant Discount Rate (MDR). Penelitian menggunakan pendekatan kuantitatif asosiatif kausal dengan metode survei melalui kuesioner kepada 100 responden UMKM perdagangan yang dipilih secara purposive sampling di Kecamatan Jekan Raya, Pahandut, dan Sebangau, dan data dianalisis menggunakan Structural Equation Modeling berbasis Partial Least Square (SEM-PLS) dengan SmartPLS 4.0. Model pengukuran memenuhi seluruh kriteria validitas dan reliabilitas, dan hasil bootstrapping menunjukkan bahwa adopsi QRIS berpengaruh positif dan signifikan terhadap efisiensi transaksi maupun profitabilitas, efisiensi transaksi berpengaruh positif dan signifikan terhadap profitabilitas, serta efisiensi transaksi memediasi hubungan adopsi QRIS dan profitabilitas secara parsial dan komplementer, sehingga keempat hipotesis penelitian terdukung pada tingkat kepercayaan 95%. Temuan ini mengimplikasikan bahwa manfaat profitabilitas dari QRIS tidak bersifat otomatis, melainkan optimal ketika pelaku UMKM secara aktif memanfaatkan

Kata Kunci: Adopsi QRIS, Efisiensi Transaksi, Profitabilitas UMKM.

fitur QRIS untuk menciptakan efisiensi operasional yang nyata, sehingga dukungan kebijakan perlu bergeser dari sekadar perluasan pendaftaran merchant menuju penguatan kapasitas UMKM dalam mengoptimalkan fitur manajemen kas digital.

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) serve as a pillar of national economic stability, demonstrating high resilience against global economic shocks. In the digital economy era, business sustainability increasingly depends on the ability of business owners to adapt to efficient digital payment systems that support ongoing business performance. Various empirical studies confirm a positive relationship between the adoption of financial technology and MSME performance (Zikrillah & Sartika, 2024), Meanwhile, perceptions of the benefits and ease of use of financial technology have proven to be key drivers of MSMEs' interest in adopting digital payment systems (Setyo & Ramadani, 2022).

A key accelerator of this transformation is the Quick Response Code Indonesian Standard (QRIS), developed by Bank Indonesia since 2019 under the Indonesia Payment System Blueprint 2025 (Bank Indonesia, 2019) to establish an inclusive, secure, and efficient payment system. Data from Bank Indonesia (2025) indicates that the number of QRIS merchants in Central Kalimantan reached 381,262 in October 2025; Palangka Raya City recorded the highest adoption rate in the province with 72,981 merchants—a more than fivefold increase since 2021, driven by the local government's "Smart Economy" mission (Bappedalitbang Palangka Raya City, 2021). The highest concentration of MSMEs in the trade sector is found in Jekan Raya District, which accounts for 10,254 businesses—approximately 43.3% of the 23,683 businesses operating in the hotel, trade, and restaurant sectors across Palangka Raya City (BPS Palangka Raya City, 2026).

This rapid adoption raises critical questions regarding its actual impact on merchant profitability. Preliminary research conducted in Jekan Raya District revealed that MSME operators still express concerns regarding the Merchant Discount Rate (MDR) of 0.3%–0.7%, even though Bank Indonesia Regulation No. 23/6/PBI/2021 strictly prohibits merchants from passing this cost on to consumers. This situation places MSMEs with thin profit margins in a dilemma; consequently, the financial benefits of QRIS cannot be realized through price increases but must instead be sought through transaction efficiencies—such as savings on cash

management, faster service, and the accuracy of automated record-keeping. This phenomenon suggests that the efficiencies offered by payment digitalization do not necessarily translate automatically into significant profitability gains for small business operators.

This study is grounded in the Resource-Based View (RBV) as its grand theory. According to Barney (1991), a company's financial success depends on its ability to manage valuable and unique strategic resources. In this context, the adoption of QRIS is viewed as a digital asset capable of creating a competitive advantage for MSMEs. However, merely possessing the technology does not guarantee profitability. Based on the Transaction Cost Theory (TCT) introduced by Williamson (2008), Economic value arises when technology reduces transaction friction costs; consequently, transaction efficiency serves as a mediating variable, allowing QRIS to transcend being merely a cost burden and instead translate into profitability through operational time savings and accurate cash recording. The behavioral aspect of technology adoption by merchants is explained via the Technology Acceptance Model (TAM), which posits that adoption is determined by perceived ease of use and perceived usefulness (Purwatiningsih et al., 2025).

Numerous previous studies have confirmed a positive relationship between the adoption of QRIS/fintech and the performance of MSMEs. Elmahdy et al. (2025) found that operational efficiency is the main driver of profits in the adoption of financial technology, while Utami (2025) demonstrates that digital financial inclusion through QRIS is positively correlated with MSME profitability. Tur & Sartika (Tur & Sartika, 2025) indicates that the ease of payment transactions mediates the relationship between financial technology and the financial performance of MSMEs, consistent with the findings Latifah & Waluya (2023) regarding the mediating role of transaction convenience in Sharia fintech. However, research specifically examining the mediating role of transaction efficiency between QRIS adoption and the profitability of MSMEs in the trade sector in Palangka Raya City remains very limited; thus, this study is strategically positioned to fill that research gap.

Other references further enrich the understanding of the mechanisms by which fintech influences MSME performance. Astari & Candraningrat (2022) found that

fintech influences the financial performance of MSMEs, with financial literacy as a moderating variable, while Dali et al. (2023) indicate that payment gateways and e-money improve MSME financial performance by accelerating record-keeping and reducing transaction errors. Nugraha et al. (2022) add that the drive for innovation is a key factor propelling fintech adoption among MSMEs in Indonesia. These findings consistently confirm a positive relationship between digital payment technology adoption and MSME performance; however, the intervening mechanism explaining how this influence unfolds remains an area requiring deeper investigation, particularly regarding MSMEs in the trade sector within developing cities like Palangka Raya.

This study offers novelty in three aspects. First, from a theoretical standpoint, it integrates three major theories—the Resource-Based View, the Technology Acceptance Model, and Transaction Cost Theory—into a cohesive causal model. This approach explains the mechanism by which technology adoption translates into profitability, moving beyond the direct relationship testing common in previous studies. Second, methodologically, the study employs a Structural Equation Modeling-Partial Least Squares (SEM-PLS) approach featuring a rigorous two-stage pilot test, ensuring the research instrument is empirically validated before application to the main dataset. Third, contextually, the study focuses on trade-sector MSMEs in the area with the highest density of QRIS adoption in Central Kalimantan—a specific context that has received limited attention in the literature regarding transaction efficiency mediation in the digitalization of Indonesian MSMEs.

Based on this background, the study aims to analyze the impact of Quick Response Code Indonesian Standard (QRIS) adoption on transaction efficiency among trade-sector MSMEs in Palangka Raya, examine the effect of transaction efficiency on MSME profitability, and assess the direct influence of QRIS adoption on profitability. Furthermore, the study investigates the role of transaction efficiency as a mediating variable in the relationship between QRIS adoption and MSME profitability. The findings are expected to provide practical insights for MSME operators on optimizing QRIS as a digital payment tool to enhance operational efficiency and business profitability. Furthermore, the findings of this study are expected to provide valuable input for Bank Indonesia and local governments in

formulating more effective policies, educational programs, and digitalization incentives to accelerate the digital transformation of MSMEs. From an academic perspective, this study is expected to enrich the literature on digital financial technology adoption by elucidating the mediating role of transaction efficiency in the relationship between QRIS implementation and increased MSME profitability.

METHOD

This study employs a quantitative method with a causal-associative design to examine the cause-and-effect relationships between variables. Primary data were collected from MSME operators via questionnaires distributed both directly (door-to-door) and through Google Forms, while secondary data were obtained from Bank Indonesia and Statistics Indonesia (BPS) publications to reinforce the validity of field findings through data triangulation (Suryono et al., 2020).

The study population consists of all MSME operators in the trade sector in Palangka Raya City who use QRIS. The sample size was set at 100 respondents using the purposive sampling technique. The determination of the sample size was not based solely on recommendations Hair's et al. (2019), but also considers several approaches within SEM-PLS. Based on the inverse square root method developed by Kock and Hadaya (2018), The minimum sample size is calculated based on the maximum number of structural paths leading to an endogenous construct. In this research model, there are two paths leading to the profitability variable (QRIS Adoption and Transaction Efficiency); consequently, the minimum sample requirement is well below 100 respondents. Furthermore, based on minimum sample requirements for a PLS-SEM model—assuming a 5% significance level, 0.80 statistical power, and a minimum effect size in the medium category—a sample of 100 respondents satisfies the criteria, thereby enabling stable parameter estimation and adequate statistical power.

Operational Definitions and Variable Measurement

This study involves three latent variables measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). QRIS Adoption is operationalized through five dimensions, namely perceived ease of use, perceived usefulness, system reliability, supporting features, and continuance intention. Each

dimension is measured by two statement items, resulting in a total of ten measurement items (X1.1–X5.2).

Transaction Efficiency is measured using five dimensions, namely time efficiency, elimination of small change, nominal accuracy, ease of reconciliation, and risk mitigation. Each dimension consists of two statement items, resulting in ten indicators (M1.1–M5.2). MSME Profitability is measured through five dimensions consisting of sales volume, revenue growth, cost efficiency, net profit, and customer expansion. Each dimension is represented by two statement items, resulting in ten indicators (Y1.1–Y5.2). Accordingly, the research instrument comprises 30 statement items across the three latent constructs. Table 1 presents the dimensions and representative questionnaire statements, while the complete list of items is provided in the appendix or supplementary material.

Table 1. Operational Definition of Variables

Variable	Code	Sample Questionnaire Items
QRIS Adoption	X1	QRIS is easy to use in my business transactions.
	X2	QRIS accelerates the customer payment process.
	X3	I intend to continue using QRIS in my business.
Transaction Efficiency	M1	The use of QRIS reduces transaction processing time.
	M2	QRIS reduces errors in payment calculations.
	M3	QRIS simplifies the recording of daily transactions.
Profitability of MSMEs	Y1	Using QRIS has increased my business turnover.
	Y2	Business operating costs become more efficient.
	Y3	Operating profit increased after using QRIS.

Source: Data processed by the researcher (2026).
Note: Each indicator dimension consists of one to two statement items. Therefore, the questionnaire instrument comprises 30 measurement items in total (10 items for QRIS Adoption, 10 items for Transaction Efficiency, and 10 items for MSME Profitability).

Data Collection Technique

The questionnaire served as the primary instrument, developed based on theoretical indicators synthesized from RBV, TCT, and TAM. Before the main data collection, the instrument underwent a pilot test with 30 MSME operators to ensure that the statements were unambiguous and easily understood by respondents. In addition to questionnaire distribution, this study employed non-participatory observation as a supporting technique. The researcher conducted direct observations at each business location during the data collection process. Observed aspects included the presence of an active QRIS, the intensity of QRIS usage in daily transactions, customer payment processes, transaction completion times, and transaction recording mechanisms. Observation results were recorded using a structured observation sheet and served as a basis for triangulation to verify the consistency between respondents' answers and actual conditions in the field. While the observational findings were not statistically analyzed, they were utilized to support the interpretation of research results and enhance data validity.

Model Equation

The research structural model consists of two equations as follows:

Equation 1

$$\mathrm{TE} = \beta_1(\mathrm{QA}) + \varepsilon_1 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Description:
TE = Transaction Efficiency
QA = QRIS Adoption

Equation 2

$$\mathrm{MP} = \beta_2(\mathrm{QA}) + \beta_3(\mathrm{TE}) + \varepsilon_2 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Description:
MP = MSME Profitability
QA = QRIS Adoption
TE = Transaction Efficiency

The indirect effect is calculated by multiplying the path coefficients $\beta_1 \times \beta_3$, whereas the total effect is the sum of the direct effect (β_2) and the indirect effect. The significance of the mediation effect is tested using a bootstrapping procedure with 5,000 subsamples in SmartPLS 4.0.

Data Analysis Techniques

The data were analyzed using Partial Least Squares Structural Equation Modeling (SEM-PLS) with SmartPLS 4.0 software, selected for its capability to handle complex models involving latent variables and its effectiveness with relatively small sample sizes. Before the main data collection, the questionnaire underwent a pilot test with 30 respondents. The pilot test results identified 15 items requiring editorial revision due to outer loading values below the recommended threshold (Hair et al., 2019). After revision, the final questionnaire was distributed to the main sample of 100 respondents. The outer model analysis encompasses tests for convergent validity (outer loading ≥ 0.70 and Average Variance Extracted/AVE > 0.50), discriminant validity via the Heterotrait-Monotrait Ratio (HTMT < 0.90) and cross-loading, as well as reliability via Cronbach's Alpha and Composite Reliability (≥ 0.70). The inner model analysis includes a test for multicollinearity using the Variance Inflation Factor (VIF < 3.3) and bootstrapping with 5,000 subsamples (Tama et al., 2023). To determine path significance (t-value ≥ 1.96; p-value < 0.05), the mediation effect test (via a comparison of direct and indirect effects), effect size test (f-square), and coefficient of determination test (R-square) are conducted based on established criteria.

RESULTS AND DISCUSSION

Results

Overview of the Research Subject

This study focuses on MSMEs in the trade sector of Palangka Raya City that have adopted QRIS as a digital payment system. The trade sector was selected due to its high volume of daily transactions, making it relevant for measuring the tangible and quantifiable impact of transaction efficiency on business profitability. Although Palangka Raya City covers a vast area, economic activity and the trade sector are heavily concentrated in the Jekan Raya and Pahandut districts, which account for over 80% of the city's total MSMEs (BPS Palangka Raya City, 2026). The high concentration of trade-based MSMEs in these two districts is driven by their status as higher education hubs in Central Kalimantan; this creates a market ecosystem dominated by Generation Z consumers—who are digital natives—thereby encouraging MSMEs to align their services with the cashless payment preferences of

the younger generation. Meanwhile, the Sebangau district shows a positive trend in QRIS adoption, particularly among MSMEs in tourism areas, whereas the Bukit Batu district continues to face internet network infrastructure limitations that hinder the digitalization of the local economy.

Respondent Characteristics

Data collection involved 100 respondents—MSME owners in the trade sector—who met all purposive sampling criteria. The largest concentration of respondents was in Jekan Raya District (60%), followed by Pahandut (30%) and Sebangau (10%), in accordance with the planned sample allocation. By business sector, the culinary segment dominated the respondent profile (89%), followed by grocery stores (6%), fashion (3%), and other sectors (2%), reflecting the characteristics of the MSME ecosystem surrounding campus areas and densely populated residential zones. The majority of respondents (87%) had been in operation for over three years, and 96% had used QRIS for more than a year, ensuring they possessed sufficient experience to objectively assess the impact of QRIS adoption. Most respondents (81%) conducted between 10 and 30 QRIS transactions daily, confirming that QRIS has become a primary payment instrument—rather than merely a supplementary tool—in the daily operations of trade-sector MSMEs in Palangka Raya City.

Measurement Model Evaluation (Outer Model)

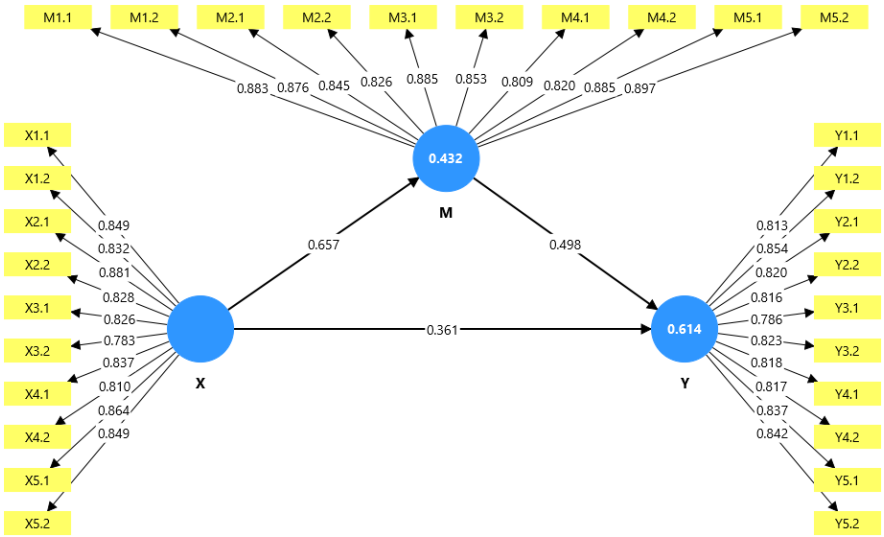

Figure 1. Outer Model Diagram (Outer Loading Values)

The evaluation of the measurement model using the primary data (n=100)

indicates that all 30 indicators across the three constructs meet the criteria for convergent validity, with outer loading values ranging from 0.783 to 0.897 (details in Table 2)—well above the minimum threshold of 0.70 (Hair et al., 2019). The Average Variance Extracted (AVE) values for all three constructs also exceed 0.50.

Table 2. Final Model Outer Loadings (n=100)

Construct	Code	Outer Loading	Note
QRIS Adoption (QA)	X1.1	0,849	Valid
	X1.2	0,832	Valid
	X2.1	0,881	Valid
	X2.2	0,828	Valid
	X3.1	0,826	Valid
	X3.2	0,783	Valid
	X4.1	0,837	Valid
	X4.2	0,810	Valid
	X5.1	0,864	Valid
	X5.2	0,849	Valid
Transaction Efficiency (TE)	M1.1	0,883	Valid
	M1.2	0,876	Valid
	M2.1	0,845	Valid
	M2.2	0,826	Valid
	M3.1	0,885	Valid
	M3.2	0,853	Valid
	M4.1	0,809	Valid
	M4.2	0,820	Valid
	M5.1	0,885	Valid
	M5.2	0,897	Valid
MSME Profitability (MP)	Y1.1	0,813	Valid
	Y1.2	0,854	Valid
	Y2.1	0,820	Valid
	Y2.2	0,816	Valid
	Y3.1	0,786	Valid
	Y3.2	0,823	Valid
	Y4.1	0,818	Valid
	Y4.2	0,817	Valid
	Y5.1	0,837	Valid
	Y5.2	0,842	Valid

Source: SmartPLS 4 output, data processed by the researcher (2026). Reference value for outer loading ≥ 0.70 (Hair et al., 2019).

Table 2 shows that all indicators for the QRIS Adoption, Transaction Efficiency, and MSME Profitability constructs have outer loading values above the minimum threshold of 0.70. These results indicate that all indicators meet the criteria for convergent validity and are suitable for retention in the measurement model. The highest outer loading values are observed for indicators M5.2 and X2.1, demonstrating that these two indicators make the strongest contribution to representing the constructs being measured.

Table 3. Construct Reliability and Validity

Construct	Cronbach's Alpha	Composite Reliability	AVE	Keterangan
QRIS Adoption (QA)	0,952	0,959	0,699	Valid & Reliabel
Transaction Efficiency (TE)	0,960	0,965	0,737	Valid & Reliabel
MSME Profitability (MP)	0,947	0,954	0,677	Valid & Reliabel

Source: SmartPLS 4 output, data processed by the researcher (2026). Reference values: Cronbach's Alpha & CR ≥ 0.70; AVE > 0.50.

All Cronbach's Alpha (0.947–0.960) and Composite Reliability (0.954–0.965) values are well above the minimum threshold, indicating very high internal consistency of the instrument. Discriminant validity was assessed using the Heterotrait-Monotrait Ratio (HTMT) as presented in Table 4; all values (0.682–0.766) fell below the 0.90 threshold (Henseler et al., 2015), reinforced by the cross-loading pattern, which consistently shows the highest loadings on the respective constructs across all 30 indicators, as presented in Table 5. The constructs are empirically demonstrated to be unique and distinct from one another, allowing the analysis to proceed to the structural model stage.

Table 4. Heterotrait-Monotrait Ratio (HTMT)

Construct	QRIS Adoption (QA)	Transaction Efficiency (TE)	MSME Profitability (MP)
QRIS Adoption (QA)	—		
Transaction Efficiency (TE)	0,682	—	
MSME Profitability (MP)	0,715	0,766	—

Source: SmartPLS 4 output, data processed by the researcher (2026). Reference value: HTMT < 0.90.

Table 4 shows that all HTMT values between construct pairs (0.682–0.766) are below the 0.90 threshold (Henseler et al., 2015), demonstrating that the three research constructs—QRIS adoption, transaction efficiency, and MSME profitability—are empirically distinct and that there is no measurement overlap between them.

Table 5. Cross Loadings Indicator

Code	QRIS Adoption (QA)	Transaction Efficiency (TE)	MSME Profitability (MP)
X1.1	**0,849**	0,546	0,620
X1.2	**0,832**	0,536	0,520
X2.1	**0,881**	0,631	0,642
X2.2	**0,828**	0,506	0,442
X3.1	**0,826**	0,538	0,548
X3.2	**0,783**	0,504	0,559
X4.1	**0,837**	0,611	0,631

X4.2	**0,810**	0,492	0,605
X5.1	**0,864**	0,574	0,619
X5.2	**0,849**	0,529	0,526
M1.1	0,572	**0,883**	0,663
M1.2	0,601	**0,876**	0,639
M2.1	0,544	**0,845**	0,528
M2.2	0,620	**0,826**	0,657
M3.1	0,619	**0,885**	0,603
M3.2	0,539	**0,853**	0,663
M4.1	0,468	**0,809**	0,607
M4.2	0,503	**0,820**	0,644
M5.1	0,579	**0,885**	0,616
M5.2	0,578	**0,897**	0,673
Y1.1	0,593	0,591	**0,813**
Y1.2	0,641	0,722	**0,854**
Y2.1	0,651	0,616	**0,820**
Y2.2	0,464	0,615	**0,816**
Y3.1	0,540	0,553	**0,786**
Y3.2	0,538	0,580	**0,823**
Y4.1	0,591	0,556	**0,818**
Y4.2	0,453	0,572	**0,817**
Y5.1	0,593	0,651	**0,837**
Y5.2	0,561	0,561	**0,842**

Source: SmartPLS 4 output, data processed by the researcher (2026). Bold figures indicate the highest loadings on the respective constructs (dominant diagonal).

Table 5 confirms that all indicators consistently exhibit the highest loading values on their respective constructs compared to other constructs; thus, the discriminant validity of this research model is fully satisfied. Consequently, the three constructs—QRIS Adoption, Transaction Efficiency, and MSME Profitability—are empirically proven to be unique and distinct from one another, allowing the analysis to proceed to the structural model stage.

Structural Model Evaluation (Inner Model) and Hypothesis Testing

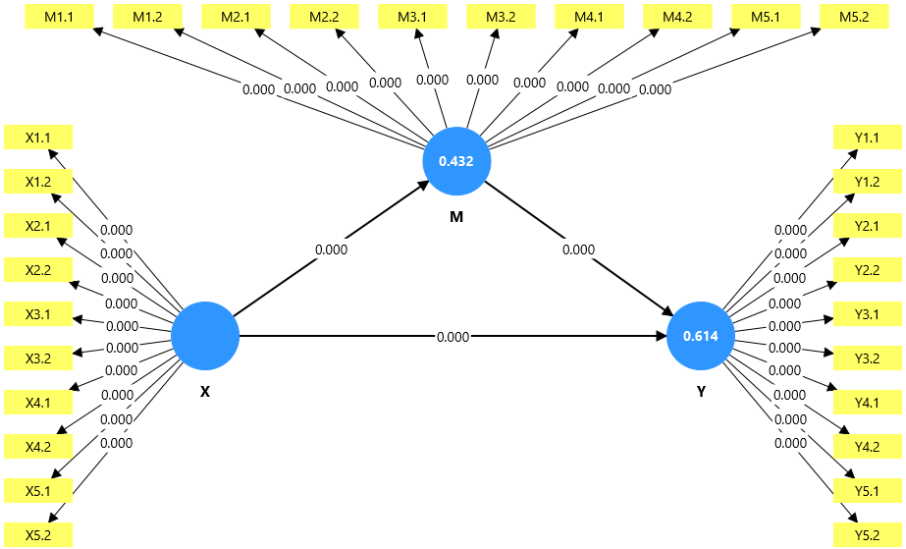

Figure 2. Inner Model Diagram (Path Coefficients and R-Square)

The multicollinearity test indicates that all Variance Inflation Factor (VIF) values for the inner model fall within the range of 1.000–1.760—well below the critical threshold of 3.3—meaning there are no multicollinearity issues that could distort the path coefficient estimates. Path significance testing was conducted using bootstrapping with 5,000 subsamples, and the results are presented in Table 6.

Table 6. Hypothesis Testing Results (Bootstrapping)

Hipotesis / Jalur	Koefisien Jalur	t-value	p-value	Keterangan
H1: Adopsi QRIS (QA) → Efisiensi Transaksi (TE)	0,657	10,284	0,000	Diterima
H2: Efisiensi Transaksi (TE) → Profitabilitas (MP)	0,498	5,733	0,000	Diterima
H3: Adopsi QRIS (QA) → Profitabilitas (MP) - langsung	0,361	4,017	0,000	Diterima
H4: Adopsi QRIS (QA) → M → Profitabilitas (MP) - mediasi	0,327	5,241	0,000	Diterima

Source: SmartPLS 4 output (bootstrapping with 5,000 subsamples), data processed by the researcher (2026). Reference values: t-value ≥ 1.96; p-value < 0.05.

Table 6 shows that all four paths—including the mediation effect in H4—exhibit t-values well above the minimum threshold and p-values of 0.000; consequently, all research hypotheses are statistically supported at a 95% confidence level. Further analysis of the mediation effect confirms that both the direct effect (coefficient 0.361; p=0.000) and the indirect effect (coefficient 0.327; p=0.000) are significant, resulting in a total effect of 0.688. Transaction Efficiency acts as a complementary partial mediator in the relationship between QRIS adoption and MSME profitability.

The effect size (f-square) test reveals that the path from QRIS adoption to Transaction Efficiency makes the largest contribution, falling into the "large" category ($f^2 = 0.760$). This is followed by the path from Transaction Efficiency to MSME profitability, which also falls into the "large" category ($f^2 = 0.365$), while the direct effect of QRIS adoption on profitability is classified as ranging from medium to large ($f^2 = 0.192$) (Hair et al., 2019).

Table 7. R-Square and Model Fit Test Results

Konstruk / Indikator	Nilai	Kategori
R-Square - Efisiensi Transaksi (M)	0,432	Moderate
R-Square - Profitabilitas UMKM (Y)	0,614	Moderate-Substantial
SRMR	0,058	Model Fit (< 0,08)
NFI	0,805	Acceptable Fit (≥ 0,80)

Source: SmartPLS 4 output, data processed by the researcher (2026). R-square categorization is based on Hair et al. (2019).

Table 7 shows that QRIS adoption explains 43.2% of the variance in Transaction Efficiency (a moderate level), while QRIS adoption and Transaction Efficiency jointly explain 61.4% of the variance in MSME Profitability (a level bordering on strong); the remaining 38.6% is explained by factors outside this research model—such as macroeconomic conditions, marketing strategies, or the availability of business capital—thereby opening avenues for future research. An SRMR value of 0.058 (below the 0.08 threshold) and an NFI of 0.805 (exceeding 0.80) confirm that the research model demonstrates good fit and serves as a valid representation of the phenomenon under study.

Discussion

The Impact of QRIS Adoption on Transaction Efficiency

Research results indicate that QRIS adoption has a positive and significant impact on the transaction efficiency of MSMEs in the trade sector in Palangka Raya City. The substantial path coefficient ($\beta = 0.657$) and the large effect size demonstrate that payment digitalization transforms not only transaction methods but also daily business operational processes. These findings suggest that the benefits of QRIS are felt more acutely in operational aspects than merely as an alternative payment tool.

This situation can be explained by the characteristics of trade-sector MSMEs in Palangka Raya City, most of which operate in the culinary and retail sectors and handle high daily transaction volumes. Under these conditions, savings in service time, a reduced need to provide cash for change, and automated transaction recording generate more tangible efficiency gains compared to businesses with low transaction volumes. In other words, the higher the transaction intensity, the greater the economic benefits derived from using QRIS.

These findings also explain why the impact of QRIS on efficiency in Palangka Raya is relatively strong. The Jekan Raya and Pahandut areas feature concentrations of university students, employees, and young consumers accustomed to digital payments; consequently, market pressure drives business owners to utilize QRIS optimally. Conversely, in areas where digital literacy and internet network quality remain limited—such as parts of the Sebangau or Bukit Batu districts—efficiency benefits may not be as significant as those observed in this study. Thus, the local

context serves as a crucial factor reinforcing the relationship between QRIS adoption and transaction efficiency. While these results are consistent with previous studies, this research demonstrates that the strength of the QRIS impact is heavily influenced by the characteristics of the local digital ecosystem; therefore, the effectiveness of QRIS implementation cannot be uniformly generalized across all regions of Indonesia.

The Impact of Transaction Efficiency on MSME Profitability

Transaction efficiency has been shown to positively influence MSME profitability. These findings indicate that profit growth stems not only from increased sales volume but also from the ability of business owners to reduce operational costs and accelerate transaction cycles. For MSMEs in Palangka Raya City, these benefits are particularly crucial because business owners cannot pass Merchant Discount Rate (MDR) costs on to consumers, in accordance with Bank Indonesia regulations. Consequently, the only way to ensure that using QRIS remains profitable is by enhancing operational efficiency. Greater savings in transaction time, reduced risk of recording errors, and faster cash reconciliation processes all contribute to a higher likelihood of increased net profit.

These findings also shed light on why the impact of digital payments on profitability has not always been significant in previous studies. Discrepancies in results likely stem from variations in the extent to which QRIS features are utilized. If business owners use QRIS merely as a means to accept payments without leveraging digital transaction reports for financial management, the economic benefits remain limited. Conversely, when QRIS is integrated into the business management system, the resulting efficiencies can be more readily translated into increased profitability.

The Direct Impact of QRIS Adoption on Profitability

This study demonstrates that QRIS continues to exert a direct influence on profitability even when transaction efficiency is included as a mediating variable. This indicates that there are benefits to using QRIS beyond mere operational efficiency. This phenomenon can be attributed to the characteristics of consumers in Palangka Raya City, who are becoming increasingly accustomed to cashless transactions. MSMEs that offer QRIS gain access to a consumer segment that might

otherwise have been reluctant to transact had cash been the only payment option. Beyond enhancing consumer convenience, QRIS also boosts the perceived professionalism and credibility of the business, thereby offering the potential to expand market share.

However, the magnitude of this direct impact is smaller than the total impact observed when transaction efficiency is taken into account. These findings indicate that simply providing QRIS as a payment facility is insufficient to drive increased profitability; greater economic value is realized when the adoption of QRIS is accompanied by changes in how business operations are managed.

The Mediating Role of Transaction Efficiency

The most significant finding of this study is the confirmation of transaction efficiency's role as a complementary partial mediator. The results indicate that the relationship between QRIS adoption and profitability operates through two mutually reinforcing mechanisms.

The first mechanism is a direct pathway involving increased market access, enhanced service convenience, and greater consumer trust. The second mechanism is an indirect pathway driven by operational efficiency, resulting in cost savings, faster transactions, and increased business productivity.

These findings demonstrate that digital transformation does not automatically yield financial gains. QRIS serves as a source of advantage only when successfully integrated into daily operational activities. Consequently, the benefits of technology depend not merely on its existence, but on the business's ability to transform that technology into operationally valuable capabilities.

Theoretical Contributions

This study not only integrates the Resource-Based View (RBV), the Technology Acceptance Model (TAM), and Transaction Cost Theory (TCT) but also extends the relationships between these three theories. From an RBV perspective, the study demonstrates that QRIS cannot be considered a strategic resource generating competitive advantage simply by virtue of business ownership. QRIS creates value only when converted into an operational capability—specifically, transaction efficiency. Thus, the study extends the RBV by showing that transaction efficiency acts as a conversion mechanism linking digital assets to financial performance.

From a TAM perspective, the results show that perceptions of ease of use and usefulness do not stop at the technology adoption decision; rather, they evolve into changes in operational behavior that drive increased efficiency. In other words, this study expands the TAM from a theory of adoption into a theory of value creation following technology implementation.

Meanwhile, TCT is extended through empirical evidence showing that reduced transaction costs do not directly boost profitability; instead, they must be realized through sustained operational efficiency. Thus, this study offers an integrative model explaining how digital technology generates economic value through the mechanism of transaction efficiency.

Policy Implications

The research findings offer several actionable recommendations for stakeholders. First, Bank Indonesia could consider providing subsidies or incentives regarding the Merchant Discount Rate (MDR) for micro-enterprises with low turnover, ensuring that transaction costs do not hinder QRIS adoption. Second, local governments, in collaboration with Bank Indonesia, should conduct practical QRIS training sessions that cover not only payment acceptance but also the utilization of transaction reports, automated reconciliation, and digital cash flow management. Third, the Palangka Raya City Cooperatives and MSME Agency needs to integrate digital bookkeeping programs so that QRIS transaction data can be directly utilized to prepare simple financial statements, apply for business loans, and evaluate business performance. Fourth, payment service providers should develop merchant dashboards that are intuitive for MSME operators—featuring summaries of daily turnover, customer analysis, transaction patterns, and profit estimates—thereby transforming QRIS from a mere payment tool into an instrument for business decision-making.

Finally, digitalization policies must take into account regional disparities within Palangka Raya City. Areas with limited internet connectivity require telecommunications infrastructure support before QRIS adoption programs are expanded, ensuring that the benefits of digitalization are distributed more equitably.

CONCLUSION

This study yields four key findings. First, QRIS adoption has a positive and significant impact on the transaction efficiency of MSMEs in the trade sector in Palangka Raya City; this demonstrates that the digitalization of payment systems enhances operational efficiency by accelerating transaction processes, improving record-keeping accuracy, and reducing transaction costs. Second, transaction efficiency positively and significantly affects MSME profitability, indicating that savings in time, operational costs, and transaction risks can be translated into improved financial performance. Third, QRIS adoption also has a direct, positive, and significant impact on MSME profitability; thus, the benefits of QRIS stem not only from increased efficiency but also from expanded market access, enhanced consumer convenience, and strengthened business competitiveness. Fourth, transaction efficiency is shown to partially and complementarily mediate the relationship between QRIS adoption and MSME profitability, meaning that profitability gains arise from a combination of direct and indirect effects.

This study has several limitations. First, the scope is limited to MSMEs in the trade sector in Palangka Raya City, so generalizing the results to other business sectors or regions requires caution. Second, the study employs a survey approach with a cross-sectional design, which does not capture changes in QRIS usage behavior or its impact on profitability over the long term. Third, the research model explains 61.4% of the variation in profitability, leaving other factors outside the model—such as digital literacy, managerial capability, service quality, access to capital, intensity of QRIS usage, and competitive conditions—unanalyzed.

Theoretically, this study contributes by integrating the Resource-Based View (RBV), Technology Acceptance Model (TAM), and Transaction Cost Theory (TCT) into a single empirical model to explain the mechanism by which digital payment technology adoption enhances profitability through transaction efficiency. The finding that transaction efficiency acts as a partial mediator enriches the literature on MSME digitalization by demonstrating that technological benefits are not automatic; rather, they depend on business owners' ability to translate technology adoption into sustainable operational efficiency.

Future research is encouraged to employ a longitudinal design to evaluate the

long-term impact of QRIS usage on business performance. Subsequent studies could also expand the sample scope to include additional business sectors and regions, thereby improving generalizability. Furthermore, the research model could be expanded by incorporating variables such as digital literacy, digital innovation, technological capabilities, entrepreneurial orientation, service quality, QRIS usage intensity, or government support—acting as either mediating or moderating variables—to gain a more comprehensive understanding of the mechanisms by which payment digitalization enhances MSME profitability.

REFERENCES

Barney, J. (1991). Firm Reseources and Sustained Competitive Advantage. *Journal of Management*, *17*, 99–120. https://doi.org/10.1177/014920639101700108

Dali, N., Aswati, W. O., & Fiskal. (2023). The influence of perceived usefulness and ease of use of e-money on the financial performance of MSMEs: A TAM model approach. Jurnal Akuntansi dan Keuangan, 8(2), 87–96. https://doi.org/10.33772/jak.v8i2.99

Elmahdy, A. H. A. M., Abdelkader, M. T. K. M., & Shaker, M. A. M. (2025). Bridging the nexus between Fintech, operational efficiency and banks profitability: the moderating role of bank size. *Future Business Journal*, *11*(1). https://doi.org/10.1186/s43093-025-00478-x

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. In *European Business Review* (Vol. 31, Number 1, pp. 2–24). Emerald Group Publishing Ltd. https://doi.org/10.1108/EBR-11-2018-0203

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Kock, N., & Hadaya, P. (2018). Minimum sample size estimation in PLS-SEM: The inverse square root and gamma-exponential methods. *Information Systems Journal*, *28*(1), 227–261. https://doi.org/10.1111/isj.12131

Latifah, S. W., & Waluya, A. J. (2023). The Use Of Sharia Fintech On MSMEs Performance: Mediation Of Interest In Use Of Transactions. *Jurnal Reviu Akuntansi Dan Keuangan*, *13*(2), 463–480. https://doi.org/10.22219/jrak.v13i2.23419

Nugraha, D. P., Setiawan, B., Nathan, R. J., & Fekete-Farkas, M. (2022). Fintech Adoption Drivers for Innovation for SMEs in Indonesia. *Journal of Open Innovation: Technology, Market, and Complexity*, *8*(4). https://doi.org/10.3390/joitmc8040208

Purwatiningsih, A. P., Fitria, S., Indriani, A., & Kuriawan, C. S. (2025). Adoption of QRIS digital payment in Indonesia and Malaysia: A technology acceptance and knowledge perspective. *International Journal of Innovative Research and Scientific Studies*, *8*(6), 704–713.

https://doi.org/10.53894/ijirss.v8i6.9670

Astari, N. P. R. P., & Candraningrat, I. R. (2022). The influence of fintech on MSME financial performance with financial literacy as a moderating variable. Journal of Strategic Management and Business Simulation, 3(1), 68–81. https://doi.org/10.25077/mssb.3.1.68-81.2022

Setyo Dwi Purnomo, A., & Ramadani, D. D. (2022). The influence of perceived benefits and ease of use on the intention to adopt financial technology for digital payments among MSMEs in Sumenep. Akuntabilitas: Jurnal Ilmiah Ilmu-Ilmu Ekonomi, 14(2), 17–30. https://doi.org/10.35457/akuntabilitas.v14i2.2505

Suryono, R. R., Budi, I., & Purwandari, B. (2020). Challenges and trends of financial technology (Fintech): A systematic literature review. In *Information (Switzerland)* (Vol. 11, Number 12, pp. 1–20). MDPI AG. https://doi.org/10.3390/info11120590

Tama, R. A. Z., Hoque, M. M., Liu, Y., Alam, M. J., & Yu, M. (2023). An Application of Partial Least Squares Structural Equation Modeling (PLS-SEM) to Examining Farmers' Behavioral Attitude and Intention towards Conservation Agriculture in Bangladesh. *Agriculture (Switzerland)*, *13*(2). https://doi.org/10.3390/agriculture13020503

Tur, A. W., & Sartika, D. (2025). The Impact of Financial Technology on MSME Financial Performance: The Mediating Role of Payment Transaction Convenience in Seberang Ulu. *Sinergi International Journal of Management and Business*, *3*(3), 206–217. https://doi.org/10.61194/ijmb.v3i3.844

Utami, N. (2025). Adoption of digital payments via QRIS and its impact on the financial performance of MSMEs in the Special Region of Yogyakarta. Jurnal Transaksi, 17(1). https://doi.org/10.25170/transaksi.v17i1.7116

Williamson, O. E. (1985). *The economic institutions of capitalism: Firms, markets, relational contracting*. Free Press.

Zikrillah, M., & Sartika, D. (2024). The Influence of Financial Technology on the Performance of MSMEs in Alang-Alang Lebar District with E-Commerce as a Moderating Variable. *Accounting Information Systems and Information Technology Business Enterprise*, *9*(2), 106–120. https://doi.org/10.34010/aisthebest.v9i2.14811

LAMPIRAN

Lampiran 1 Surat Ijin Penelitian

PEMERINTAH KOTA PALANGKA RAYA
DINAS PENANAMAN MODAL DAN
PELAYANAN TERPADU SATU PINTU
JL. Yos Sudarso No.02 Palangka Raya Kalimantan Tengah 73112
Telp/Fax. (0536) 421035, Posel: dpmptsppalangkaraya@gmail.com

SURAT KETERANGAN PENELITIAN
Nomor : 503.2/0773/DPMPTSP/SKP/V/2026

Membaca : Surat Dekan FAKULTAS EKONOMI DAN BISNIS UNIVERSITAS PALANGKA RAYA Nomor : 2363 /UN24.4/EP/2026 tanggal 04 Mei 2026 perihal Izin Penelitian.

Mengingat :
1. Undang-Undang Nomor 18 Tahun 2002 tentang Sistem Nasional Penelitian, Pengembangan dan Penerapan Ilmu Pengetahuan dan Teknologi.
2. Peraturan Menteri Dalam Negeri Nomor 17 Tahun 2016 tentang Pedoman Penelitian dan Pengembangan di Lingkungan Kementerian Dalam Negeri dan Pemerintah Daerah.
3. Peraturan Gubernur Kalimantan Tengah Nomor 12 Tahun 2015 tentang Perubahan atas Peraturan Gubernur Nomor 59 Tahun 2008 tentang Tata Cara Pemberian Izin Penelitian/Pendataan bagi setiap Instansi Pemerintah maupun Non Pemerintah.
4. Peraturan Walikota Kota Palangka Raya Nomor 55 Tahun 2021 Tentang Kedudukan, Susunan Organisasi, Tugas Dan Fungsi Serta Tata Kerja Dinas Penanaman Modal Dan Pelayanan Terpadu Satu Pintu Kota Palangka Raya.
5. Peraturan Walikota Palangka Raya Nomor 3 Tahun 2024 tentang Pendelegasian Kewenangan Perizinan Berusaha, Perizinan Nonberusaha Dan Non perizinan Kepada Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu Kota Palangka Raya.

Memberikan Izin kepada

Nama : **NAHDYA IRSA,** NIM : **223020302167** Mahasiswa Jenjang: S1, Program Studi -, Jurusan Manajemen, FAKULTAS EKONOMI DAN BISNIS , UNIVERSITAS PALANGKA RAYA

Judul Penelitian : ANALISIS MEDIASI EFISIENSI TRANSAKSI DALAM HUBUNGAN ADOPSI QRIS DAN PENINGKATAN PROFITABILITAS UMKM PERDAGANGAN DI KOTA PALANGKA RAYA

Lokasi : UMKM DI KOTA PALANGKA RAYA

Telpon : 082151466586

Dalam rangka mewujudkan zona integritas menuju Wilayah Bebas Korupsi (WBK). DPMPTSP Kota Palangka Raya berkomitmen menegakan integritas, memberikan pelayanan berkualitas dan transparan. Pengaduan laporan Gratifikasi *https://dpmptsp.palangkaraya.go.id/whistle-blowing-system*

Dokumen ini telah ditandatangani secara elektronik menggunakan sertifikat elektronik yang diterbitkan oleh Balai Sertifikasi Elektronik (BSrE), BSSN

Dengan Ketentuan

a. Sebelum melakukan penelitian agar melaporkan diri kepada Pejabat yang berwenang di tempat/lokasi yang ditetapkan.
b. Hasil penelitian ini supaya diserahkan kepada Pemerintah Kota Palangka Raya Cq. Bidang Penelitian dan Pengembangan BAPPEDA-LITBANG Kota Palangka Raya dan DPM-PTSP berupa Soft Copy dalam bentuk PDF.
c. Surat Izin Penelitian ini agar tidak disalahgunakan untuk tujuan tertentu, yang dapat mengganggu kestabilan Pemerintah tetapi hanya dipergunakan untuk keperluan ilmiah;
d. Surat Izin Penelitian ini diberikan selama 1 Bulan, terhitung mulai tanggal **08 Mei 2026 s/d 08 Juni 2026** dan dapat dibatalkan sewaktu-waktu apabila Peneliti tidak memenuhi kriteria ketentuan-ketentuan pada butir a,b dan c tersebut di atas;
e. Apabila penelitian sudah berakhir agar melaporkan ke BAPPEDA-LITBANG untuk mendapatkan surat keterangan selesai penelitian.

Demikian surat izin penelitian ini diberikan agar dapat dipergunakan sebagaimana mestinya.

Ditetapkan di Palangka Raya
pada tanggal 08 Mei 2026

Ditandatangi secara elektronik oleh:
Plt. Kepala Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu Kota Palangka Raya

VALLERY BUDIANTO. ST..M.P.W.K
Pembina (IV/a)
NIP 198108082010011011

Membangun Zona Integritas
STOP GRATIFIKASI
Lihat Lawan Laporkan

Tembusan disampaikan Kepada Yth:

1. Walikota Palangka Raya di Palangka Raya (sebagai laporan);
2. Kepala BAPPEDA-LITBANG Kota Palangka Raya di Palangka Raya;
3. Dekan FAKULTAS EKONOMI DAN BISNIS UNIVERSITAS PALANGKA RAYA di Kota Palangka Raya ;
4. Objek Penelitian

Dalam rangka mewujudkan zona integritas menuju Wilayah Bebas Korupsi (WBK). DPMPTSP Kota Palangka Raya berkomitmen menegakan integritas, memberikan pelayanan berkualitas dan transparan. Pengaduan laporan Gratifikasi *https://dpmptsp.palangkaraya.go.id/whistle-blowing-system*

Lampiran 2 Kuesioner Penelitian

Judul: Analisis Mediasi Efisiensi Transaksi Dalam Hubungan Adopsi Qris Dan Peningkatan Profitabilitas Umkm Perdagangan Di Kota Palangka Raya

KRITERIA RESPONDEN

Penelitian ini ditujukan bagi pelaku usaha di Kota Palangka Raya yang memenuhi kriteria berikut:

1. Usaha bergerak dalam penjualan barang (bukan jasa murni).
2. Memiliki lokasi usaha di wilayah Kota Palangka Raya.
3. Telah menggunakan QRIS sebagai metode pembayaran minimal selama 3 bulan
4. Responden merupakan pemilik atau pengelola keuangan yang memahami kondisi profitabilitas usaha.

BAGIAN 1: IDENTITAS RESPONDEN

Silakan isi atau pilih jawaban yang sesuai.

1. Nama Usaha: _____
2. Kecamatan Lokasi Usaha:
   [ ] Jekan Raya
   [ ] Pahandut
   [ ] Sebangau
   [ ] Bukit Batu
   [ ] Rakumpit

3. Kategori Bidang Usaha:
   [ ] Kuliner (Makanan/Minuman)
   [ ] Fashion/Pakaian
   [ ] Toko Kelontong
   [ ] Minimarket Lokal
   [ ] Konter Pulsa & Aksesoris
   [ ] Lainnya: _____

4. Lama Usaha Berdiri:
   [ ] < 1 Tahun
   [ ] 1-3 Tahun
   [ ] > 3 Tahun
5. Sudah Menggunakan QRIS Selama:
   [ ] < 6 Bulan
   [ ] 6-12 Bulan
   [ ] > 1 Tahun
6. Rata-rata Transaksi QRIS per Hari:
   [ ] < 10 kali
   [ ] 10-30 kali
   [ ] > 30 kali

BAGIAN 2: PETUNJUK PENGISIAN
Berikan tanda centang (√) pada kolom yang paling sesuai dengan persepsi Anda:

1. STS: Sangat Tidak Setuju (Skala 1)
2. TS: Tidak Setuju (Skala 2)
3. N: Netral (Skala 3)
4. S: Setuju (Skala 4)
5. SS: Sangat Setuju (Skala 5)

BAGIAN 3: BUTIR PERNYATAAN

No	Variabel	Kode Indikator	Pernyataan	STS	TS	N	S	SS
1	Adopsi QRIS (X)	X1.1	Saya merasa cara mendaftar dan mengaktifkan kode QRIS untuk toko saya sangat praktis dan tidak berbelit-belit.					
2		X1.2	Saya tidak merasa kesulitan saat harus mengoperasikan aplikasi QRIS untuk menerima pembayaran.					
3		X2.1	Penggunaan QRIS membuat proses transaksi penjualan di toko saya menjadi lebih efektif.					
4		X2.2	Secara keseluruhan, QRIS sangat berguna dalam menunjang kegiatan operasional bisnis saya.					
5		X3.1	Sistem QRIS jarang mengalami gangguan (*error*) saat digunakan bertransaksi.					
6		X3.2	Saya langsung mengetahui uang masuk saat pembeli berhasil menunjukkan bukti transaksi QRIS atau saat notifikasi uang masuk di hp saya muncul setelah pelanggan sukses melakukan pembayaran melalui QRIS.					
7		X4.1	Saya bisa melihat total uang yang masuk setiap harinya dengan mudah melalui aplikasi QRIS.					
8		X4.2	Fitur keamanan (seperti PIN/verifikasi) membuat saya merasa aman menggunakan QRIS.					
9		X5.1	Saya merasa rugi jika tidak lagi menyediakan pilihan pembayaran QRIS di toko saya untuk ke depannya.					
10		X5.2	Saya menyarankan rekan sesama pedagang untuk memasang QRIS agar pelanggan mereka tidak lari ke toko lain.					

No	Variabel	Kode Indikator	Pernyataan	STS	TS	N	S	SS
11	Efisiensi Transaksi (M)	M1.1	Waktu yang dibutuhkan untuk menyelesaikan satu transaksi dengan QRIS lebih singkat dibanding tunai.					
12		M1.2	Antrean di depan kasir menjadi lebih cepat sejak saya menyediakan metode pembayaran QRIS.					
13		M2.1	Saya menghemat waktu operasional karena tidak perlu lagi keliling mencari atau menukar uang receh untuk kembalian.					
14		M2.2	Hambatan transaksi akibat tidak adanya uang kembalian berkurang drastis sejak ada QRIS.					
15		M3.1	QRIS memastikan nominal yang dibayar pelanggan sesuai persis dengan harga barang (tanpa pembulatan).					
16		M3.2	QRIS membuat nominal uang yang masuk otomatis pas, sehingga mengurangi risiko selisih hitung di akhir hari.					
17		M4.1	QRIS menghemat tenaga saya karena tidak perlu menghitung tumpukan uang tunai berulang kali saat toko tutup.					
18		M4.2	Catatan transaksi di aplikasi QRIS membantu saya memantau perkembangan total omzet usaha setiap bulannya.					
19		M5.1	Menerima pembayaran dengan QRIS membantu mengurangi kekhawatiran saya terhadap peredaran uang palsu.					
20		M5.2	Saya merasa lebih aman karena tidak perlu menyimpan terlalu banyak uang tunai di laci toko.					
21	Profitabilitas UMKM (Y)	Y1.1	Jumlah transaksi harian di toko saya meningkat sejak menyediakan pilihan pembayaran QRIS.					

No	Variabel	Kode Indikator	Pernyataan	STS	TS	N	S	SS
22		Y1.2	Pembeli jadi lebih sering datang kembali ke toko karena tahu di sini bisa membayar tanpa uang tunai (pakai QRIS).					
23		Y2.1	Total pendapatan kotor (omzet) bulanan saya mengalami tren kenaikan setelah mengadopsi QRIS.					
24		Y2.2	Pelanggan cenderung berbelanja lebih banyak karena kemudahan pembayaran digital tanpa batas uang tunai di dompet.					
25		Y3.1	Biaya operasional (seperti biaya transportasi setor tunai ke bank atau beli kembalian) menjadi lebih hemat.					
26		Y3.2	Pengelolaan keuangan yang lebih rapi lewat digital mengurangi biaya yang tidak terduga/hilang.					
27		Y4.1	Secara keseluruhan, kemudahan transaksi digital lewat QRIS memberikan dampak positif bagi keuntungan bersih toko saya.					
28		Y4.2	Berkurangnya salah hitung uang dan hematnya waktu transaksi membantu usaha saya menghasilkan keuntungan yang lebih maksimal.					
29		Y5.1	Toko saya kini dapat menjangkau pelanggan baru (seperti generasi muda/wisatawan) yang jarang membawa tunai.					
30		Y5.2	Toko saya terlihat lebih kekinian dan menarik di mata pelanggan sejak menyediakan bar					

Terima kasih atas partisipasi Anda dalam penelitian ini.

Lampiran 3 Tabulasi Data Utama

Adopsi Qris (X)									
X1.1	X1.2	X2.1	X2.2	X3.1	X3.2	X4.1	X4.2	X5.1	X1.3
5	4	5	4	5	5	4	5	4	4
5	4	5	5	5	5	5	4	5	4
5	5	4	5	5	5	5	5	4	4
5	4	4	4	5	5	5	5	4	4
4	4	4	4	4	3	4	5	4	4
3	3	3	2	2	2	3	3	3	3
4	4	4	5	4	3	4	4	4	4
4	4	5	5	4	4	5	4	4	4
3	3	5	3	5	4	5	5	3	3
5	5	4	5	4	4	5	4	5	4
5	4	5	4	5	4	5	4	4	5
4	4	3	5	4	4	3	4	4	4
3	4	4	4	4	4	4	4	3	4
4	4	5	4	5	5	4	4	5	4
4	4	5	4	4	5	5	5	4	4
5	5	5	4	4	4	4	4	4	5
5	4	4	5	4	4	5	4	5	5
4	4	4	4	4	5	5	4	5	5
4	4	4	5	5	5	4	5	5	4
5	5	4	4	4	4	4	5	4	5
5	4	5	5	4	4	5	5	5	4
5	5	5	4	5	5	5	5	5	5
4	4	5	5	4	5	4	4	4	5
2	3	3	3	3	2	3	4	2	3
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4	5	5	4	4	5	5	4	4	5
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3	5	4	3	4	4	4	4	3	5
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2	2	2	3	2	2	2	2	2	2
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5	4	5	5	5	4	5	5	5	4
5	5	4	4	5	4	4	5	5	5

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5	5	4	5	4	5	4	5	5	5
5	4	5	5	5	4	5	5	5	4
4	5	5	5	5	5	5	4	4	5
2	2	2	2	1	1	2	2	2	2
3	2	3	2	3	4	3	2	3	2
3	3	5	5	5	4	5	4	3	3
4	3	4	3	5	5	4	4	4	3
4	5	5	3	4	5	3	3	4	5
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4	4	4	5	4	4	5	3	4	4
3	3	2	2	2	3	3	2	3	3
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4	4	4	5	3	4	3	5	4	4
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3	2	3	3	4	3	2	2	3	3
4	3	4	5	4	4	4	3	4	3
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5	5	5	4	4	5	4	3	5	4

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5	4	5	4	4	5	4	4	5	4
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5	4	5	5	5	5	5	4	5	5
3	5	4	4	3	4	3	4	4	4
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3	2	4	4	3	4	3	3	4	4
3	4	5	5	3	3	5	4	5	5
3	4	5	4	4	3	5	5	5	4

Efesiensi Transaksi (M)									
M1.1	**M1.2**	**M2.1**	**M2.2**	**M3.1**	**M3.2**	**M4.1**	**M4.2**	**M5.1**	**M5.2**
5	4	5	4	5	4	4	5	5	4
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4	5	5	4	5	5	5	4	5	5
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4	5	5	4	4	5	5	5	5	4
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3	2	2	4	3	2	3	3	3	2
5	4	5	4	4	5	5	5	4	4
3	3	3	3	2	3	3	3	4	3

Profitabilitas UMKM (Y)									
Y1.1	Y1.2	Y2.1	Y2.2	Y3.1	Y3.2	Y4.1	Y4.2	Y5.1	Y5.2
5	5	5	4	4	4	5	4	4	4
4	5	4	5	5	5	4	5	5	4
5	4	5	4	5	5	4	5	4	4
5	4	5	5	4	5	5	5	4	5

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5	4	4	4	5	4	3	4	4	3
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2	4	2	4	3	3	2	2	3	2
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1	1	1	2	2	3	3	3	2	3
4	5	5	5	4	5	5	4	5	5
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4	4	5	4	5	4	4	5	5	5
4	5	5	5	5	5	4	5	4	5
5	5	5	4	5	5	4	5	5	5
5	5	4	4	5	5	4	5	5	5
3	3	4	2	4	4	4	3	3	3
5	4	5	4	3	5	3	3	4	3
5	4	5	5	5	5	4	5	4	4
5	5	4	3	3	4	4	5	3	4
3	3	3	4	4	3	2	3	3	2
4	4	5	5	4	4	4	5	3	5
4	5	5	5	5	5	5	5	5	5
5	5	4	5	5	5	5	5	5	5
3	5	5	4	4	5	4	3	3	4
5	5	4	4	5	4	4	4	4	5

5	5	5	5	5	5	5	4	4	4
4	3	4	4	4	5	4	4	4	5
4	5	4	5	3	3	4	5	4	4
3	5	4	5	4	3	3	3	3	3
5	5	4	4	5	5	5	4	5	5
3	2	3	4	3	2	3	4	2	3
3	3	3	3	4	4	3	4	2	4
3	4	4	4	4	4	4	5	5	5
2	3	3	3	3	4	3	3	3	4
3	5	3	4	5	4	3	4	5	4
3	3	4	4	5	3	4	3	4	5
4	4	3	4	4	4	4	3	3	4
4	4	5	4	5	3	4	4	4	5
1	3	2	2	3	2	3	2	3	1
4	5	4	3	4	5	4	3	4	5
3	2	2	2	2	3	3	3	1	2
4	4	3	4	4	5	5	5	4	5
2	3	3	2	1	2	2	2	2	2
2	2	3	2	3	2	2	1	1	1
3	4	3	3	3	4	4	2	4	2
4	3	4	3	5	4	5	4	4	3
4	4	5	4	5	3	4	3	3	4
5	4	5	4	5	5	5	5	5	4
4	3	3	5	3	5	4	5	4	4
3	2	3	4	3	3	3	2	3	3
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4	5	3	4	4	4	5	4	4	4
3	4	5	3	4	4	5	3	4	3
3	4	4	4	3	5	5	4	3	4
1	2	1	2	3	2	2	2	3	2
3	4	5	4	5	3	3	5	4	4
2	1	1	2	3	1	1	2	1	2
5	4	4	5	4	4	5	5	5	5
4	5	5	5	4	5	4	5	4	4
4	4	5	5	5	4	5	5	4	5
2	2	1	2	3	1	1	2	2	2
5	3	3	3	5	3	3	3	3	4
3	4	4	4	4	4	3	3	5	5
2	3	4	3	3	3	2	4	3	2

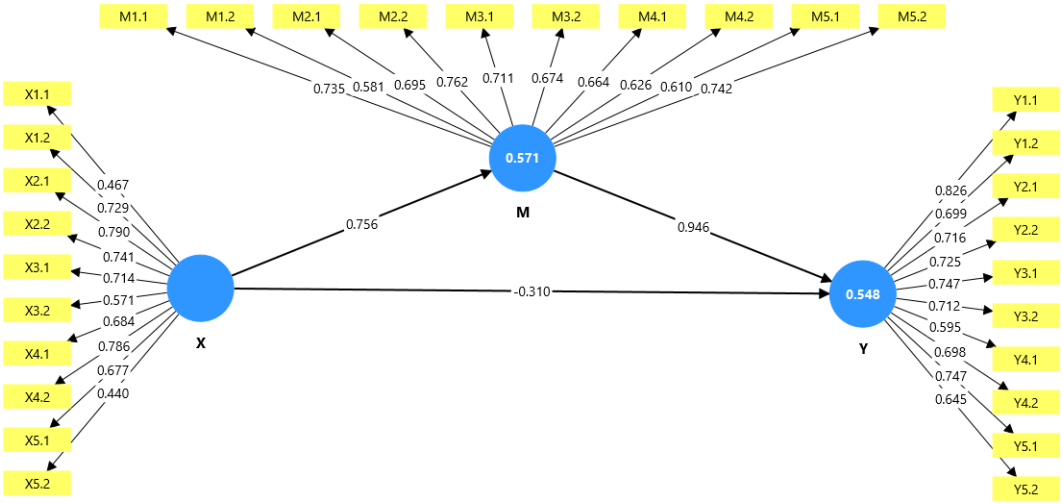
3	2	2	2	2	4	4	2	2	2
2	4	2	3	3	2	3	3	2	3
2	2	2	2	2	2	2	2	2	2
4	5	5	5	4	5	5	4	5	5
2	2	4	3	2	3	4	4	3	4
3	3	3	4	5	4	4	4	4	4
4	4	5	3	3	3	4	5	3	3
3	2	4	4	4	2	4	2	3	4

Lampiran 4. Karakteristik Data Responden Utama

No	Nama Usaha	Kecamatan	Kategori Bidang Usaha	Lama Usaha Berdiri	Sudah Menggunakan Qris Selama	Rata-rata Transaksi QRIS per Hari
1	Warung Makan Wanty	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
2	RM Padang Saraso	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
3	Geprek Senju	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
4	Raja Lalapan	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
5	Soto Bang Yos	Jekan Raya	Kuliner (Makanan/Minuman)	< 1 Tahun	6-12 Bulan	10-30 kali
6	Pondok 21 Pasar mini	Jekan Raya	Kuliner (Makanan/Minuman)	1-3 Tahun	> 1 Tahun	< 10 kali
7	Geprek Sultan	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	< 10 kali
8	Lalapan Cak Lis	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
9	Bakso Jos	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	< 10 kali
10	Gudeg Jogja NR	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
11	Ketoprak Latansa	Jekan Raya	Kuliner (Makanan/Minuman)	1-3 Tahun	> 1 Tahun	10-30 kali
12	Es Teh Kito	Jekan Raya	Kuliner (Makanan/Minuman)	1-3 Tahun	6-12 Bulan	10-30 kali
13	Siomay Bunbes	Jekan Raya	Kuliner (Makanan/Minuman)	1-3 Tahun	6-12 Bulan	< 10 kali
14	Raja Gorengan	Jekan Raya	Kuliner (Makanan/Minuman)	1-3 Tahun	> 1 Tahun	10-30 kali
15	Ngemeal Ceker	Jekan Raya	Kuliner (Makanan/Minuman)	1-3 Tahun	> 1 Tahun	10-30 kali
16	Ayam penyet cabe ijo	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
17	Sambal bakar amang jali	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
18	Abhista Coffee	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	> 30 kali
19	Warung makan Pelangi	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
20	Lalapan King Solo	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
21	WR Pakle Kantin Prodi Matematika	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
22	Kantin Feb Upr	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
23	Jajanan Mbah Gibran	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
24	Toko bintang serba murah	Jekan Raya	Toko Kelontong	> 3 Tahun	> 1 Tahun	10-30 kali
25	Kebab Burger JNF	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
26	Sate Ayam Yanto	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
27	Toko Wafaros	Jekan Raya	Toko Kelontong	> 3 Tahun	> 1 Tahun	10-30 kali
28	Warung Makan Didi PKY	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
29	Telur Mata Gajah Bang Jay	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
30	Ketoprak Telur Barokah	Jekan Raya	Kuliner (Makanan/Minuman)	1-3 Tahun	> 1 Tahun	10-30 kali
31	Toko Imay Collection	Jekan Raya	Fashion/Pakaian	> 3 Tahun	> 1 Tahun	< 10 kali
32	Es Teh Poci Didin	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
33	Volte Coffe	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
34	Warung Srikandi	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	6-12 Bulan	10-30 kali
35	Toko Od Frozen Food	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
36	Toko Laros Buah	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
37	Toko Rachel	Jekan Raya	Toko Kelontong	> 3 Tahun	> 1 Tahun	10-30 kali
38	Toko Nita Collection	Jekan Raya	Fashion/Pakaian	> 3 Tahun	> 1 Tahun	10-30 kali
39	Risol Kuu	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	< 10 kali
40	Hikarin Sushi	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
41	Utama Cafe and Roastery	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	> 30 kali
42	Nasi Kuning Medina	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
43	O'Desert.PKY	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
44	Toko Mandiri Jaya	Jekan Raya	Toko Bahan Bangunan	> 3 Tahun	> 1 Tahun	< 10 kali
45	Ngejus.ahh	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
46	Ayam Crispy Abah Anum	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
47	Humaira Collections	Jekan Raya	Fashion/Pakaian	> 3 Tahun	> 1 Tahun	10-30 kali
48	Bakso Mas Rokib	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
49	Warung Jajan Raden Saleh	Jekan Raya	Toko Kelontong	> 3 Tahun	> 1 Tahun	10-30 kali
50	Warung Makan Madani	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
51	Kurma Muda PKY	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
52	Toko Sembako Hasibuan	Jekan Raya	Toko Kelontong	> 3 Tahun	> 1 Tahun	10-30 kali
53	Pentol Aduhai	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
54	TWK Togo & Ramie Bakmie	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
55	Martabak Hamizan	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
56	Jajanan Keripik Suwati	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
57	Gorengan Telur Gulung	Jekan Raya	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
58	Pisang Wijen Makkiana	Jekan Raya	Kuliner (Makanan/Minuman)	1-3 Tahun	> 1 Tahun	10-30 kali
59	Kùwe.pky	Jekan Raya	Kuliner (Makanan/Minuman)	1-3 Tahun	> 1 Tahun	< 10 kali
60	Enjoys Dimsum Coffee	Jekan Raya	Kuliner (Makanan/Minuman)	1-3 Tahun	> 1 Tahun	10-30 kali
61	Snacktime.pky	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
62	Siomay_Batagor	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
63	Pizza House	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
64	Bubur Ayam Spesial	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
65	Toko Barokah	Pahandut	Toko Alat Tulis Kantor	> 3 Tahun	> 1 Tahun	10-30 kali
66	Martabak Mas Fikri	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
67	WR Soto Banjar Abah Faisal	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
68	Toko Kopi Tuang	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
69	Warung Pak Nas Lamongan	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
70	Teh Poci Patih Rumbih	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
71	Bubur Ayam AS Bandung	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
72	Warung Barokah Setha Adji	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
73	Ahmad Rizki Ponsel	Pahandut	Konter Pulsa & Aksesoris	> 3 Tahun	> 1 Tahun	< 10 kali
74	Warung Makan Patih Rumbih	Pahandut	Kuliner (Makanan/Minuman)	1-3 Tahun	> 1 Tahun	10-30 kali
75	Bakso Smansa Pak Min	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
76	Sate Ayam Dan Kambing Pak Robbi	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
77	Acil Ita Sajuta	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
78	Bakso Smada	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
79	Warung Santai	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
80	Dimzia Dimsum	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
81	Along Space	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
82	Nasi Goreng Cipta Rasa	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
83	Capcin Sahrudin	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
84	Qiya Kitchen	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
85	Riska Cake	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
86	Hokki Express	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
87	Angkringan Gooners	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
88	Kedai Seblak Vera	Pahandut	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
89	Ayting Decha	Pahandut	Kuliner (Makanan/Minuman)	< 1 Tahun	< 6 Bulan	< 10 kali
90	Toko Imuh	Pahandut	Toko Kelontong	> 3 Tahun	> 1 Tahun	< 10 kali
91	Bakmi Ayam 88 Jakarta	Sebangau	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
92	Zona Cake	Sebangau	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	< 10 kali
93	Lalapan Kios Asih	Sebangau	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	< 10 kali
94	Soto Lamongan Sumber Arto	Sebangau	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
95	Bakso Prilly	Sebangau	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	< 10 kali
96	Mie Ayam Bakso Bharata	Sebangau	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
97	Pisang lumer Ala Queen	Sebangau	Kuliner (Makanan/Minuman)	1-3 Tahun	> 1 Tahun	< 10 kali
98	WR Gorengan & Minuman Mama Al	Sebangau	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	< 10 kali
99	Gendhis Koppie	Sebangau	Kuliner (Makanan/Minuman)	> 3 Tahun	> 1 Tahun	10-30 kali
100	Familiar Hijab	Sebangau	Fashion/Pakaian	> 3 Tahun	> 1 Tahun	10-30 kali

Lampiran 5. Hasil Analisis Data Menggunanakan Smart PLS 4.0

1. Hasil Evaluasi Model Pengukuran (Outer Model) – Uji Data Awal (Pilot Test)



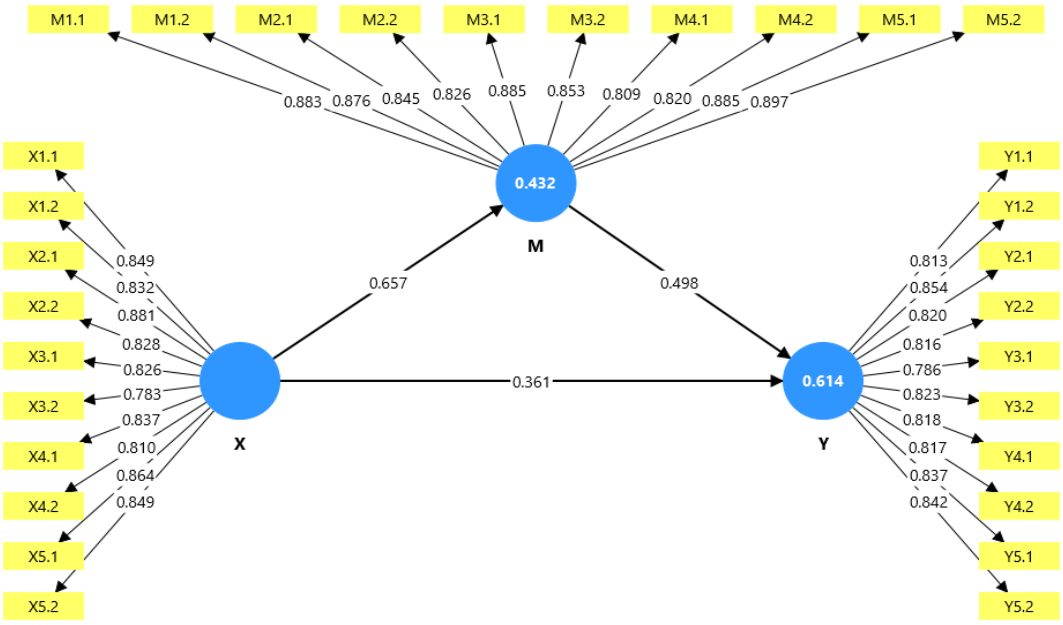
Output SmartPLS 4 – Outer Model Pilot test (n=30)

Konstruk	Kode	Outer Loading	Keterangan
Adopsi QRIS (X)	X1.1	**0,467**	**Perlu Revisi**
	X1.2	**0,729**	**Valid**
	X2.1	**0,790**	**Valid**
	X2.2	**0,741**	**Valid**
	X3.1	**0,714**	**Valid**
	X3.2	**0,571**	**Perlu Revisi**
	X4.1	**0,684**	**Perlu Revisi**
	X4.2	**0,786**	**Valid**
	X5.1	**0,677**	**Perlu Revisi**
	X5.2	**0,440**	**Perlu Revisi**
Efisiensi Transaksi (M)	M1.1	**0,735**	**Valid**
	M1.2	**0,581**	**Perlu Revisi**
	M2.1	**0,695**	**Perlu Revisi**
	M2.2	**0,762**	**Valid**
	M3.1	**0,711**	**Valid**
	M3.2	**0,674**	**Perlu Revisi**
	M4.1	**0,664**	**Perlu Revisi**
	M4.2	**0,626**	**Perlu Revisi**
	M5.1	**0,610**	**Perlu Revisi**
	M5.2	**0,742**	**Valid**
Profitabilitas UMKM (Y)	Y1.1	**0,826**	**Valid**
	Y1.2	**0,699**	**Perlu Revisi**
	Y2.1	**0,716**	**Valid**

	Y2.2	**0,725**	**Valid**
	Y3.1	**0,747**	**Valid**
	Y3.2	**0,712**	**Valid**
	Y4.1	**0,595**	**Perlu Revisi**
	Y4.2	**0,698**	**Perlu Revisi**
	Y5.1	**0,747**	**Valid**
	Y5.2	**0,645**	**Perlu Revisi**

2. Hasil Evaluasi Model Pengukuran (Outer Model) – Data Utama (Model Akhir)

a) Validitas Konvergen (Convergent Validity) – Outer Loadings



Outer Loadings Model Akhir (n=100)

Konstruk	Kode	Outer Loading	Keterangan
Adopsi QRIS (X)	X1.1	**0,849**	**Valid**
	X1.2	**0,832**	**Valid**
	X2.1	**0,881**	**Valid**
	X2.2	**0,828**	**Valid**
	X3.1	**0,826**	**Valid**
	X3.2	**0,783**	**Valid**
	X4.1	**0,837**	**Valid**
	X4.2	**0,810**	**Valid**
	X5.1	**0,864**	**Valid**
	X5.2	**0,849**	**Valid**
Efisiensi Transaksi (M)	M1.1	**0,883**	**Valid**
	M1.2	**0,876**	**Valid**

	M2.1	**0,845**	**Valid**
	M2.2	**0,826**	**Valid**
	M3.1	**0,885**	**Valid**
	M3.2	**0,853**	**Valid**
	M4.1	**0,809**	**Valid**
	M4.2	**0,820**	**Valid**
	M5.1	**0,885**	**Valid**
	M5.2	**0,897**	**Valid**
Profitabilitas UMKM (Y)	Y1.1	**0,813**	**Valid**
	Y1.2	**0,854**	**Valid**
	Y2.1	**0,820**	**Valid**
	Y2.2	**0,816**	**Valid**
	Y3.1	**0,786**	**Valid**
	Y3.2	**0,823**	**Valid**
	Y4.1	**0,818**	**Valid**
	Y4.2	**0,817**	**Valid**
	Y5.1	**0,837**	**Valid**
	Y5.2	**0,842**	**Valid**

b) Construct Reliability and Validity

Konstruk	Cronbach's Alpha	rho_a	Composite Reliability (rho_c)	AVE	Keterangan
Adopsi QRIS (X)	**0,952**	**0,954**	**0,959**	**0,699**	**Valid & Reliabel**
Efisiensi Transaksi (M)	**0,960**	**0,961**	**0,965**	**0,737**	**Valid & Reliabel**
Profitabilitas UMKM (Y)	**0,947**	**0,949**	**0,954**	**0,677**	**Valid & Reliabel**

c) Validitas Diskriminan (Discriminant Validity)

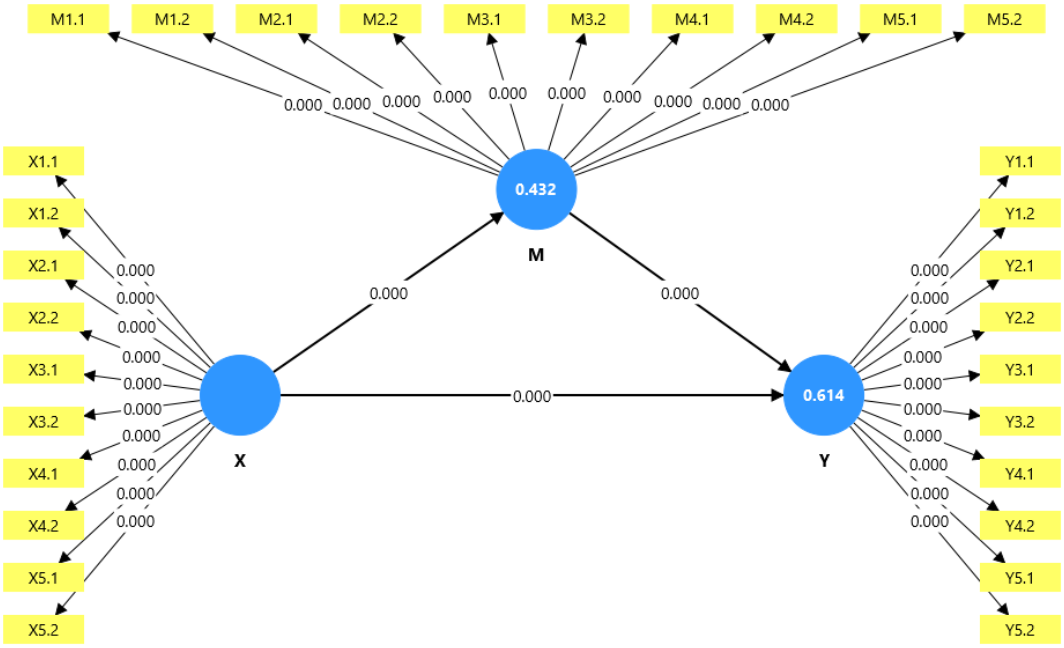
Heterotrait-Monotrait Ratio (HTMT)

Konstruk	Adopsi QRIS (X)	Efisiensi Transaksi (M)	Profitabilitas UMKM (Y)
Adopsi QRIS (X)	—		
Efisiensi Transaksi (M)	**0,682**	—	
Profitabilitas UMKM (Y)	**0,715**	**0,766**	—

Cross Loadings Indikator

Kode	Adopsi QRIS (X)	Efisiensi Transaksi (M)	Profitabilitas UMKM (Y)
X1.1	**0,849**	0,546	0,620
X1.2	**0,832**	0,536	0,520
X2.1	**0,881**	0,631	0,642
X2.2	**0,828**	0,506	0,442
X3.1	**0,826**	0,538	0,548
X3.2	**0,783**	0,504	0,559
X4.1	**0,837**	0,611	0,631
X4.2	**0,810**	0,492	0,605
X5.1	**0,864**	0,574	0,619
X5.2	**0,849**	0,529	0,526
M1.1	0,572	**0,883**	0,663
M1.2	0,601	**0,876**	0,639
M2.1	0,544	**0,845**	0,528
M2.2	0,620	**0,826**	0,657
M3.1	0,619	**0,885**	0,603
M3.2	0,539	**0,853**	0,663
M4.1	0,468	**0,809**	0,607
M4.2	0,503	**0,820**	0,644
M5.1	0,579	**0,885**	0,616
M5.2	0,578	**0,897**	0,673
Y1.1	0,593	0,591	**0,813**
Y1.2	0,641	0,722	**0,854**
Y2.1	0,651	0,616	**0,820**
Y2.2	0,464	0,615	**0,816**
Y3.1	0,540	0,553	**0,786**
Y3.2	0,538	0,580	**0,823**
Y4.1	0,591	0,556	**0,818**
Y4.2	0,453	0,572	**0,817**
Y5.1	0,593	0,651	**0,837**
Y5.2	0,561	0,561	**0,842**

3. Hasil Evaluasi Model Struktural (Inner Model)



Output SmartPLS 4 – Inner Model (n=100)

a) Uji Multikolinearitas – Variance Inflation Factor (VIF)

Jalur Prediktor	VIF Inner Model	Nilai Acuan	Keterangan
Adopsi QRIS (X) → Efisiensi Transaksi (M)	**1,000**	< 3,3	**Tidak Ada Multikolinearitas**
Efisiensi Transaksi (M) → Profitabilitas UMKM (Y)	**1,760**	< 3,3	**Tidak Ada Multikolinearitas**
Adopsi QRIS (X) → Profitabilitas UMKM (Y)	**1,760**	< 3,3	**Tidak Ada Multikolinearitas**

Collinearity Statistics (VIF) – Inner Model

b) Bootstrapping (t-value dan p-value)

Jalur / Hipotesis	Path Coefficient	t-value	p-value	Signifikansi
X → M (H1)	**0,657**	**10,284**	**0,000**	**Signifikan**
M → Y (H2)	**0,498**	**5,733**	**0,000**	**Signifikan**
X → Y Direct (H3)	**0,361**	**4,017**	**0,000**	**Signifikan**
X → M → Y Indirect (H4)	**0,327**	**5,241**	**0,000**	**Signifikan**

Hasil Bootstrapping – Signifikansi Jalur

4. Uji Hipotesis

a) Path Coefficient (Koefisien Jalur)

Jalur	Path Coefficient	Arah	VIF Inner
Adopsi QRIS (X) → Efisiensi Transaksi (M)	0,657	Positif	1,000
Efisiensi Transaksi (M) → Profitabilitas UMKM (Y)	0,498	Positif	1,760
Adopsi QRIS (X) → Profitabilitas UMKM (Y) – direct	0,361	Positif	1,760

Rekapitulasi Path Coefficients dan VIF Inner Model

b) Analisis Mediasi (Indirect Effects)

Komponen	Koefisien	t-value	p-value	Ket.
Direct Effect – Adopsi QRIS (X) → Profitabilitas (Y)	0,361	4,017	0,000	Signifikan
Indirect Effect – X → Efisiensi Transaksi (M) → Y	0,327	5,241	0,000	Signifikan
Total Effect – X → Y	0,688	—	—	—
Jenis Mediasi	Partial Mediation (Mediasi Parsial/Komplementer)	—	—	Terkonfirmasi

Rekapitulasi Efek Langsung, Tidak Langsung, dan Total Efek

c) Uji F-Square (Effect Size)

Jalur	f-Square	Kategori
Adopsi QRIS (X) → Efisiensi Transaksi (M)	0,760	Besar
Efisiensi Transaksi (M) → Profitabilitas UMKM (Y)	0,365	Besar
Adopsi QRIS (X) → Profitabilitas UMKM (Y) – direct	0,192	Sedang–Besar

Hasil Uji Effect Size (f-Square)

d) Uji R-Square (Koefisien Determinasi)

Konstruk Endogen	R-Square	R-Square Adjusted	Kategori	Interpretasi
Efisiensi Transaksi (M)	0,432	0,426	Moderate	Adopsi QRIS menjelaskan sebagian besar varians Efisiensi Transaksi
Profitabilitas UMKM (Y)	0,614	0,606	Moderate–Substantial	Model secara bersama menjelaskan lebih dari separuh varians Profitabilitas

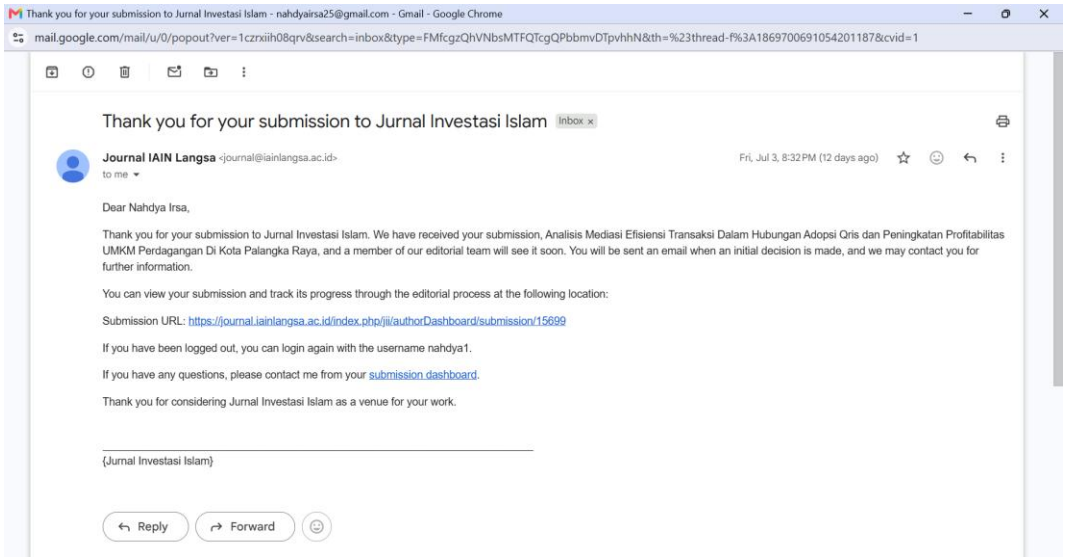
Hasil Uji R-Square

Indikator Fit	Nilai	Nilai Acuan	Keterangan
SRMR	0,058	< 0,08	**Model Fit**
NFI	0,805	≥ 0,80	**Acceptable Fit**

Model Fit

Lampiran 6. Bukti Korepondensi, Bukti Submit, LoA dan Bukti Jurnal Sinta

1. Bukti Korespondesi



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Journal IAIN Langsa <journal@iainlangsa.ac.id> Fri, Jul 3, 8:32 PM (12 days ago)

to me

Dear Nahdya Irsa,

Thank you for your submission to Jurnal Investasi Islam. We have received your submission, Analisis Mediasi Efisiensi Transaksi Dalam Hubungan Adopsi Qris dan Peningkatan Profitabilitas UMKM Perdagangan Di Kota Palangka Raya, and a member of our editorial team will see it soon. You will be sent an email when an initial decision is made, and we may contact you for further information.

You can view your submission and track its progress through the editorial process at the following location:

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If you have any questions, please contact me from your submission dashboard.

Thank you for considering Jurnal Investasi Islam as a venue for your work.

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Reply Forward

Gmail **Nahdya Irsa <nahdyairsa25@gmail.com>**

Your submission has been sent for review

1 message

Journal IAIN Langsa <journal@iainlangsa.ac.id> Fri, Jul 3, 2026 at 9:24 PM
Reply-To: Tajul Ula <tajul.ula@ar-raniry.ac.id>
To: Nahdya Irsa <nahdyairsa25@gmail.com>

Dear Nahdya Irsa,

I am pleased to inform you that an editor has reviewed your submission, Analisis Mediasi Efisiensi Transaksi Dalam Hubungan Adopsi Qris dan Peningkatan Profitabilitas UMKM Perdagangan Di Kota Palangka Raya, and has decided to send it for peer review. An editor will identify qualified reviewers who will provide feedback on your submission.

This journal conducts double-anonymous peer review. The reviewers will not see any identifying information about you or your co-authors. Similarly, you will not know who reviewed your submission, and you will not hear from the reviewers directly. You will hear from us with feedback from the reviewers and information about the next steps.

Please note that sending the submission to peer review does not guarantee that it will be published. We will consider the reviewers' recommendations before deciding to accept the submission for publication. You may be asked to make revisions and respond to the reviewers' comments before a final decision is made.

If you have any questions, please contact me from your submission dashboard.

Tajul Ula

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Artikel ini harus menggunakan Bahasa inggris. Bisa ditranslasi Ketika revisi

Analisis Mediasi Efisiensi Transaksi Dalam Hubungan Adopsi Qris dan Peningkatan Profitabilitas UMKM Perdagangan Di Kota Palangka Raya

Commented [T1]: Judul sudah menggambarkan variabel utama, objek penelitian, serta lokasi penelitian. Penggunaan istilah *mediasi*, *adopsi QRIS*, *profitabilitas*, dan *UMKM perdagangan* telah mencerminkan isi penelitian.
Namun demikian, judul masih bersifat cukup panjang dan belum secara eksplisit menunjukkan nilai kebaruan (novelty). Frasa *Analisis Mediasi* juga kurang informatif dibandingkan apabila langsung menunjukkan hubungan kausal yang diuji.
Selain itu, istilah *Peningkatan Profitabilitas* dapat menimbulkan interpretasi kausal yang terlalu kuat, padahal penelitian menggunakan desain survei cross-sectional sehingga yang diuji adalah pengaruh berdasarkan persepsi responden.
Rekomendasi Perbaikan
- Ringkas judul agar lebih padat.
- Hindari kata-kata yang terlalu deskriptif seperti "Analisis Mediasi".
- Gunakan istilah yang menunjukkan model penelitian.

Contoh alternatif:
Transaction Efficiency as a Mediator in the Relationship between QRIS Adoption and MSME Profitability: Evidence from Trading MSMEs in Palangka Raya
atau
Does Transaction Efficiency Mediate the Effect of QRIS Adoption on MSME Profitability? Evidence from Trading MSMEs

Nahdya Irsa[1], Roby Sambung[2], Ronni Haga[3], Dhina Sri Widyaningsih[4]

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Submitted:m/d/y Accepted: m/d/y Published: m/d/y

Keywords: *QRIS Adoption, Transaction Efficiency, MSME Profitability, Partial Least Squares.*

Kata Kunci: *Adopsi QRIS, Efisiensi Transaksi, Profitabilitas UMKM, Partial Least Square.*

Abstract

This study aims to examine the effect of Quick Response Code Indonesian Standard (QRIS) adoption on the profitability of trading micro, small, and medium enterprises (MSMEs) in Palangka Raya City, with transaction efficiency positioned as a mediating variable, given the persistent gap between the rapid growth of QRIS merchants and the uncertain financial benefit felt by traders who bear the Merchant Discount Rate (MDR) cost. A quantitative associative-causal design was employed using a questionnaire survey distributed to 100 trading MSME respondents selected through purposive sampling across Jekan Raya, Pahandut, and Sebangau Districts, and the data were analyzed using Structural Equation Modeling based on Partial Least Squares (SEM-PLS) with SmartPLS 4.0. The measurement model met all validity and reliability criteria, and bootstrapping results show that QRIS adoption has a positive and significant effect on transaction efficiency and on profitability; transaction efficiency significantly affects profitability; and transaction efficiency partially and complementarily mediates the QRIS-profitability relationship, with all four hypotheses supported at the 95% confidence level. These findings imply that the profitability gain from QRIS is not automatic; it is optimized when MSME actors actively use QRIS features to build genuine operational efficiency, so that policy support should shift from merely expanding merchant registration toward strengthening MSME capacity to utilize digital cash-management features.

Abstrak

Penelitian ini bertujuan untuk menganalisis pengaruh adopsi Quick Response Code Indonesian Standard (QRIS) terhadap profitabilitas Usaha Mikro, Kecil, dan Menengah (UMKM) sektor perdagangan di Kota Palangka Raya, dengan efisiensi transaksi diposisikan sebagai variabel mediasi, mengingat masih terdapat kesenjangan antara pesatnya pertumbuhan jumlah merchant QRIS dan manfaat finansial yang belum sepenuhnya dirasakan pedagang akibat beban biaya Merchant Discount Rate (MDR). Penelitian menggunakan pendekatan kuantitatif asosiatif kausal dengan metode survei melalui kuesioner kepada 100 responden UMKM perdagangan yang dipilih secara purposive sampling di Kecamatan Jekan Raya, Pahandut, dan Sebangau, dan data dianalisis menggunakan Structural Equation Modeling berbasis Partial Least Square (SEM-PLS) dengan SmartPLS 4.0. Model pengukuran memenuhi seluruh kriteria validitas dan reliabilitas, dan hasil bootstrapping menunjukkan bahwa adopsi QRIS berpengaruh positif dan signifikan terhadap efisiensi transaksi maupun profitabilitas, efisiensi transaksi berpengaruh positif dan signifikan terhadap profitabilitas, serta efisiensi transaksi memediasi hubungan adopsi QRIS dan profitabilitas secara parsial dan komplementer, sehingga keempat hipotesis penelitian terdukung

pada tingkat kepercayaan 95%. Temuan ini mengimplikasikan bahwa manfaat profitabilitas dari QRIS tidak bersifat otomatis, melainkan optimal ketika pelaku UMKM secara aktif memanfaatkan fitur QRIS untuk menciptakan efisiensi operasional yang nyata, sehingga dukungan kebijakan perlu bergeser dari sekadar perluasan pendaftaran merchant menuju penguatan kapasitas UMKM dalam mengoptimalkan fitur manajemen kas digital.

PENDAHULUAN

Usaha Mikro, Kecil, dan Menengah (UMKM) merupakan pilar stabilitas ekonomi nasional yang memiliki daya tahan tinggi terhadap guncangan krisis global. Di era ekonomi digital, keberlanjutan usaha semakin bergantung pada kemampuan pelaku usaha beradaptasi dengan sistem pembayaran digital yang efisien untuk menunjang kinerja bisnis secara berkelanjutan. Berbagai kajian empiris mengonfirmasi hubungan positif antara adopsi teknologi finansial dan kinerja UMKM (Zikrillah & Sartika, 2024), sementara persepsi manfaat dan kemudahan penggunaan financial technology terbukti menjadi pendorong utama minat UMKM untuk mengadopsi sistem pembayaran digital (Setyo & Ramadani, 2022).

Akselerator utama transformasi ini adalah Quick Response Code Indonesian Standard (QRIS) yang dikembangkan Bank Indonesia sejak 2019 melalui Blueprint Sistem Pembayaran Indonesia 2025 (Bank Indonesia, 2019) untuk menciptakan sistem pembayaran yang inklusif, aman, dan efisien. Data Bank Indonesia (2025) mencatat jumlah merchant QRIS di Kalimantan Tengah mencapai 381.262 pada Oktober 2025, dengan Kota Palangka Raya sebagai pusat adopsi tertinggi di provinsi tersebut, yaitu 72.981 merchant, meningkat lebih dari lima kali lipat sejak 2021 sebagai bagian dari misi Smart Economy pemerintah daerah (Bappedalitbang Kota Palangka Raya, 2021). Konsentrasi UMKM perdagangan tertinggi berada di Kecamatan Jekan Raya, yang mencakup 10.254 usaha atau sekitar 43,3% dari total 23.683 usaha sektor hotel, perdagangan, dan rumah makan se-Kota Palangka Raya (BPS Kota Palangka Raya, 2026).

Pesatnya pertumbuhan adopsi ini memunculkan pertanyaan kritis mengenai dampak riilnya terhadap profitabilitas pedagang. Studi pra-riset peneliti di Kecamatan Jekan Raya menemukan bahwa pelaku UMKM masih mengeluhkan biaya Merchant Discount Rate (MDR) sebesar 0,3%-0,7%, sementara Peraturan Bank Indonesia Nomor 23/6/PBI/2021 secara tegas melarang pedagang membebankan biaya tersebut kepada konsumen. Kondisi ini menempatkan UMKM dengan margin laba tipis pada posisi dilematis, sehingga manfaat finansial QRIS

tidak dapat diperoleh melalui kenaikan harga, melainkan harus diupayakan melalui jalur efisiensi transaksi, seperti penghematan pengelolaan uang tunai, kecepatan layanan, dan akurasi pencatatan otomatis. Fenomena ini mengindikasikan bahwa efisiensi yang ditawarkan digitalisasi pembayaran belum tentu bertransformasi secara otomatis menjadi peningkatan profitabilitas yang signifikan bagi pelaku usaha kecil.

Penelitian ini dibangun di atas landasan Resource-Based View (RBV) sebagai grand theory. Menurut Barney (1991), kesuksesan finansial perusahaan bergantung pada kemampuan mengelola sumber daya strategis yang bernilai dan unik. Dalam konteks ini, adopsi QRIS dipandang sebagai aset digital yang mampu menciptakan keunggulan kompetitif bagi UMKM. Namun demikian, kepemilikan teknologi saja tidak menjamin keuntungan. Berdasarkan Transaction Cost Theory (TCT) yang diperkenalkan Williamson (2008), nilai ekonomi muncul apabila teknologi mampu menekan biaya friksi dalam proses transaksi, sehingga efisiensi transaksi dihadirkan sebagai variabel mediasi agar QRIS tidak sekadar menjadi beban biaya, melainkan mampu dikonversi menjadi profitabilitas melalui penghematan waktu operasional dan akurasi pencatatan kas. Sisi perilaku penerimaan teknologi oleh pedagang dijelaskan melalui Technology Acceptance Model (TAM), yang menekankan bahwa penerimaan teknologi ditentukan oleh persepsi kemudahan penggunaan (perceived ease of use) dan persepsi kebermanfaatan (perceived usefulness).

Penelitian terdahulu telah banyak mengonfirmasi hubungan positif antara adopsi QRIS/fintech dan kinerja UMKM. Elmahdy et al. (2025) menemukan bahwa efisiensi operasional menjadi pendorong utama keuntungan dalam adopsi teknologi finansial, sementara Utami (2025) membuktikan bahwa inklusi keuangan digital melalui QRIS berkorelasi positif dengan profitabilitas UMKM. Tur Wasiah & Sartika (2025) menunjukkan bahwa kemudahan transaksi pembayaran memediasi hubungan antara teknologi finansial dan kinerja keuangan UMKM, sejalan dengan temuan Latifah & Waluya (2023) mengenai peran mediasi kemudahan transaksi pada fintech syariah. Meskipun demikian, penelitian yang secara spesifik menguji peran efisiensi transaksi sebagai variabel mediasi antara adopsi QRIS dan profitabilitas pada UMKM sektor perdagangan di Kota Palangka Raya masih sangat terbatas, sehingga penelitian ini memiliki posisi strategis untuk mengisi celah tersebut (research gap).

Rujukan lain turut memperkaya pemahaman mengenai mekanisme fintech terhadap kinerja UMKM. Rika & Candraningrat (2022) menemukan bahwa fintech memengaruhi kinerja keuangan UMKM dengan literasi keuangan sebagai variabel moderasi, sementara Dali et al. (2023) menunjukkan bahwa payment gateway dan e-money berkontribusi terhadap peningkatan kinerja keuangan UMKM melalui percepatan pencatatan dan pengurangan kesalahan transaksi. Nugraha et al. (2022) menambahkan bahwa dorongan inovasi menjadi salah satu pendorong utama adopsi fintech pada UMKM di Indonesia. Berbagai temuan tersebut secara konsisten mengonfirmasi hubungan positif antara adopsi teknologi pembayaran digital dan kinerja UMKM, namun mekanisme (intervening mechanism) yang menjelaskan bagaimana pengaruh tersebut terjadi masih menjadi area yang perlu digali lebih dalam, khususnya dalam konteks UMKM sektor perdagangan di kota-kota berkembang seperti Palangka Raya.

Kebaruan penelitian ini terletak pada tiga aspek. Pertama, secara teoretis, penelitian ini mengintegrasikan tiga grand theory sekaligus, yaitu Resource-Based View, Technology Acceptance Model, dan Transaction Cost Theory, dalam satu model kausalitas yang kohesif untuk menjelaskan mekanisme konversi adopsi teknologi menjadi profitabilitas, alih-alih hanya menguji hubungan langsung antara kedua variabel tersebut sebagaimana banyak dilakukan penelitian terdahulu. Kedua, secara metodologis, penelitian ini menggunakan pendekatan SEM-PLS dengan prosedur pilot test dua tahap yang ketat, sehingga instrumen penelitian teruji secara empiris sebelum digunakan pada data utama. Ketiga, secara kontekstual, penelitian ini berfokus pada UMKM sektor perdagangan di wilayah dengan kepadatan adopsi QRIS tertinggi di Kalimantan Tengah, sebuah konteks yang secara spesifik belum banyak dieksplorasi dalam literatur mediasi efisiensi transaksi pada digitalisasi UMKM di Indonesia.

Berdasarkan uraian tersebut, penelitian ini bertujuan untuk menganalisis pengaruh adopsi Quick Response Code Indonesian Standard (QRIS) terhadap efisiensi transaksi UMKM sektor perdagangan di Kota Palangka Raya, menganalisis pengaruh efisiensi transaksi terhadap profitabilitas UMKM, serta menguji pengaruh langsung adopsi QRIS terhadap profitabilitas UMKM. Selain itu, penelitian ini juga bertujuan untuk menguji peran efisiensi transaksi sebagai variabel mediasi dalam

hubungan antara adopsi QRIS dan profitabilitas UMKM. Hasil penelitian diharapkan dapat memberikan kontribusi praktis bagi pelaku UMKM dalam mengoptimalkan pemanfaatan QRIS sebagai instrumen pembayaran digital untuk meningkatkan efisiensi operasional dan profitabilitas usaha. Di samping itu, temuan penelitian ini diharapkan menjadi masukan bagi Bank Indonesia dan pemerintah daerah dalam merumuskan kebijakan, program edukasi, serta insentif digitalisasi yang lebih efektif untuk mempercepat transformasi digital UMKM. Secara akademis, penelitian ini diharapkan dapat memperkaya literatur mengenai adopsi teknologi keuangan digital dengan menjelaskan mekanisme mediasi efisiensi transaksi dalam hubungan antara implementasi QRIS dan peningkatan profitabilitas UMKM.

METODE

Penelitian ini menggunakan metode kuantitatif dengan sifat asosiatif kausal untuk menguji hubungan sebab-akibat antarvariabel. Data primer dikumpulkan melalui kuesioner yang disebarkan secara langsung (door-to-door) maupun melalui Google Form kepada pelaku UMKM, sedangkan data sekunder diperoleh dari publikasi Bank Indonesia dan Badan Pusat Statistik untuk memperkuat validitas temuan lapangan melalui triangulasi data (Suryono et al., 2020).

Populasi penelitian adalah seluruh pelaku UMKM sektor perdagangan yang telah menggunakan QRIS di Kota Palangka Raya. Tercatat sebanyak 23.683 usaha hotel, perdagangan, dan rumah makan (BPS Kota Palangka Raya, 2026). Ukuran sampel ditetapkan sebanyak 100 responden, yang menurut Hair et al. (2019) telah memberikan kekuatan statistik yang memadai (di atas 0,80) untuk analisis SEM-PLS dengan model jalur moderat. Teknik pengambilan sampel menggunakan purposive sampling dengan kriteria: (1) UMKM sektor perdagangan (bukan jasa murni); (2) berdomisili di Kota Palangka Raya; (3) telah menggunakan QRIS minimal 3 bulan; dan (4) responden merupakan pemilik/pengelola keuangan usaha. Sampel dialokasikan secara proporsional dengan konsentrasi terbesar di Kecamatan Jekan Raya (60 responden), diikuti Pahandut (30 responden) dan Sebangau (10 responden), sesuai dengan tingkat kepadatan aktivitas ekonomi dan adopsi QRIS di masing-masing wilayah.

Commented [T2]: beberapa kekurangan.

Justifikasi ukuran sampel masih kurang
Penulis hanya mengutip Hair (2019).
Reviewer menyarankan ditambahkan:
- power analysis
- minimum sample requirement atau
- inverse square root method

agar justifikasi lebih kuat.

Instrumen penelitian belum ditampilkan
Tabel indikator masih sangat umum.
Reviewer mengharapkan contoh item kuesioner atau lampiran instrumen.

Teknik observasi kurang dijelaskan
Penulis menyebut melakukan observasi.
Namun:
- bagaimana prosedurnya,
- siapa yang melakukan,
- bagaimana hasil observasi digunakan,

belum dijelaskan.

Persamaan model dalam penelitian ini belum dijelaskan

Rekomendasi
Tambahkan:
- justifikasi ukuran sampel;
- contoh indikator;
- prosedur observasi.
- Tapilkan persamaan model dalam penelitian ini.

Definisi Operasional dan Pengukuran Variabel

Penelitian ini melibatkan tiga variabel laten yang diukur menggunakan Skala Likert 5 poin (1 = Sangat Tidak Setuju hingga 5 = Sangat Setuju). Adopsi QRIS (X) berlandaskan Technology Acceptance Model, diukur melalui indikator persepsi kemudahan, persepsi kegunaan, keandalan sistem, fitur pendukung, dan intensi berlanjut. Efisiensi Transaksi (M) berlandaskan Transaction Cost Theory, diukur melalui efisiensi waktu, peniadaan uang receh, akurasi nominal, kemudahan rekonsiliasi, dan mitigasi risiko. Profitabilitas UMKM (Y) berlandaskan Resource-Based View, diukur melalui volume penjualan, kenaikan omzet, efisiensi biaya, laba bersih, dan perluasan pelanggan, sebagaimana dirangkum pada Tabel 1.

Tabel 1. Definisi Operasional Variabel

Variabel	Definisi Operasional	Dimensi Indikator
Adopsi QRIS (X)	Tingkat penerimaan dan penggunaan sistem pembayaran digital QRIS oleh pelaku UMKM berdasarkan persepsi kemudahan dan kegunaan.	Kemudahan & kegunaan, kehandalan sistem, fitur pendukung, intensi berlanjut
Efisiensi Transaksi (M)	Kemampuan sistem meminimalkan penggunaan sumber daya waktu, biaya, dan kesalahan manusia dalam proses transaksi.	Efisiensi operasional, manajemen kas kecil, akurasi & rekonsiliasi, mitigasi risiko
Profitabilitas UMKM (Y)	Persepsi pelaku UMKM terhadap kenaikan kinerja keuangan dari pertumbuhan penjualan dan efisiensi biaya.	Kinerja penjualan, kenaikan omzet & laba, efisiensi struktur biaya, perluasan segmen

Sumber: Data diolah oleh peneliti (2026).

Commented [T3]: Hindari Simbol X M dan Y ganti dengan nama singkatan variabel

Teknik Pengumpulan Data

Kuesioner merupakan instrumen utama yang dikembangkan berdasarkan indikator-indikator teoretis yang disintesis dari RBV, TCT, dan TAM. Sebelum pengambilan data utama, instrumen diuji coba (pilot test) pada 30 pelaku UMKM untuk memastikan butir pernyataan tidak ambigu dan mudah dipahami responden. Pengumpulan data dilakukan dengan metode self-administered berpendampingan, yaitu peneliti mendatangi lokasi usaha secara langsung (door-to-door) dan mendampingi responden dalam pengisian kuesioner untuk menjelaskan istilah teknis jika diperlukan, dilengkapi dengan skrining singkat di awal untuk memastikan responden memenuhi kriteria sampel. Bagi responden dengan mobilitas tinggi, disediakan alternatif akses kuesioner melalui Google Form dengan tetap dilakukan pemantauan berkala. Sebagai teknik pendukung, peneliti juga melakukan observasi lapangan untuk validasi silang (cross-check), meliputi verifikasi ketersediaan atribut

QRIS aktif di lokasi usaha serta pengamatan durasi penyelesaian transaksi digital dibandingkan dengan tunai guna memvalidasi aspek efisiensi waktu secara objektif.

Teknik Analisis Data

Data dianalisis menggunakan Structural Equation Modeling berbasis Partial Least Squares (SEM-PLS) dengan perangkat lunak SmartPLS 4.0, yang dipilih karena keunggulannya dalam mengelola model kompleks dengan variabel laten dan tetap optimal pada ukuran sampel relatif kecil. Sebelum pengumpulan data utama, kuesioner diuji melalui pilot test terhadap 31 responden; hasilnya mengidentifikasi 15 butir pernyataan yang memerlukan revisi redaksi berdasarkan nilai outer loading di bawah ambang batas (Hair et al., 2019). Analisis outer model mencakup uji validitas konvergen (outer loading ≥ 0,70 dan Average Variance Extracted/AVE > 0,50), validitas diskriminan melalui Heterotrait-Monotrait Ratio (HTMT < 0,90) dan cross loading, serta reliabilitas melalui Cronbach's Alpha dan Composite Reliability (≥ 0,70). Analisis inner model mencakup uji multikolinearitas melalui Variance Inflation Factor (VIF < 3,3), bootstrapping dengan 5.000 subsampel (Fallo et al., 2020) untuk menentukan signifikansi jalur (t-value ≥ 1,96; p-value < 0,05), uji efek mediasi melalui perbandingan pengaruh langsung dan tidak langsung, uji effect size (f-square), dan uji koefisien determinasi (R-square) mengacu pada kriteria.

HASIL DAN PEMBAHASAN

Hasil

Commented [T4]: Terlalu banyak narasi yang mengulang tabel
Misalnya setelah Tabel 2,
penulis kembali menuliskan seluruh isi tabel.
Hal ini menyebabkan pembahasan menjadi repetitif.
Rekomendasi
- ringkas narasi hasil;

Gambaran Umum Objek Penelitian

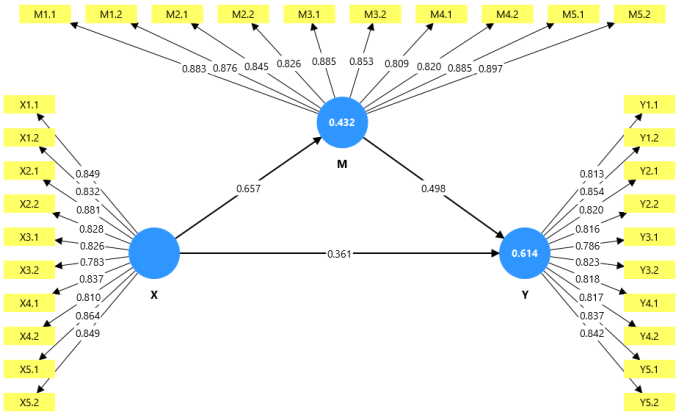
Penelitian ini berfokus pada pelaku UMKM sektor perdagangan di Kota Palangka Raya yang telah mengadopsi QRIS sebagai sistem pembayaran digital. Sektor perdagangan dipilih karena memiliki intensitas perputaran transaksi harian yang tinggi, sehingga relevan untuk mengukur dampak efisiensi transaksi terhadap profitabilitas usaha secara nyata dan terukur. Meskipun Kota Palangka Raya memiliki wilayah yang luas, pusat aktivitas ekonomi dan sektor perdagangan secara masif terkonsentrasi di Kecamatan Jekan Raya dan Pahandut, yang mendominasi lebih dari 80% total UMKM di kota ini (BPS Kota Palangka Raya, 2026). Tingginya konsentrasi UMKM perdagangan di kedua kecamatan tersebut didorong oleh statusnya sebagai pusat pendidikan tinggi di Kalimantan Tengah, yang menciptakan

ekosistem pasar dengan dominasi konsumen Generasi Z sebagai digital native, sehingga mendorong pelaku UMKM menyelaraskan layanan dengan preferensi pembayaran nontunai generasi muda. Kecamatan Sebangau menunjukkan tren pertumbuhan adopsi QRIS yang positif terutama pada sektor UMKM di kawasan wisata, sementara Kecamatan Bukit Batu masih menghadapi keterbatasan infrastruktur jaringan internet yang menghambat digitalisasi ekonomi lokal.

Karakteristik Responden

Pengumpulan data melibatkan 100 responden pelaku UMKM sektor perdagangan yang memenuhi seluruh kriteria purposive sampling. Distribusi responden terbesar berada di Kecamatan Jekan Raya (60%), diikuti Pahandut (30%) dan Sebangau (10%), sesuai rencana alokasi sampel. Berdasarkan bidang usaha, segmen kuliner mendominasi profil responden (89%), diikuti toko kelontong (6%), fashion (3%), dan bidang usaha lainnya (2%), sejalan dengan karakteristik ekosistem UMKM di sekitar kawasan kampus dan permukiman padat. Mayoritas responden (87%) telah beroperasi lebih dari tiga tahun dan 96% telah menggunakan QRIS lebih dari satu tahun, sehingga responden memiliki pengalaman yang cukup untuk menilai dampak adopsi QRIS secara objektif. Sebagian besar responden (81%) melakukan transaksi QRIS 10-30 kali per hari, mengonfirmasi bahwa QRIS telah menjadi instrumen pembayaran utama, bukan sekadar alat pelengkap, dalam operasional harian UMKM perdagangan di Kota Palangka Raya.

Evaluasi Model Pengukuran (Outer Model)



Gambar 1. Diagram Outer Model (Nilai Outer Loading)

Hasil evaluasi model pengukuran pada data utama (n=100) menunjukkan bahwa seluruh 30 indikator dari ketiga konstruk memenuhi syarat validitas konvergen, dengan nilai outer loading berkisar antara 0,783-0,897 (rincian pada Tabel 2), jauh di atas ambang batas minimum 0,70 (Hair et al., 2019). Nilai Average Variance Extracted (AVE) ketiga konstruk juga seluruhnya melampaui 0,50.

Tabel 2. Outer Loadings Model Akhir (n=100)

Konstruk	Kode	Outer Loading	Keterangan
Adopsi QRIS (X)	X1.1	0,849	Valid
	X1.2	0,832	Valid
	X2.1	0,881	Valid
	X2.2	0,828	Valid
	X3.1	0,826	Valid
	X3.2	0,783	Valid
	X4.1	0,837	Valid
	X4.2	0,810	Valid
	X5.1	0,864	Valid
	X5.2	0,849	Valid
Efisiensi Transaksi (M)	M1.1	0,883	Valid
	M1.2	0,876	Valid
	M2.1	0,845	Valid
	M2.2	0,826	Valid
	M3.1	0,885	Valid
	M3.2	0,853	Valid
	M4.1	0,809	Valid
	M4.2	0,820	Valid
	M5.1	0,885	Valid
	M5.2	0,897	Valid
Profitabilitas UMKM (Y)	Y1.1	0,813	Valid
	Y1.2	0,854	Valid
	Y2.1	0,820	Valid
	Y2.2	0,816	Valid
	Y3.1	0,786	Valid
	Y3.2	0,823	Valid
	Y4.1	0,818	Valid
	Y4.2	0,817	Valid
	Y5.1	0,837	Valid
	Y5.2	0,842	Valid

Sumber: Output SmartPLS 4, data diolah peneliti (2026). Nilai acuan outer loading ≥ 0,70 (Hair et al., 2019).

Tabel 2 menyajikan nilai outer loading tiap indikator pada model akhir (n=100). Seluruh tiga puluh indikator dari ketiga konstruk—Adopsi QRIS, Efisiensi Transaksi, dan Profitabilitas UMKM—memiliki nilai outer loading di atas ambang batas minimum 0,70, dengan kontribusi pengukuran tertinggi pada indikator M5.2 yang berkaitan dengan rasa aman dari risiko menyimpan uang tunai berlebih, serta X2.1 yang berkaitan dengan persepsi kepraktisan dan efisiensi pelayanan penjualan,

sehingga validitas konvergen model penelitian ini terpenuhi secara empiris.

Tabel 3. Construct Reliability and Validity

Konstruk	Cronbach's Alpha	Composite Reliability	AVE	Keterangan
Adopsi QRIS (X)	0,952	0,959	0,699	Valid & Reliabel
Efisiensi Transaksi (M)	0,960	0,965	0,737	Valid & Reliabel
Profitabilitas UMKM (Y)	0,947	0,954	0,677	Valid & Reliabel

Sumber: Output SmartPLS 4, data diolah oleh peneliti (2026). Nilai acuan: Cronbach's Alpha & CR ≥ 0,70; AVE > 0,50.

Seluruh nilai Cronbach's Alpha (0,947-0,960) dan Composite Reliability (0,954-0,965) berada jauh di atas batas minimum, menunjukkan konsistensi internal instrumen yang sangat tinggi. Validitas diskriminan diuji melalui Heterotrait-Monotrait Ratio (HTMT) sebagaimana disajikan pada Tabel 4, yang seluruh nilainya (0,682-0,766) berada di bawah ambang batas 0,90 (Henseler et al., 2015), diperkuat oleh pola cross-loading yang secara konsisten menunjukkan loading tertinggi pada konstruknya sendiri di seluruh 30 indikator sebagaimana disajikan pada Tabel 5. Konstruk terbukti secara empiris unik dan berbeda satu sama lain, sehingga analisis dapat dilanjutkan ke tahap model struktural.

Tabel 4. Heterotrait-Monotrait Ratio (HTMT)

Konstruk	Adopsi QRIS (X)	Efisiensi Transaksi (M)	Profitabilitas UMKM (Y)
Adopsi QRIS (X)	—		
Efisiensi Transaksi (M)	0,682	—	
Profitabilitas UMKM (Y)	0,715	0,766	—

Sumber: Output SmartPLS 4, data diolah oleh peneliti (2026). Nilai acuan: HTMT < 0,90

Tabel 4 menunjukkan bahwa seluruh nilai HTMT antarpasangan konstruk (0,682-0,766) berada di bawah ambang batas 0,90 (Henseler et al., 2015), membuktikan bahwa ketiga konstruk penelitian—Adopsi QRIS, Efisiensi Transaksi, dan Profitabilitas UMKM—secara empiris berbeda dan tidak terjadi tumpang tindih pengukuran antarkonstruk.

Tabel 5. Cross Loadings Indikator

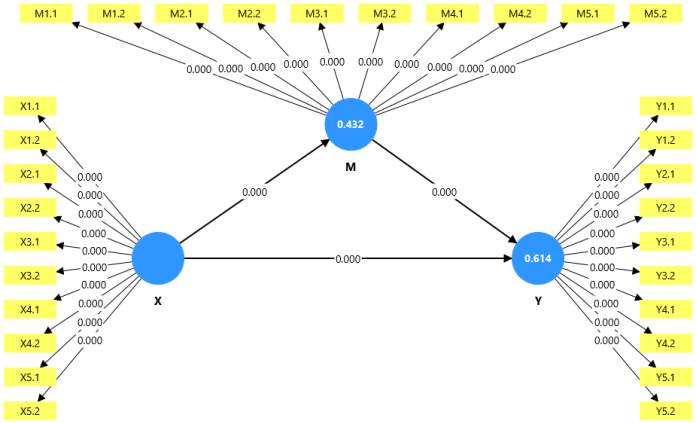
Kode	Adopsi QRIS (X)	Efisiensi Transaksi (M)	Profitabilitas UMKM (Y)
X1.1	**0,849**	0,546	0,620
X1.2	**0,832**	0,536	0,520
X2.1	**0,881**	0,631	0,642

X2.2	**0,828**	0,506	0,442
X3.1	**0,826**	0,538	0,548
X3.2	**0,783**	0,504	0,559
X4.1	**0,837**	0,611	0,631
X4.2	**0,810**	0,492	0,605
X5.1	**0,864**	0,574	0,619
X5.2	**0,849**	0,529	0,526
M1.1	0,572	**0,883**	0,663
M1.2	0,601	**0,876**	0,639
M2.1	0,544	**0,845**	0,528
M2.2	0,620	**0,826**	0,657
M3.1	0,619	**0,885**	0,603
M3.2	0,539	**0,853**	0,663
M4.1	0,468	**0,809**	0,607
M4.2	0,503	**0,820**	0,644
M5.1	0,579	**0,885**	0,616
M5.2	0,578	**0,897**	0,673
Y1.1	0,593	0,591	**0,813**
Y1.2	0,641	0,722	**0,854**
Y2.1	0,651	0,616	**0,820**
Y2.2	0,464	0,615	**0,816**
Y3.1	0,540	0,553	**0,786**
Y3.2	0,538	0,580	**0,823**
Y4.1	0,591	0,556	**0,818**
Y4.2	0,453	0,572	**0,817**
Y5.1	0,593	0,651	**0,837**
Y5.2	0,561	0,561	**0,842**

Sumber: Output SmartPLS 4, data diolah oleh peneliti (2026). Angka dicetak tebal menunjukkan loading tertinggi pada konstruknya sendiri (diagonal dominan).

Tabel 5 mengonfirmasi bahwa seluruh indikator secara konsisten memiliki nilai loading tertinggi pada konstruknya sendiri dibandingkan dengan konstruk lain, sehingga validitas diskriminan model penelitian ini terpenuhi secara penuh. Dengan demikian, ketiga konstruk—Adopsi QRIS, Efisiensi Transaksi, dan Profitabilitas UMKM—terbukti secara empiris unik dan berbeda satu sama lain, sehingga analisis dapat dilanjutkan ke tahap model struktural.

Evaluasi Model Struktural (Inner Model) dan Uji Hipotesis



Gambar 2. Diagram Inner Model (Koefisien Jalur dan R-Square)

Uji multikolinearitas menunjukkan seluruh nilai Variance Inflation Factor (VIF) inner model berada pada rentang 1,000-1,760, jauh di bawah ambang batas kritis 3,3, sehingga tidak terdapat masalah multikolinearitas yang dapat mendistorsi estimasi koefisien jalur. Pengujian signifikansi jalur dilakukan melalui bootstrapping dengan 5.000 subsampel, dengan hasil yang disajikan pada Tabel 6.

Tabel 6. Hasil Pengujian Hipotesis (Bootstrapping)

Hipotesis / Jalur	Koefisien Jalur	t-value	p-value	Keterangan
H1: Adopsi QRIS (X) → Efisiensi Transaksi (M)	0,657	10,284	0,000	Diterima
H2: Efisiensi Transaksi (M) → Profitabilitas (Y)	0,498	5,733	0,000	Diterima
H3: Adopsi QRIS (X) → Profitabilitas (Y) - langsung	0,361	4,017	0,000	Diterima
H4: Adopsi QRIS (X) → M → Profitabilitas (Y) - mediasi	0,327	5,241	0,000	Diterima

Sumber: Output SmartPLS 4 (Bootstrapping 5.000 subsampel), data diolah oleh peneliti (2026). Nilai acuan: t-value ≥ 1,96; p-value < 0,05.

Tabel 6 menunjukkan bahwa keempat jalur, termasuk efek mediasi pada H4, memiliki t-value yang jauh melampaui ambang batas minimum dan p-value 0,000, sehingga seluruh hipotesis penelitian terdukung secara statistik pada tingkat kepercayaan 95%. Analisis efek mediasi lebih lanjut membuktikan bahwa pengaruh langsung (koefisien 0,361; p=0,000) dan pengaruh tidak langsung (koefisien 0,327; p=0,000) keduanya signifikan secara bersamaan, dengan total efek mencapai 0,688,

Efisiensi Transaksi berfungsi sebagai mediator parsial yang bersifat komplementer (complementary partial mediation) dalam hubungan Adopsi QRIS dan Profitabilitas UMKM.

Uji effect size (f-square) menunjukkan bahwa jalur Adopsi QRIS terhadap Efisiensi Transaksi memiliki kontribusi terbesar dengan kategori besar ($f^2 = 0,760$), diikuti jalur Efisiensi Transaksi terhadap Profitabilitas UMKM yang juga tergolong besar ($f^2 = 0,365$), sementara pengaruh langsung Adopsi QRIS terhadap Profitabilitas tergolong sedang hingga besar ($f^2 = 0,192$), mengacu pada klasifikasi Hair et al. (2019).

Tabel 7. Hasil Uji R-Square dan Model Fit

Konstruk / Indikator	Nilai	Kategori
R-Square - Efisiensi Transaksi (M)	0,432	Moderate
R-Square - Profitabilitas UMKM (Y)	0,614	Moderate-Substantial
SRMR	0,058	Model Fit (< 0,08)
NFI	0,805	Acceptable Fit (≥ 0,80)

Sumber: Output SmartPLS 4, data diolah peneliti (2026). Kategorisasi R-Square mengacu pada Hair et al. (2019).

Tabel 7 menunjukkan bahwa Adopsi QRIS mampu menjelaskan 43,2% varians Efisiensi Transaksi (kategori moderat), sementara Adopsi QRIS dan Efisiensi Transaksi secara bersama-sama menjelaskan 61,4% varians Profitabilitas UMKM (kategori moderat mendekati kuat), dengan sisanya sekitar 38,6% dijelaskan oleh faktor lain di luar model penelitian ini, seperti kondisi makroekonomi, strategi pemasaran, atau ketersediaan modal usaha, yang membuka ruang bagi penelitian lanjutan. Nilai SRMR sebesar 0,058 yang berada di bawah ambang batas 0,08 serta NFI sebesar 0,805 yang melampaui 0,80 mengonfirmasi bahwa model penelitian ini memiliki kecocokan yang baik (good model fit) dan layak digunakan sebagai representasi valid dari fenomena yang diteliti.

Pembahasan

Hasil pengujian hipotesis pertama membuktikan bahwa adopsi QRIS berpengaruh positif dan signifikan terhadap efisiensi transaksi UMKM perdagangan di Kota Palangka Raya, dengan effect size tergolong besar, sehingga H1 diterima. Temuan ini berlandaskan Technology Acceptance Model bahwa pelaku UMKM yang menginternalisasi persepsi kemudahan dan kebermanfaatan QRIS mengalami perubahan perilaku transaksi dari manual ke digital, yang menghasilkan efisiensi terukur. Dari perspektif Transaction Cost Theory, adopsi QRIS mereduksi tiga komponen biaya transaksi tersembunyi, yaitu biaya pengelolaan uang kembalian, biaya risiko salah hitung, dan biaya penyimpanan uang tunai (Williamson, 2008). Temuan ini sejalan dengan penelitian Suyatna (2024) di wilayah yang sama, yang menemukan bahwa QRIS meningkatkan efisiensi operasional melalui pencatatan otomatis, serta Calderon (2025) yang mengonfirmasi peningkatan efisiensi waktu transaksi melalui digitalisasi pembayaran secara internasional.

Hasil pengujian hipotesis kedua membuktikan bahwa efisiensi transaksi berpengaruh positif dan signifikan terhadap profitabilitas UMKM, sehingga H2 diterima. Efisiensi transaksi yang tercipta dari penghematan waktu operasional dan akurasi pencatatan kas berhasil dikonversi menjadi nilai ekonomi tambahan secara langsung. Dalam konteks dilematis akibat larangan pembebanan biaya MDR kepada konsumen (Peraturan Bank Indonesia Nomor 23/6/PBI/2021), efisiensi transaksional yang dihasilkan QRIS menjadi jalur legal dan berkelanjutan untuk meningkatkan profitabilitas. Temuan ini selaras dengan Wasiah dan Sartika (2025) yang membuktikan bahwa kemudahan transaksi pembayaran secara signifikan memediasi hubungan antara teknologi finansial dan kinerja keuangan UMKM, serta Dali et al. (2023) yang menemukan dampak positif kemudahan penggunaan e-money terhadap kinerja keuangan UMKM melalui pendekatan TAM.

Hasil pengujian hipotesis ketiga membuktikan bahwa adopsi QRIS berpengaruh positif dan signifikan secara langsung terhadap profitabilitas UMKM, dengan effect size sedang hingga besar, sehingga H3 diterima. Pengaruh langsung ini menunjukkan bahwa QRIS memberikan nilai strategis yang melampaui efisiensi operasional semata, meliputi perluasan pangsa pasar ke segmen konsumen nontunai serta penguatan citra dan kredibilitas usaha, terutama di mata konsumen Generasi Z

Commented [T5]: Pembahasan terlalu dominan mengonfirmasi
Hampir semua paragraf menyatakan:
hasil ini sejalan dengan...
Reviewer mengharapkan diskusi yang lebih kritis.
Misalnya:
mengapa hasil berbeda?
mengapa hubungan kuat?
apa faktor kontekstual Palangka Raya?

Kontribusi teori masih umum
Penulis menyebut berhasil mengintegrasikan:
RBV
TAM
TCT
Namun belum dijelaskan bagaimana penelitian ini memperluas teori tersebut.

Implikasi kebijakan masih normatif
Harus ada rekomendasi yang lebih operasional.
Misalnya:
- subsidi MDR
- pelatihan QRIS
- digital bookkeeping
- dashboard merchant

yang mendominasi ekosistem konsumen di Jekan Raya dan Pahandut. Temuan ini mendukung Sholikhah dan Soesilo (2023) yang membuktikan bahwa implementasi QRIS memberikan dampak peningkatan omzet paling signifikan pada UMKM sektor perdagangan, sejalan dengan Fidelius et al. (2026) yang menemukan dampak positif adopsi kode pembayaran quick response terhadap kinerja keuangan UMKM di Indonesia.

Hipotesis keempat merupakan inti dari penelitian ini. Efisiensi transaksi terbukti memediasi pengaruh adopsi QRIS terhadap profitabilitas UMKM secara parsial dan komplementer, sehingga H4 diterima. Temuan ini bermakna bahwa Adopsi QRIS memengaruhi profitabilitas melalui dua saluran yang bekerja simultan: saluran langsung melalui perluasan akses pasar dan peningkatan citra usaha, serta saluran tidak langsung melalui transformasi efisiensi operasional yang menghasilkan penghematan biaya dan peningkatan produktivitas. Secara teoretis, integrasi RBV, TCT, dan TAM menjelaskan mekanisme ini secara komprehensif: RBV memposisikan efisiensi transaksi sebagai mediating resource yang menjembatani kapabilitas digital dengan kinerja keuangan; TCT menjelaskan bahwa penghematan biaya transaksi harus terakumulasi melalui efisiensi proses yang konsisten sebelum menjadi profit; sementara TAM memberikan dimensi perilaku, yaitu efisiensi sesungguhnya baru tercipta ketika pelaku UMKM benar-benar memanfaatkan fitur QRIS secara optimal, bukan sekadar memiliki kode QR. Temuan ini konsisten dengan Guo & Xu (2021) yang menyatakan bahwa pengaruh teknologi digital terhadap kinerja perusahaan bersifat tidak langsung dan memerlukan perbaikan kinerja operasional sebagai jembatannya, serta Latifah & Waluya (2023) yang membuktikan peran mediasi kemudahan transaksi pada fintech syariah terhadap kinerja UMKM.

Secara teoretis, penelitian ini memberikan kontribusi melalui integrasi empiris RBV, TAM, dan TCT dalam satu model kohesif, serta mengisi celah penelitian dengan membuktikan bahwa efisiensi transaksi berfungsi sebagai mediator parsial, bukan mediator penuh, dalam konteks UMKM perdagangan Kota Palangka Raya. Temuan mediasi parsial ini memberikan nuansa yang lebih kaya terhadap pemahaman hubungan teknologi-kinerja dalam literatur digitalisasi UMKM di negara berkembang, sekaligus memperluas generalisasi temuan Zahir & Bibi (2024)

mengenai peran efisiensi operasional sebagai jembatan antara kapabilitas digital dan kinerja perusahaan dalam konteks usaha berskala mikro dan kecil. Temuan ini juga selaras dengan Ashiru et al. (2023) yang menegaskan peran teknologi digital dalam memperkuat resiliensi UMKM menghadapi tekanan operasional.

Secara praktis, temuan ini memberikan justifikasi empiris bagi pelaku UMKM untuk tidak berhenti pada tahap adopsi, tetapi secara aktif mengoptimalkan fitur rekap transaksi otomatis sebagai alat manajemen kas harian, karena fitur inilah yang secara konsisten terbukti menjadi mekanisme utama pengubah adopsi teknologi menjadi profitabilitas nyata. Pelaku usaha juga disarankan meningkatkan frekuensi dan volume transaksi QRIS secara proaktif, mengingat semakin tinggi intensitas penggunaan, semakin besar pula akumulasi efisiensi yang berpotensi meningkatkan profitabilitas. Bagi Bank Indonesia dan pemerintah daerah, hasil penelitian menegaskan bahwa digitalisasi ekonomi masih mengalami ketimpangan geografis yang nyata antarkecamatan, sehingga program edukasi dan pendampingan perlu direorientasi dari sekadar penambahan jumlah merchant menuju peningkatan kapasitas UMKM dalam mengoptimalkan fitur-fitur QRIS untuk menciptakan efisiensi operasional yang berkelanjutan. Perhatian khusus juga perlu diberikan pada wilayah dengan potensi ekonomi besar namun adopsi masih rendah, seperti Kecamatan Sebangau dan Bukit Batu, disertai akselerasi pembangunan infrastruktur internet yang merata agar manfaat digitalisasi dapat dirasakan secara berkeadilan oleh seluruh pelaku UMKM di Kota Palangka Raya.

KESIMPULAN

Penelitian ini menyimpulkan empat temuan utama. Pertama, adopsi QRIS berpengaruh positif dan signifikan terhadap efisiensi transaksi UMKM perdagangan di Kota Palangka Raya dengan kontribusi yang tergolong besar, mengonfirmasi bahwa digitalisasi sistem pembayaran merupakan determinan dominan dalam membentuk kapabilitas efisiensi operasional UMKM. Kedua, efisiensi transaksi berpengaruh positif dan signifikan terhadap profitabilitas UMKM, membuktikan bahwa efisiensi bukan sekadar indikator kinerja operasional, melainkan kapabilitas strategis yang mengonversi penghematan waktu, biaya, dan risiko menjadi peningkatan laba bersih yang berkelanjutan. Ketiga, adopsi QRIS berpengaruh positif

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dan signifikan secara langsung terhadap profitabilitas UMKM, menunjukkan bahwa QRIS memberikan nilai strategis yang melampaui efisiensi operasional semata. Keempat, efisiensi transaksi terbukti memediasi pengaruh adopsi QRIS terhadap profitabilitas UMKM melalui mekanisme mediasi parsial yang bersifat komplementer, membuktikan bahwa hubungan antara adopsi QRIS dan profitabilitas bersifat multidimensional dan berlangsung melalui dua saluran yang saling melengkapi.

Berdasarkan simpulan tersebut, pelaku UMKM perdagangan disarankan untuk secara konsisten mengoptimalkan fitur rekap transaksi QRIS sebagai kebiasaan manajemen kas baru, sementara Bank Indonesia dan pemerintah daerah disarankan untuk mereorientasi program digitalisasi dari penambahan jumlah merchant menuju peningkatan kualitas pemanfaatan QRIS, disertai akselerasi pemerataan infrastruktur internet. Penelitian selanjutnya disarankan menambahkan variabel moderasi seperti literasi digital atau lama usaha berdiri.

PUSTAKA ACUAN

Ashiru, F., Nakpodia, F., & You, J. J. (2023). Adapting emerging digital communication technologies for resilience: evidence from Nigerian SMEs. *Annals of Operations Research*, *327*(2), 795–823. https://doi.org/10.1007/s10479-022-05049-9

Barney, J. (1991). Firm Reseources and Sustained Competitive Advantage. *Journal of Management*, *17*, 99–120.

Calderon, A. A. (2025). Digital Payments and their Role in Enhancing Financial Transactions Efficiency. *International Journal of Economics and Financial Issues* , *15*(1), 182–189. https://doi.org/10.32479/ijefi.17555

Dali, N., Ode, W. A., & Fiskal. (2023). PENGARUH PERSEPSI KEGUNAAN DAN KEMUDAHAN PENGGUNAAN E-MONEY TERHADAP KINERJA KEUANGAN PADA UMKM : PENDEKATAN MODEL TAM. *JAK: Jurnal Akuntansi Dan Keuangan*, *8*.

Elmahdy, A. H. A. M., Abdelkader, M. T. K. M., & Shaker, M. A. M. (2025). Bridging the nexus between Fintech, operational efficiency and banks profitability: the moderating role of bank size. *Future Business Journal*, *11*(1). https://doi.org/10.1186/s43093-025-00478-x

Fidelius, M. C. M., Oktiovani, A. R., Fidiyah, N., Novita, A. W., & Nur, S. A. (2026). PARADIGMA UMKM MELALUI QRIS: DAMPAK TERHADAP KEUANGAN, KONSUMEN, DAN KESIAPAN SDM. *Jurnal Bisnis Perspektif (BIP's)*, *18*, 49–64.

Guo, L., & Xu, L. (2021). The effects of digital transformation on firm performance: evidence from China's manufacturing sector. *Sustainability (Switzerland)*,

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13(22). https://doi.org/10.3390/su132212844

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. In *European Business Review* (Vol. 31, Number 1, pp. 2–24). Emerald Group Publishing Ltd. https://doi.org/10.1108/EBR-11-2018-0203

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Latifah, S. W., & Waluya, A. J. (2023). The Use Of Sharia Fintech On MSMEs Performance: Mediation Of Interest In Use Of Transactions. *Jurnal Reviu Akuntansi Dan Keuangan*, *13*(2), 463–480. https://doi.org/10.22219/jrak.v13i2.23419

Nugraha, D. P., Setiawan, B., Nathan, R. J., & Fekete-Farkas, M. (2022). Fintech Adoption Drivers for Innovation for SMEs in Indonesia. *Journal of Open Innovation: Technology, Market, and Complexity*, *8*(4). https://doi.org/10.3390/joitmc8040208

Rika, N. P., & Candraningrat, I. R. (2022). Pengaruh Fintech Terhadap Kinerja Keuangan Umkm Dengan Literasi Keuangan Sebagai Variabel Moderasi. In *Jurnal Manajemen Strategi dan Simulasi Bisnis (JMASSBI)* (Vol. 3, Number 1).

Setyo, A. D. P., & Ramadani, D. D. (2022). Pengaruh Manfaat, Kemudahan terhadap Minat Pemakaian Financial Technology Pada Penggunaan Pembayaran Digital UMKM di Sumenep. *Akuntabilitas: Jurnal Ilmu-Ilmu Ekonomi*, *14*. https://doi.org/10.35457/xxx

Sholikhah, T. H., & Soesilo, N. I. (2023). QRIS' IMPACTS ON TURNOVER BASED ON BUSINESS SCALE AND SECTORAL STUDY ON MSME. *Indonesian Journal of Multidisciplinary Science*, *2*.

Suryono, R. R., Budi, I., & Purwandari, B. (2020). Challenges and trends of financial technology (Fintech): A systematic literature review. In *Information (Switzerland)* (Vol. 11, Number 12, pp. 1–20). MDPI AG. https://doi.org/10.3390/info11120590

Suyatna, N. (2024). QRIS dalam Meningkatkan Kinerja Sistem Informasi Penerimaan Kas dan Dampaknya terhadap Rekonsiliasi Kas di Indonesia. *Jurnal Accounting Information System (AIMS*, *7*(2), 121–129. https://doi.org/10.32627

Tur Wasiah, A., & Sartika, D. (2025). The Impact of Financial Technology on MSME Financial Performance: The Mediating Role of Payment Transaction Convenience in Seberang Ulu. *Sinergi International Journal of Management and Business*, *3*(3), 206–217. https://doi.org/10.61194/ijmb.v3i3.844

Utami, N. (2025). ADOPSI PEMBAYARAN DIGITAL MELALUI QRIS DAN DAMPAKNYA TERHADAP KINERJA FINANSIAL UMKM DI DAERAH ISTIMEWA YOGYAKARTA. *Jurnal Transaksi*, *17*(1).

Williamson, O. E. (2008). *The ECONOMIC INSTITUTIONS of CAPITALISM*.

Zahir, S., & Bibi, A. (2024). Exploring the Mediating Role of Operational Capabilities in the Relationship Between Digital Transformation and Firm Performance in SMEs. *Journal of Asian Development Studies*, *13*(4), 536–548. https://doi.org/10.62345/jads.2024.13.4.44

Zikrillah, M., & Sartika, D. (2024). The Influence of Financial Technology on the Performance of MSMEs in Alang-Alang Lebar District with E-Commerce as a Moderating Variable. *Accounting Information Systems and Information Technology Business Enterprise*, *9*(2), 106–120. https://doi.org/10.34010/aisthebest.v9i2.14811

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Journal IAIN Langsa <journal@iainlangsa.ac.id> Thu, Jul 9, 2026 at 8:46 PM
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To: Nahdya Irsa <nahdyairsa25@gmail.com>

Dear Nahdya Irsa,

I am pleased to inform you that we have decided to accept your submission without further revision. After careful review, we found your submission, Analisis Mediasi Efisiensi Transaksi Dalam Hubungan Adopsi Qris dan Peningkatan Profitabilitas UMKM Perdagangan Di Kota Palangka Raya, to meet or exceed our expectations. We are excited to publish your piece in Jurnal Investasi Islam and we thank you for choosing our journal as a venue for your work.

Your submission is now forthcoming in a future issue of Jurnal Investasi Islam and you are welcome to include it in your list of publications. We recognize the hard work that goes into every successful submission and we want to congratulate you on reaching this stage.

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Dear Nahdya Irsa,

I am writing from Jurnal Investasi Islam to let you know that the editing of your submission, Transaction Efficiency as a Mediator in the Relationship between QRIS Adoption and MSME Profitability: Evidence from Trading MSMEs in Palangka Raya, is complete. Your submission will now advance to the production stage, where the final galleys will be prepared for publication. We will contact you if we need any further assistance.

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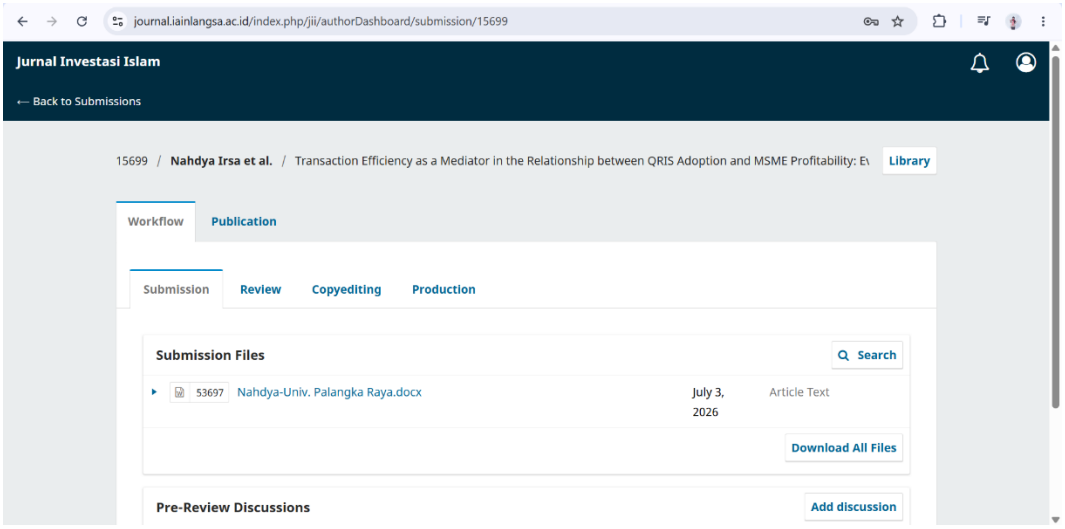

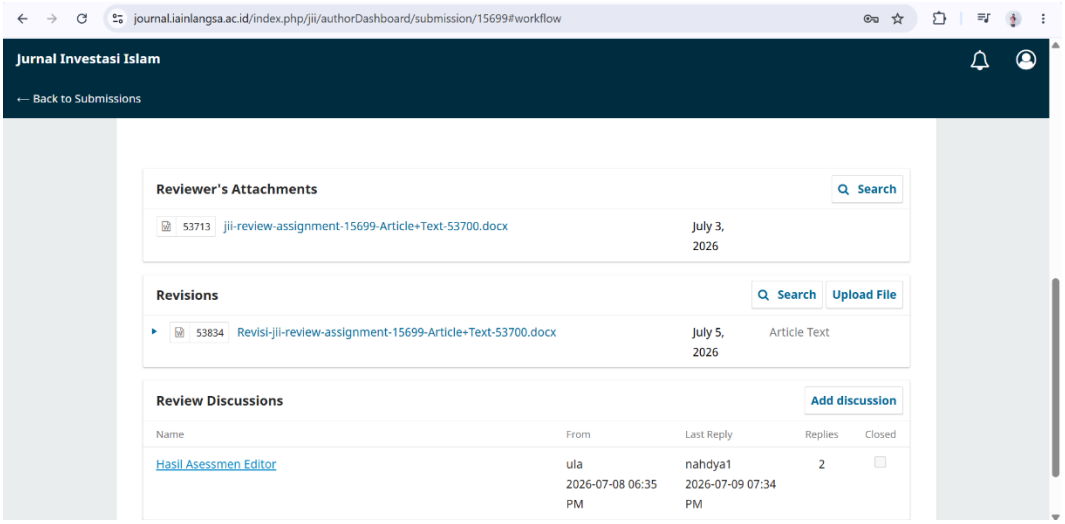

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DearAuthor(s)
Nahdya Irsa, Roby Sambung, Ronni Haga, Dhina Sri Widyaningsih

Correspondence Email:** ***nahdyairsa25@gmail.com

It is a great pleasure to inform you that, after peer review process, your article:

Title : Transaction Efficiency as a Mediator in the Relationship between QRIS Adoption and MSME Profitability: Evidence from Trading MSMEs in Palangka Raya

Status : **Accepted, July 9th, 2026**

The article has been scheduled to the **Vol. 11, No. 2, Tahun 2026**. Thank you for your contribution to the journal, and we are looking forward to your future contribution.

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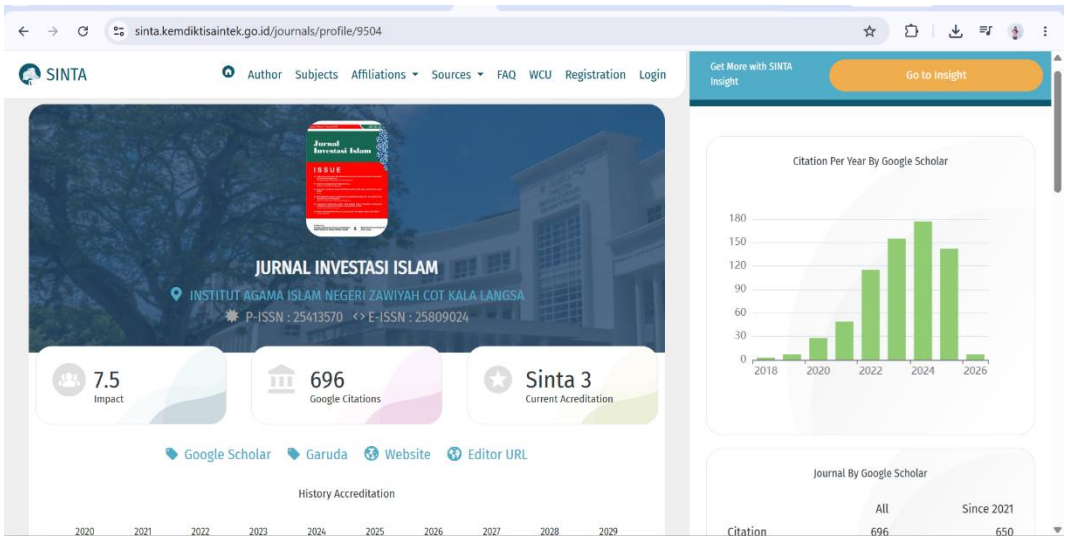

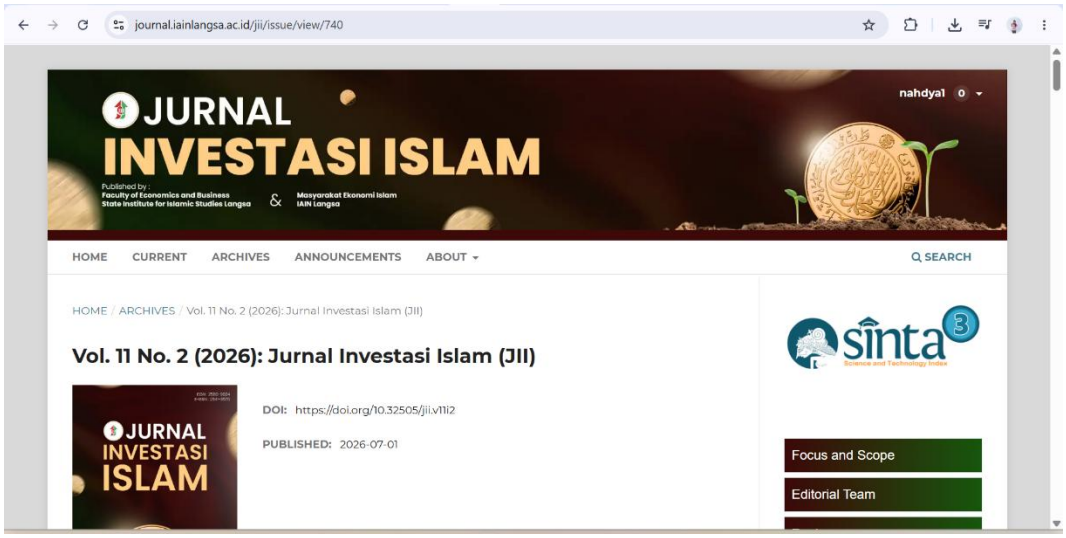

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Transaction Efficiency as a Mediator in the Relationship between QRIS Adoption and MSME Profitability: Evidence from Trading MSMEs in Palangka Raya

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Abstract

This study aims to examine the effect of Quick Response Code Indonesian Standard (QRIS) adoption on the profitability of trading micro, small, and medium enterprises (MSMEs) in Palangka Raya City, with transaction efficiency positioned as a mediating variable, given the persistent gap between the rapid growth of QRIS merchants and uncertain financial benefit felt by traders who bear the Merchant Discount Rate (MDR) cost. A quantitative associative-causal design was employed using a questionnaire survey distributed to 100 trading MSME respondents selected through purposive sampling across Jekan Raya, Pahandut, and Sebangau Districts, and the data were analyzed using Structural Equation Modeling based on Partial Least Squares (SEM-PLS) with SmartPLS 4.0. The measurement model met all validity and reliability criteria, and bootstrapping results show that QRIS adoption has a positive and significant effect on transaction efficiency and on profitability; transaction efficiency significantly affects profitability; and transaction efficiency partially and complementarily mediates the QRIS-profitability relationship, with all four hypotheses supported at the 95% confidence level. These findings imply that the profitability gain from QRIS is not automatic; it is optimized when MSME actors actively use QRIS features to build genuine operational efficiency, so that policy support should shift from merely expanding merchant registration toward strengthening MSME capacity to utilize digital cash-management features.

Keywords: *QRIS Adoption, Transaction Efficiency, MSME Profitability.*

Abstrak

Penelitian ini bertujuan untuk menganalisis pengaruh adopsi Quick Response Code Indonesian Standard (QRIS) terhadap profitabilitas Usaha Mikro, Kecil, dan Menengah (UMKM) sektor perdagangan di Kota Palangka Raya, dengan efisiensi transaksi diposisikan sebagai variabel mediasi, mengingat masih terdapat kesenjangan antara pesatnya pertumbuhan jumlah merchant QRIS dan manfaat finansial yang belum sepenuhnya dirasakan pedagang akibat beban biaya Merchant Discount Rate (MDR). Penelitian menggunakan pendekatan kuantitatif asosiatif kausal dengan metode survei melalui kuesioner kepada 100 responden UMKM perdagangan yang dipilih secara purposive sampling di Kecamatan Jekan Raya, Pahandut, dan Sebangau, dan data dianalisis menggunakan Structural Equation Modeling berbasis Partial Least Square (SEM-PLS) dengan SmartPLS 4.0. Model pengukuran memenuhi seluruh kriteria validitas dan reliabilitas, dan hasil bootstrapping menunjukkan bahwa adopsi QRIS berpengaruh positif dan signifikan terhadap efisiensi transaksi maupun profitabilitas, efisiensi transaksi berpengaruh positif dan signifikan terhadap profitabilitas, serta efisiensi transaksi memediasi hubungan adopsi QRIS dan profitabilitas secara parsial dan komplementer, sehingga keempat hipotesis penelitian terdukung pada tingkat kepercayaan 95%. Temuan ini mengimplikasikan bahwa manfaat profitabilitas dari QRIS tidak bersifat otomatis, melainkan optimal ketika pelaku UMKM secara aktif memanfaatkan

Kata Kunci: Adopsi QRIS, Efisiensi Transaksi, Profitabilitas UMKM.

fitur QRIS untuk menciptakan efisiensi operasional yang nyata, sehingga dukungan kebijakan perlu bergeser dari sekadar perluasan pendaftaran merchant menuju penguatan kapasitas UMKM dalam mengoptimalkan fitur manajemen kas digital.

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) serve as a pillar of national economic stability, demonstrating high resilience against global economic shocks. In the digital economy era, business sustainability increasingly depends on the ability of business owners to adapt to efficient digital payment systems that support ongoing business performance. Various empirical studies confirm a positive relationship between the adoption of financial technology and MSME performance (Zikrillah & Sartika, 2024), Meanwhile, perceptions of the benefits and ease of use of financial technology have proven to be key drivers of MSMEs' interest in adopting digital payment systems (Setyo & Ramadani, 2022).

A key accelerator of this transformation is the Quick Response Code Indonesian Standard (QRIS), developed by Bank Indonesia since 2019 under the Indonesia Payment System Blueprint 2025 (Bank Indonesia, 2019) to establish an inclusive, secure, and efficient payment system. Data from Bank Indonesia (2025) indicates that the number of QRIS merchants in Central Kalimantan reached 381,262 in October 2025; Palangka Raya City recorded the highest adoption rate in the province with 72,981 merchants—a more than fivefold increase since 2021, driven by the local government's "Smart Economy" mission (Bappedalitbang Palangka Raya City, 2021). The highest concentration of MSMEs in the trade sector is found in Jekan Raya District, which accounts for 10,254 businesses—approximately 43.3% of the 23,683 businesses operating in the hotel, trade, and restaurant sectors across Palangka Raya City (BPS Palangka Raya City, 2026).

This rapid adoption raises critical questions regarding its actual impact on merchant profitability. Preliminary research conducted in Jekan Raya District revealed that MSME operators still express concerns regarding the Merchant Discount Rate (MDR) of 0.3%–0.7%, even though Bank Indonesia Regulation No. 23/6/PBI/2021 strictly prohibits merchants from passing this cost on to consumers. This situation places MSMEs with thin profit margins in a dilemma; consequently, the financial benefits of QRIS cannot be realized through price increases but must instead be sought through transaction efficiencies—such as savings on cash

management, faster service, and the accuracy of automated record-keeping. This phenomenon suggests that the efficiencies offered by payment digitalization do not necessarily translate automatically into significant profitability gains for small business operators.

This study is grounded in the Resource-Based View (RBV) as its grand theory. According to Barney (1991), a company's financial success depends on its ability to manage valuable and unique strategic resources. In this context, the adoption of QRIS is viewed as a digital asset capable of creating a competitive advantage for MSMEs. However, merely possessing the technology does not guarantee profitability. Based on the Transaction Cost Theory (TCT) introduced by Williamson (2008), Economic value arises when technology reduces transaction friction costs; consequently, transaction efficiency serves as a mediating variable, allowing QRIS to transcend being merely a cost burden and instead translate into profitability through operational time savings and accurate cash recording. The behavioral aspect of technology adoption by merchants is explained via the Technology Acceptance Model (TAM), which posits that adoption is determined by perceived ease of use and perceived usefulness (Purwatiningsih et al., 2025).

Numerous previous studies have confirmed a positive relationship between the adoption of QRIS/fintech and the performance of MSMEs. Elmahdy et al. (2025) found that operational efficiency is the main driver of profits in the adoption of financial technology, while Utami (2025) demonstrates that digital financial inclusion through QRIS is positively correlated with MSME profitability. Tur & Sartika (Tur & Sartika, 2025) indicates that the ease of payment transactions mediates the relationship between financial technology and the financial performance of MSMEs, consistent with the findings Latifah & Waluya (2023) regarding the mediating role of transaction convenience in Sharia fintech. However, research specifically examining the mediating role of transaction efficiency between QRIS adoption and the profitability of MSMEs in the trade sector in Palangka Raya City remains very limited; thus, this study is strategically positioned to fill that research gap.

Other references further enrich the understanding of the mechanisms by which fintech influences MSME performance. Astari & Candraningrat (2022) found that

fintech influences the financial performance of MSMEs, with financial literacy as a moderating variable, while Dali et al. (2023) indicate that payment gateways and e-money improve MSME financial performance by accelerating record-keeping and reducing transaction errors. Nugraha et al. (2022) add that the drive for innovation is a key factor propelling fintech adoption among MSMEs in Indonesia. These findings consistently confirm a positive relationship between digital payment technology adoption and MSME performance; however, the intervening mechanism explaining how this influence unfolds remains an area requiring deeper investigation, particularly regarding MSMEs in the trade sector within developing cities like Palangka Raya.

This study offers novelty in three aspects. First, from a theoretical standpoint, it integrates three major theories—the Resource-Based View, the Technology Acceptance Model, and Transaction Cost Theory—into a cohesive causal model. This approach explains the mechanism by which technology adoption translates into profitability, moving beyond the direct relationship testing common in previous studies. Second, methodologically, the study employs a Structural Equation Modeling-Partial Least Squares (SEM-PLS) approach featuring a rigorous two-stage pilot test, ensuring the research instrument is empirically validated before application to the main dataset. Third, contextually, the study focuses on trade-sector MSMEs in the area with the highest density of QRIS adoption in Central Kalimantan—a specific context that has received limited attention in the literature regarding transaction efficiency mediation in the digitalization of Indonesian MSMEs.

Based on this background, the study aims to analyze the impact of Quick Response Code Indonesian Standard (QRIS) adoption on transaction efficiency among trade-sector MSMEs in Palangka Raya, examine the effect of transaction efficiency on MSME profitability, and assess the direct influence of QRIS adoption on profitability. Furthermore, the study investigates the role of transaction efficiency as a mediating variable in the relationship between QRIS adoption and MSME profitability. The findings are expected to provide practical insights for MSME operators on optimizing QRIS as a digital payment tool to enhance operational efficiency and business profitability. Furthermore, the findings of this study are expected to provide valuable input for Bank Indonesia and local governments in

formulating more effective policies, educational programs, and digitalization incentives to accelerate the digital transformation of MSMEs. From an academic perspective, this study is expected to enrich the literature on digital financial technology adoption by elucidating the mediating role of transaction efficiency in the relationship between QRIS implementation and increased MSME profitability.

METHOD

This study employs a quantitative method with a causal-associative design to examine the cause-and-effect relationships between variables. Primary data were collected from MSME operators via questionnaires distributed both directly (door-to-door) and through Google Forms, while secondary data were obtained from Bank Indonesia and Statistics Indonesia (BPS) publications to reinforce the validity of field findings through data triangulation (Suryono et al., 2020).

The study population consists of all MSME operators in the trade sector in Palangka Raya City who use QRIS. The sample size was set at 100 respondents using the purposive sampling technique. The determination of the sample size was not based solely on recommendations Hair's et al. (2019), but also considers several approaches within SEM-PLS. Based on the inverse square root method developed by Kock and Hadaya (2018), The minimum sample size is calculated based on the maximum number of structural paths leading to an endogenous construct. In this research model, there are two paths leading to the profitability variable (QRIS Adoption and Transaction Efficiency); consequently, the minimum sample requirement is well below 100 respondents. Furthermore, based on minimum sample requirements for a PLS-SEM model—assuming a 5% significance level, 0.80 statistical power, and a minimum effect size in the medium category—a sample of 100 respondents satisfies the criteria, thereby enabling stable parameter estimation and adequate statistical power.

Operational Definitions and Variable Measurement

This study involves three latent variables measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). QRIS Adoption is operationalized through five dimensions, namely perceived ease of use, perceived usefulness, system reliability, supporting features, and continuance intention. Each

dimension is measured by two statement items, resulting in a total of ten measurement items (X1.1–X5.2).

Transaction Efficiency is measured using five dimensions, namely time efficiency, elimination of small change, nominal accuracy, ease of reconciliation, and risk mitigation. Each dimension consists of two statement items, resulting in ten indicators (M1.1–M5.2). MSME Profitability is measured through five dimensions consisting of sales volume, revenue growth, cost efficiency, net profit, and customer expansion. Each dimension is represented by two statement items, resulting in ten indicators (Y1.1–Y5.2). Accordingly, the research instrument comprises 30 statement items across the three latent constructs. Table 1 presents the dimensions and representative questionnaire statements, while the complete list of items is provided in the appendix or supplementary material.

Table 1. Operational Definition of Variables

Variable	Code	Sample Questionnaire Items
QRIS Adoption	X1	QRIS is easy to use in my business transactions.
	X2	QRIS accelerates the customer payment process.
	X3	I intend to continue using QRIS in my business.
Transaction Efficiency	M1	The use of QRIS reduces transaction processing time.
	M2	QRIS reduces errors in payment calculations.
	M3	QRIS simplifies the recording of daily transactions.
Profitability of MSMEs	Y1	Using QRIS has increased my business turnover.
	Y2	Business operating costs become more efficient.
	Y3	Operating profit increased after using QRIS.

Source: Data processed by the researcher (2026).
Note: Each indicator dimension consists of one to two statement items. Therefore, the questionnaire instrument comprises 30 measurement items in total (10 items for QRIS Adoption, 10 items for Transaction Efficiency, and 10 items for MSME Profitability).

Data Collection Technique

The questionnaire served as the primary instrument, developed based on theoretical indicators synthesized from RBV, TCT, and TAM. Before the main data collection, the instrument underwent a pilot test with 30 MSME operators to ensure that the statements were unambiguous and easily understood by respondents. In addition to questionnaire distribution, this study employed non-participatory observation as a supporting technique. The researcher conducted direct observations at each business location during the data collection process. Observed aspects included the presence of an active QRIS, the intensity of QRIS usage in daily transactions, customer payment processes, transaction completion times, and transaction recording mechanisms. Observation results were recorded using a structured observation sheet and served as a basis for triangulation to verify the consistency between respondents' answers and actual conditions in the field. While the observational findings were not statistically analyzed, they were utilized to support the interpretation of research results and enhance data validity.

Model Equation

The research structural model consists of two equations as follows:

Equation 1

$$TE = \beta_1(QA) + \varepsilon_1 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Description:
TE = Transaction Efficiency
QA = QRIS Adoption

Equation 2

$$MP = \beta_2(QA) + \beta_3(TE) + \varepsilon_2 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Description:
MP = MSME Profitability
QA = QRIS Adoption
TE = Transaction Efficiency

The indirect effect is calculated by multiplying the path coefficients $\beta_1 \times \beta_3$, whereas the total effect is the sum of the direct effect (β_2) and the indirect effect. The significance of the mediation effect is tested using a bootstrapping procedure with 5,000 subsamples in SmartPLS 4.0.

Data Analysis Techniques

The data were analyzed using Partial Least Squares Structural Equation Modeling (SEM-PLS) with SmartPLS 4.0 software, selected for its capability to handle complex models involving latent variables and its effectiveness with relatively small sample sizes. Before the main data collection, the questionnaire underwent a pilot test with 30 respondents. The pilot test results identified 15 items requiring editorial revision due to outer loading values below the recommended threshold (Hair et al., 2019). After revision, the final questionnaire was distributed to the main sample of 100 respondents. The outer model analysis encompasses tests for convergent validity (outer loading ≥ 0.70 and Average Variance Extracted/AVE > 0.50), discriminant validity via the Heterotrait-Monotrait Ratio (HTMT < 0.90) and cross-loading, as well as reliability via Cronbach's Alpha and Composite Reliability (≥ 0.70). The inner model analysis includes a test for multicollinearity using the Variance Inflation Factor (VIF < 3.3) and bootstrapping with 5,000 subsamples (Tama et al., 2023). To determine path significance (t-value ≥ 1.96; p-value < 0.05), the mediation effect test (via a comparison of direct and indirect effects), effect size test (f-square), and coefficient of determination test (R-square) are conducted based on established criteria.

RESULTS AND DISCUSSION

Results

Overview of the Research Subject

This study focuses on MSMEs in the trade sector of Palangka Raya City that have adopted QRIS as a digital payment system. The trade sector was selected due to its high volume of daily transactions, making it relevant for measuring the tangible and quantifiable impact of transaction efficiency on business profitability. Although Palangka Raya City covers a vast area, economic activity and the trade sector are heavily concentrated in the Jekan Raya and Pahandut districts, which account for over 80% of the city's total MSMEs (BPS Palangka Raya City, 2026). The high concentration of trade-based MSMEs in these two districts is driven by their status as higher education hubs in Central Kalimantan; this creates a market ecosystem dominated by Generation Z consumers—who are digital natives—thereby encouraging MSMEs to align their services with the cashless payment preferences of

the younger generation. Meanwhile, the Sebangau district shows a positive trend in QRIS adoption, particularly among MSMEs in tourism areas, whereas the Bukit Batu district continues to face internet network infrastructure limitations that hinder the digitalization of the local economy.

Respondent Characteristics

Data collection involved 100 respondents—MSME owners in the trade sector—who met all purposive sampling criteria. The largest concentration of respondents was in Jekan Raya District (60%), followed by Pahandut (30%) and Sebangau (10%), in accordance with the planned sample allocation. By business sector, the culinary segment dominated the respondent profile (89%), followed by grocery stores (6%), fashion (3%), and other sectors (2%), reflecting the characteristics of the MSME ecosystem surrounding campus areas and densely populated residential zones. The majority of respondents (87%) had been in operation for over three years, and 96% had used QRIS for more than a year, ensuring they possessed sufficient experience to objectively assess the impact of QRIS adoption. Most respondents (81%) conducted between 10 and 30 QRIS transactions daily, confirming that QRIS has become a primary payment instrument—rather than merely a supplementary tool—in the daily operations of trade-sector MSMEs in Palangka Raya City.

11

Measurement Model Evaluation (Outer Model)

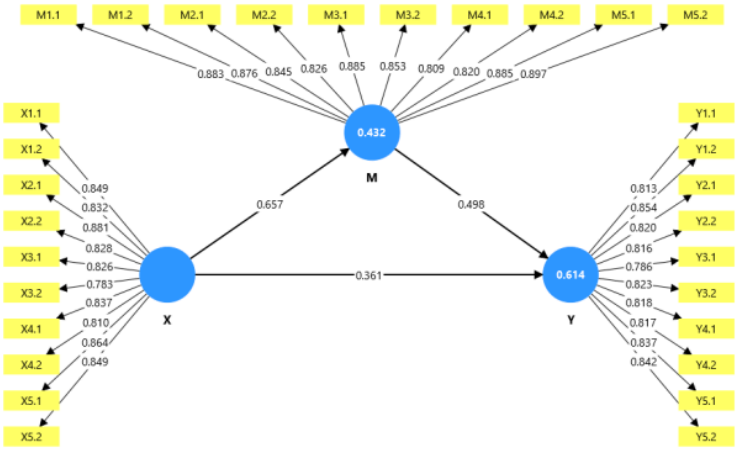

Figure 1. Outer Model Diagram (Outer Loading Values)

The evaluation of the measurement model using the primary data (n=100)

indicates that all 30 indicators across the three constructs meet the criteria for convergent validity, with outer loading values ranging from 0.783 to 0.897 (details in Table 2)—well above the minimum threshold of 0.70 (Hair et al., 2019). The Average Variance Extracted (AVE) values for all three constructs also exceed 0.50.

Table 2. Final Model Outer Loadings (n=100)

Construct	Code	Outer Loading	Note
QRIS Adoption (QA)	X1.1	0,849	Valid
	X1.2	0,832	Valid
	X2.1	0,881	Valid
	X2.2	0,828	Valid
	X3.1	0,826	Valid
	X3.2	0,783	Valid
	X4.1	0,837	Valid
	X4.2	0,810	Valid
	X5.1	0,864	Valid
	X5.2	0,849	Valid
Transaction Efficiency (TE)	M1.1	0,883	Valid
	M1.2	0,876	Valid
	M2.1	0,845	Valid
	M2.2	0,826	Valid
	M3.1	0,885	Valid
	M3.2	0,853	Valid
	M4.1	0,809	Valid
	M4.2	0,820	Valid
	M5.1	0,885	Valid
	M5.2	0,897	Valid
MSME Profitability (MP)	Y1.1	0,813	Valid
	Y1.2	0,854	Valid
	Y2.1	0,820	Valid
	Y2.2	0,816	Valid
	Y3.1	0,786	Valid
	Y3.2	0,823	Valid
	Y4.1	0,818	Valid
	Y4.2	0,817	Valid
	Y5.1	0,837	Valid
	Y5.2	0,842	Valid

Source: SmartPLS 4 output, data processed by the researcher (2026). Reference value for outer loading ≥ 0.70 (Hair et al., 2019).

Table 2 shows that all indicators for the QRIS Adoption, Transaction Efficiency, and MSME Profitability constructs have outer loading values above the minimum threshold of 0.70. These results indicate that all indicators meet the criteria for convergent validity and are suitable for retention in the measurement model. The highest outer loading values are observed for indicators M5.2 and X2.1, demonstrating that these two indicators make the strongest contribution to representing the constructs being measured.

Table 3. Construct Reliability and Validity

Construct	Cronbach's Alpha	Composite Reliability	AVE	Keterangan
QRIS Adoption (QA)	0,952	0,959	0,699	Valid & Reliabel
Transaction Efficiency (TE)	0,960	0,965	0,737	Valid & Reliabel
MSME Profitability (MP)	0,947	0,954	0,677	Valid & Reliabel

Source: SmartPLS 4 output, data processed by the researcher (2026). Reference values: Cronbach's Alpha & CR ≥ 0.70; AVE > 0.50.

All Cronbach's Alpha (0.947–0.960) and Composite Reliability (0.954–0.965) values are well above the minimum threshold, indicating very high internal consistency of the instrument. Discriminant validity was assessed using the Heterotrait-Monotrait Ratio (HTMT) as presented in Table 4; all values (0.682–0.766) fell below the 0.90 threshold (Henseler et al., 2015), reinforced by the cross-loading pattern, which consistently shows the highest loadings on the respective constructs across all 30 indicators, as presented in Table 5. The constructs are empirically demonstrated to be unique and distinct from one another, allowing the analysis to proceed to the structural model stage.

Table 4. Heterotrait-Monotrait Ratio (HTMT)

Construct	QRIS Adoption (QA)	Transaction Efficiency (TE)	MSME Profitability (MP)
QRIS Adoption (QA)	—		
Transaction Efficiency (TE)	0,682	—	
MSME Profitability (MP)	0,715	0,766	—

Source: SmartPLS 4 output, data processed by the researcher (2026). Reference value: HTMT < 0.90.

Table 4 shows that all HTMT values between construct pairs (0.682–0.766) are below the 0.90 threshold (Henseler et al., 2015), demonstrating that the three research constructs—QRIS adoption, transaction efficiency, and MSME profitability—are empirically distinct and that there is no measurement overlap between them.

Table 5. Cross Loadings Indicator

Code	QRIS Adoption (QA)	Transaction Efficiency (TE)	MSME Profitability (MP)
X1.1	**0,849**	0,546	0,620
X1.2	**0,832**	0,536	0,520
X2.1	**0,881**	0,631	0,642
X2.2	**0,828**	0,506	0,442
X3.1	**0,826**	0,538	0,548
X3.2	**0,783**	0,504	0,559
X4.1	**0,837**	0,611	0,631

X4.2	**0,810**	0,492	0,605
X5.1	**0,864**	0,574	0,619
X5.2	**0,849**	0,529	0,526
M1.1	0,572	**0,883**	0,663
M1.2	0,601	**0,876**	0,639
M2.1	0,544	**0,845**	0,528
M2.2	0,620	**0,826**	0,657
M3.1	0,619	**0,885**	0,603
M3.2	0,539	**0,853**	0,663
M4.1	0,468	**0,809**	0,607
M4.2	0,503	**0,820**	0,644
M5.1	0,579	**0,885**	0,616
M5.2	0,578	**0,897**	0,673
Y1.1	0,593	0,591	**0,813**
Y1.2	0,641	0,722	**0,854**
Y2.1	0,651	0,616	**0,820**
Y2.2	0,464	0,615	**0,816**
Y3.1	0,540	0,553	**0,786**
Y3.2	0,538	0,580	**0,823**
Y4.1	0,591	0,556	**0,818**
Y4.2	0,453	0,572	**0,817**
Y5.1	0,593	0,651	**0,837**
Y5.2	0,561	0,561	**0,842**

Source: SmartPLS 4 output, data processed by the researcher (2026). Bold figures indicate the highest loadings on the respective constructs (dominant diagonal).

Table 5 confirms that all indicators consistently exhibit the highest loading values on their respective constructs compared to other constructs; thus, the discriminant validity of this research model is fully satisfied. Consequently, the three constructs—QRIS Adoption, Transaction Efficiency, and MSME Profitability—are empirically proven to be unique and distinct from one another, allowing the analysis to proceed to the structural model stage.

Structural Model Evaluation (Inner Model) and Hypothesis Testing

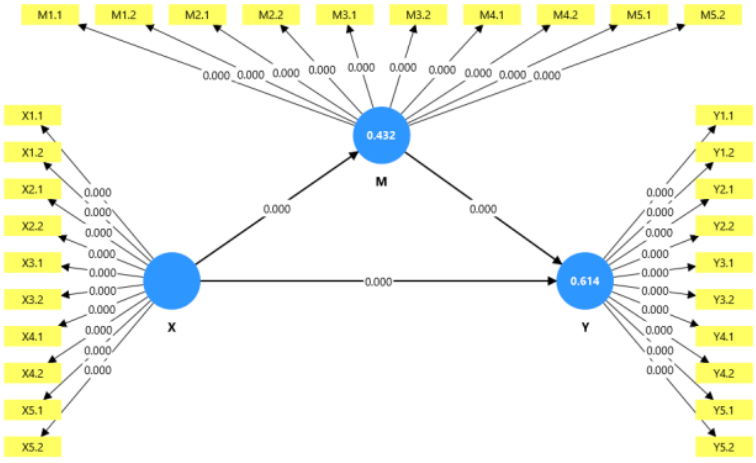

Figure 2. Inner Model Diagram (Path Coefficients and R-Square)

The multicollinearity test indicates that all Variance Inflation Factor (VIF) values for the inner model fall within the range of 1.000–1.760—well below the critical threshold of 3.3—meaning there are no multicollinearity issues that could distort the path coefficient estimates. Path significance testing was conducted using bootstrapping with 5,000 subsamples, and the results are presented in Table 6.

Table 6. Hypothesis Testing Results (Bootstrapping)

Hipotesis / Jalur	Koefisien Jalur	t-value	p-value	Keterangan
H1: Adopsi QRIS (QA) → Efisiensi Transaksi (TE)	0,657	10,284	0,000	Diterima
H2: Efisiensi Transaksi (TE) → Profitabilitas (MP)	0,498	5,733	0,000	Diterima
H3: Adopsi QRIS (QA) → Profitabilitas (MP) - langsung	0,361	4,017	0,000	Diterima
H4: Adopsi QRIS (QA) → M → Profitabilitas (MP) - mediasi	0,327	5,241	0,000	Diterima

Source: SmartPLS 4 output (bootstrapping with 5,000 subsamples), data processed by the researcher (2026). Reference values: t-value ≥ 1.96; p-value < 0.05.

Table 6 shows that all four paths—including the mediation effect in H4—exhibit t-values well above the minimum threshold and p-values of 0.000; consequently, all research hypotheses are statistically supported at a 95% confidence level. Further analysis of the mediation effect confirms that both the direct effect (coefficient 0.361; p=0.000) and the indirect effect (coefficient 0.327; p=0.000) are significant, resulting in a total effect of 0.688. Transaction Efficiency acts as a complementary partial mediator in the relationship between QRIS adoption and MSME profitability.

The effect size (f-square) test reveals that the path from QRIS adoption to Transaction Efficiency makes the largest contribution, falling into the "large" category ($f^2 = 0.760$). This is followed by the path from Transaction Efficiency to MSME profitability, which also falls into the "large" category ($f^2 = 0.365$), while the direct effect of QRIS adoption on profitability is classified as ranging from medium to large ($f^2 = 0.192$) (Hair et al., 2019).

Table 7. R-Square and Model Fit Test Results

Konstruk / Indikator	Nilai	Kategori
R-Square - Efisiensi Transaksi (M)	0,432	Moderate
R-Square - Profitabilitas UMKM (Y)	0,614	Moderate-Substantial
SRMR	0,058	Model Fit (< 0,08)
NFI	0,805	Acceptable Fit (≥ 0,80)

Source: SmartPLS 4 output, data processed by the researcher (2026). R-square categorization is based on Hair et al. (2019).

Table 7 shows that QRIS adoption explains 43.2% of the variance in Transaction Efficiency (a moderate level), while QRIS adoption and Transaction Efficiency jointly explain 61.4% of the variance in MSME Profitability (a level bordering on strong); the remaining 38.6% is explained by factors outside this research model—such as macroeconomic conditions, marketing strategies, or the availability of business capital—thereby opening avenues for future research. An SRMR value of 0.058 (below the 0.08 threshold) and an NFI of 0.805 (exceeding 0.80) confirm that the research model demonstrates good fit and serves as a valid representation of the phenomenon under study.

Discussion

The Impact of QRIS Adoption on Transaction Efficiency

Research results indicate that QRIS adoption has a positive and significant impact on the transaction efficiency of MSMEs in the trade sector in Palangka Raya City. The substantial path coefficient (β = 0.657) and the large effect size demonstrate that payment digitalization transforms not only transaction methods but also daily business operational processes. These findings suggest that the benefits of QRIS are felt more acutely in operational aspects than merely as an alternative payment tool.

This situation can be explained by the characteristics of trade-sector MSMEs in Palangka Raya City, most of which operate in the culinary and retail sectors and handle high daily transaction volumes. Under these conditions, savings in service time, a reduced need to provide cash for change, and automated transaction recording generate more tangible efficiency gains compared to businesses with low transaction volumes. In other words, the higher the transaction intensity, the greater the economic benefits derived from using QRIS.

These findings also explain why the impact of QRIS on efficiency in Palangka Raya is relatively strong. The Jekan Raya and Pahandut areas feature concentrations of university students, employees, and young consumers accustomed to digital payments; consequently, market pressure drives business owners to utilize QRIS optimally. Conversely, in areas where digital literacy and internet network quality remain limited—such as parts of the Sebangau or Bukit Batu districts—efficiency benefits may not be as significant as those observed in this study. Thus, the local

context serves as a crucial factor reinforcing the relationship between QRIS adoption and transaction efficiency. While these results are consistent with previous studies, this research demonstrates that the strength of the QRIS impact is heavily influenced by the characteristics of the local digital ecosystem; therefore, the effectiveness of QRIS implementation cannot be uniformly generalized across all regions of Indonesia.

The Impact of Transaction Efficiency on MSME Profitability

Transaction efficiency has been shown to positively influence MSME profitability. These findings indicate that profit growth stems not only from increased sales volume but also from the ability of business owners to reduce operational costs and accelerate transaction cycles. For MSMEs in Palangka Raya City, these benefits are particularly crucial because business owners cannot pass Merchant Discount Rate (MDR) costs on to consumers, in accordance with Bank Indonesia regulations. Consequently, the only way to ensure that using QRIS remains profitable is by enhancing operational efficiency. Greater savings in transaction time, reduced risk of recording errors, and faster cash reconciliation processes all contribute to a higher likelihood of increased net profit.

These findings also shed light on why the impact of digital payments on profitability has not always been significant in previous studies. Discrepancies in results likely stem from variations in the extent to which QRIS features are utilized. If business owners use QRIS merely as a means to accept payments without leveraging digital transaction reports for financial management, the economic benefits remain limited. Conversely, when QRIS is integrated into the business management system, the resulting efficiencies can be more readily translated into increased profitability.

The Direct Impact of QRIS Adoption on Profitability

This study demonstrates that QRIS continues to exert a direct influence on profitability even when transaction efficiency is included as a mediating variable. This indicates that there are benefits to using QRIS beyond mere operational efficiency. This phenomenon can be attributed to the characteristics of consumers in Palangka Raya City, who are becoming increasingly accustomed to cashless transactions. MSMEs that offer QRIS gain access to a consumer segment that might

otherwise have been reluctant to transact had cash been the only payment option. Beyond enhancing consumer convenience, QRIS also boosts the perceived professionalism and credibility of the business, thereby offering the potential to expand market share.

However, the magnitude of this direct impact is smaller than the total impact observed when transaction efficiency is taken into account. These findings indicate that simply providing QRIS as a payment facility is insufficient to drive increased profitability; greater economic value is realized when the adoption of QRIS is accompanied by changes in how business operations are managed.

The Mediating Role of Transaction Efficiency

The most significant finding of this study is the confirmation of transaction efficiency's role as a complementary partial mediator. The results indicate that the relationship between QRIS adoption and profitability operates through two mutually reinforcing mechanisms.

The first mechanism is a direct pathway involving increased market access, enhanced service convenience, and greater consumer trust. The second mechanism is an indirect pathway driven by operational efficiency, resulting in cost savings, faster transactions, and increased business productivity.

These findings demonstrate that digital transformation does not automatically yield financial gains. QRIS serves as a source of advantage only when successfully integrated into daily operational activities. Consequently, the benefits of technology depend not merely on its existence, but on the business's ability to transform that technology into operationally valuable capabilities.

Theoretical Contributions

This study not only integrates the Resource-Based View (RBV), the Technology Acceptance Model (TAM), and Transaction Cost Theory (TCT) but also extends the relationships between these three theories. From an RBV perspective, the study demonstrates that QRIS cannot be considered a strategic resource generating competitive advantage simply by virtue of business ownership. QRIS creates value only when converted into an operational capability—specifically, transaction efficiency. Thus, the study extends the RBV by showing that transaction efficiency acts as a conversion mechanism linking digital assets to financial performance.

From a TAM perspective, the results show that perceptions of ease of use and usefulness do not stop at the technology adoption decision; rather, they evolve into changes in operational behavior that drive increased efficiency. In other words, this study expands the TAM from a theory of adoption into a theory of value creation following technology implementation.

Meanwhile, TCT is extended through empirical evidence showing that reduced transaction costs do not directly boost profitability; instead, they must be realized through sustained operational efficiency. Thus, this study offers an integrative model explaining how digital technology generates economic value through the mechanism of transaction efficiency.

Policy Implications

The research findings offer several actionable recommendations for stakeholders. First, Bank Indonesia could consider providing subsidies or incentives regarding the Merchant Discount Rate (MDR) for micro-enterprises with low turnover, ensuring that transaction costs do not hinder QRIS adoption. Second, local governments, in collaboration with Bank Indonesia, should conduct practical QRIS training sessions that cover not only payment acceptance but also the utilization of transaction reports, automated reconciliation, and digital cash flow management. Third, the Palangka Raya City Cooperatives and MSME Agency needs to integrate digital bookkeeping programs so that QRIS transaction data can be directly utilized to prepare simple financial statements, apply for business loans, and evaluate business performance. Fourth, payment service providers should develop merchant dashboards that are intuitive for MSME operators—featuring summaries of daily turnover, customer analysis, transaction patterns, and profit estimates—thereby transforming QRIS from a mere payment tool into an instrument for business decision-making.

Finally, digitalization policies must take into account regional disparities within Palangka Raya City. Areas with limited internet connectivity require telecommunications infrastructure support before QRIS adoption programs are expanded, ensuring that the benefits of digitalization are distributed more equitably.

CONCLUSION

This study yields four key findings. First, QRIS adoption has a positive and significant impact on the transaction efficiency of MSMEs in the trade sector in Palangka Raya City; this demonstrates that the digitalization of payment systems enhances operational efficiency by accelerating transaction processes, improving record-keeping accuracy, and reducing transaction costs. Second, transaction efficiency positively and significantly affects MSME profitability, indicating that savings in time, operational costs, and transaction risks can be translated into improved financial performance. Third, QRIS adoption also has a direct, positive, and significant impact on MSME profitability; thus, the benefits of QRIS stem not only from increased efficiency but also from expanded market access, enhanced consumer convenience, and strengthened business competitiveness. Fourth, transaction efficiency is shown to partially and complementarily mediate the relationship between QRIS adoption and MSME profitability, meaning that profitability gains arise from a combination of direct and indirect effects.

This study has several limitations. First, the scope is limited to MSMEs in the trade sector in Palangka Raya City, so generalizing the results to other business sectors or regions requires caution. Second, the study employs a survey approach with a cross-sectional design, which does not capture changes in QRIS usage behavior or its impact on profitability over the long term. Third, the research model explains 61.4% of the variation in profitability, leaving other factors outside the model—such as digital literacy, managerial capability, service quality, access to capital, intensity of QRIS usage, and competitive conditions—unanalyzed.

Theoretically, this study contributes by integrating the Resource-Based View (RBV), Technology Acceptance Model (TAM), and Transaction Cost Theory (TCT) into a single empirical model to explain the mechanism by which digital payment technology adoption enhances profitability through transaction efficiency. The finding that transaction efficiency acts as a partial mediator enriches the literature on MSME digitalization by demonstrating that technological benefits are not automatic; rather, they depend on business owners' ability to translate technology adoption into sustainable operational efficiency.

Future research is encouraged to employ a longitudinal design to evaluate the

long-term impact of QRIS usage on business performance. Subsequent studies could also expand the sample scope to include additional business sectors and regions, thereby improving generalizability. Furthermore, the research model could be expanded by incorporating variables such as digital literacy, digital innovation, technological capabilities, entrepreneurial orientation, service quality, QRIS usage intensity, or government support—acting as either mediating or moderating variables—to gain a more comprehensive understanding of the mechanisms by which payment digitalization enhances MSME profitability.

REFERENCES

Barney, J. (1991). Firm Reseources and Sustained Competitive Advantage. *Journal of Management*, *17*, 99–120. https://doi.org/10.1177/014920639101700108

Dali, N., Aswati, W. O., & Fiskal. (2023). The influence of perceived usefulness and ease of use of e-money on the financial performance of MSMEs: A TAM model approach. Jurnal Akuntansi dan Keuangan, 8(2), 87–96. https://doi.org/10.33772/jak.v8i2.99

Elmahdy, A. H. A. M., Abdelkader, M. T. K. M., & Shaker, M. A. M. (2025). Bridging the nexus between Fintech, operational efficiency and banks profitability: the moderating role of bank size. *Future Business Journal*, *11*(1). https://doi.org/10.1186/s43093-025-00478-x

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. In *European Business Review* (Vol. 31, Number 1, pp. 2–24). Emerald Group Publishing Ltd. https://doi.org/10.1108/EBR-11-2018-0203

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Kock, N., & Hadaya, P. (2018). Minimum sample size estimation in PLS-SEM: The inverse square root and gamma-exponential methods. *Information Systems Journal*, *28*(1), 227–261. https://doi.org/10.1111/isj.12131

Latifah, S. W., & Waluya, A. J. (2023). The Use Of Sharia Fintech On MSMEs Performance: Mediation Of Interest In Use Of Transactions. *Jurnal Reviu Akuntansi Dan Keuangan*, *13*(2), 463–480. https://doi.org/10.22219/jrak.v13i2.23419

Nugraha, D. P., Setiawan, B., Nathan, R. J., & Fekete-Farkas, M. (2022). Fintech Adoption Drivers for Innovation for SMEs in Indonesia. *Journal of Open Innovation: Technology, Market, and Complexity*, *8*(4). https://doi.org/10.3390/joitmc8040208

Purwatiningsih, A. P., Fitria, S., Indriani, A., & Kuriawan, C. S. (2025). Adoption of QRIS digital payment in Indonesia and Malaysia: A technology acceptance and knowledge perspective. *International Journal of Innovative Research and Scientific Studies*, *8*(6), 704–713.

https://doi.org/10.53894/ijirss.v8i6.9670

Astari, N. P. R. P., & Candraningrat, I. R. (2022). The influence of fintech on MSME financial performance with financial literacy as a moderating variable. Journal of Strategic Management and Business Simulation, 3(1), 68–81. https://doi.org/10.25077/mssb.3.1.68-81.2022

Setyo Dwi Purnomo, A., & Ramadani, D. D. (2022). The influence of perceived benefits and ease of use on the intention to adopt financial technology for digital payments among MSMEs in Sumenep. Akuntabilitas: Jurnal Ilmiah Ilmu-Ilmu Ekonomi, 14(2), 17–30. https://doi.org/10.35457/akuntabilitas.v14i2.2505

Suryono, R. R., Budi, I., & Purwandari, B. (2020). Challenges and trends of financial technology (Fintech): A systematic literature review. In *Information (Switzerland)* (Vol. 11, Number 12, pp. 1–20). MDPI AG. https://doi.org/10.3390/info11120590

Tama, R. A. Z., Hoque, M. M., Liu, Y., Alam, M. J., & Yu, M. (2023). An Application of Partial Least Squares Structural Equation Modeling (PLS-SEM) to Examining Farmers' Behavioral Attitude and Intention towards Conservation Agriculture in Bangladesh. *Agriculture (Switzerland)*, *13*(2). https://doi.org/10.3390/agriculture13020503

Tur, A. W., & Sartika, D. (2025). The Impact of Financial Technology on MSME Financial Performance: The Mediating Role of Payment Transaction Convenience in Seberang Ulu. *Sinergi International Journal of Management and Business*, *3*(3), 206–217. https://doi.org/10.61194/ijmb.v3i3.844

Utami, N. (2025). Adoption of digital payments via QRIS and its impact on the financial performance of MSMEs in the Special Region of Yogyakarta. Jurnal Transaksi, 17(1). https://doi.org/10.25170/transaksi.v17i1.7116

Williamson, O. E. (1985). *The economic institutions of capitalism: Firms, markets, relational contracting*. Free Press.

Zikrillah, M., & Sartika, D. (2024). The Influence of Financial Technology on the Performance of MSMEs in Alang-Alang Lebar District with E-Commerce as a Moderating Variable. *Accounting Information Systems and Information Technology Business Enterprise*, *9*(2), 106–120. https://doi.org/10.34010/aisthebest.v9i2.14811

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