

Digital Payment Adoption, Operational Efficiency, and SME Financial Performance: A Systematic Evidence Review

Thierno Abdoulaye Balde^{1*} , Erna Retna Rahadjeng² 

^{1*,2}Faculty of Economics and Business, Universitas Muhammadiyah Malang, Indonesia

*Corresponding Author Email: baldethiernoabdoulaye4@gmail.com

Article History

Received: 17-05-2026

Revised: 15-06-2026

Published: 09- 07-2026

Key Words:

Digital Payment Adoption;

Financial Performance;

Operational Efficiency; Digital

Transformation; SME

Abstract: This study conducts a systematic literature review to examine how digital payment adoption, particularly QR-based systems and e-wallets, relates to SME financial performance through operational efficiency. Previous studies have largely examined the direct relationship between digital payment adoption and financial performance, while the role of operational efficiency as an explanatory mechanism remains insufficiently synthesized. Guided by the SPAR-4-SLR and PRISMA frameworks, the review analyzed 29 peer-reviewed English-language articles published between 2020 and 2026 from Scopus, Web of Science, ScienceDirect, SpringerLink, and Emerald Insight. The synthesis reveals that digital payment adoption enhances operational efficiency by accelerating transaction processing, reducing administrative costs, improving financial accuracy, and strengthening transaction records. However, evidence on the direct effect of digital payment adoption on financial performance remains mixed, suggesting that adoption alone does not automatically generate financial gains. The originality of this study lies in synthesizing fragmented evidence and positioning operational efficiency as a central explanatory mechanism linking digital payment adoption to SME financial performance. The review is limited to English-language peer-reviewed articles and may not capture relevant studies in other languages or publication formats. The findings imply that SME managers, policymakers, and fintech providers should focus not only on adoption but also on operational integration, digital capability development, and the development of supportive infrastructure.

How to Cite: Balde, T. A., & Rahadjeng, E. R. (2026). Digital Payment Adoption, Operational Efficiency, and SME Financial Performance: A Systematic Evidence Review. *JMET: Journal of Management Entrepreneurship and Tourism*, 4(2), 142–157. <https://doi.org/10.61277/jmet.v4i2.314>

 <https://doi.org/10.61277/jmet.v4i2.314>

This is an open-access article under the [CC-BY-SA License](https://creativecommons.org/licenses/by-sa/4.0/).



1. Introduction

The rapid expansion of digital technologies has fundamentally altered the global economic landscape, reshaping how financial transactions are initiated, processed, and recorded. Among these transformations, digital payment systems have emerged as a cornerstone of financial innovation, enabling faster, safer, and more transparent transactions across developed and developing economies. Global evidence shows that the shift toward digital payments is not merely a technological trend but a major change in financial behavior. According to the World Bank's Global Findex evidence, two-thirds of adults worldwide now make or receive digital payments, while the share in developing economies increased from 35% in 2014 to 57% in 2021. This global expansion demonstrates the growing importance of digital payment systems in financial inclusion, business transactions, and economic resilience. The proliferation of mobile payment platforms, quick response (QR) codes, and electronic wallets has therefore accelerated the transition toward cashless economies, reduced

reliance on physical currency, and redefined operational norms for businesses of different sizes (Alfiana Mokoginta & Sendjaja, 2025; Demirgüç-Kunt et al., 2022; Nankara & Traoret, 2023).

For small and medium-sized enterprises (SMEs), which form the backbone of most developing economies, these technological changes are especially significant. Digital payment systems provide practical solutions to reduce transaction costs, improve financial documentation, increase transaction transparency, and expand access to digital financial services. These benefits are important because SMEs often face constraints such as informal record-keeping, limited access to finance, and operational inefficiencies. By enabling more traceable and efficient transactions, digital payment adoption can support the financial resilience and operational sustainability of SMEs (Alsa et al., 2025; Sutrisno & Nainggolan, 2025). Therefore, examining how digital payment adoption contributes to SME financial performance is timely and important, particularly in emerging economies where digital financial inclusion continues to expand.

Globally, the growth of QR-based payments, mobile wallets, and interoperable payment systems reflects a wider shift toward cashless and financially inclusive economies (Demirgüç-Kunt et al., 2022; Nankara & Traoret, 2023). Indonesia is used in this review as an illustrative context because QRIS represents a national effort to standardize QR-based payments, reduce payment-system fragmentation, and support SME participation in the digital economy (Isma Nurrokhim et al., 2025). Therefore, QRIS is not treated as the sole focus of the study but as an example of how emerging economies institutionalize digital payment adoption to improve SME efficiency and financial inclusion.

Despite the documented promise of digital payments, the scholarly literature presents a more complex picture. Several studies show that digital payment adoption is associated with stronger financial performance, including higher revenue, profitability, and liquidity management (Utami, 2025; Zakariya & Arifin, 2025). Digital payments also generate transaction data that can support financial planning and strategic decision-making (Chen & Xiao, 2025). However, other findings suggest that adoption does not automatically improve financial outcomes, indicating that the relationship is conditional rather than purely direct (Zakariya & Arifin, 2025). These contradictions may be explained by differences in digital literacy, infrastructure quality, managerial capability, and the extent to which digital payments are integrated into daily operations (Kahveci, 2025; R. Ly & Ly, 2024; Yuwono et al., 2024). Studies that consider operational efficiency, transaction cost reduction, innovation, or credit access provide a clearer explanation of how digital payment adoption translates into financial outcomes (Bindeeba et al., 2025; Saleh et al., 2025; Sipayung, 2025). Therefore, these mixed findings suggest the need to examine operational efficiency and contextual moderators more systematically.

Operational efficiency is selected as the primary mediating mechanism because it represents the most immediate pathway through which digital payment adoption can influence SME financial performance. While factors such as innovation, digital literacy, credit access, and infrastructure also matter, they mainly function as supporting or contextual conditions (Bindeeba et al., 2025; Sipayung, 2025). Digital payment systems directly improve internal operations by automating transactions, reducing cash-handling costs, shortening reconciliation time, and improving the accuracy of financial records (Go et al., 2025; Yudianto & Latte, 2026). These improvements strengthen operational efficiency, which is essential for SMEs because cost control, transaction speed, and accurate records are closely linked to competitiveness and sustainability (Rahmawaty1, 2025; Saleh et al., 2025; Zakariya & Arifin, 2025).

The state of the art shows three main streams of research. The first focuses on determinants of adoption, such as perceived usefulness, trust, ease of use, financial habits, user capability, and social influence in QRIS, e-wallet, and mobile payment acceptance (Fauziah et al., 2025; B. Ly et al., 2025; Sutrisno & Nainggolan, 2025). The second examines digitalization and SME performance, showing that digital transformation improves competitiveness and sustainability when supported by managerial capability, digital orientation, and process integration (Calderon-Monge & Ribeiro-Soriano, 2024; Escob Barragan & Becker, 2025; Kahveci, 2025). The third focuses on operational efficiency and financial outcomes, showing that QRIS and e-wallet adoption can reduce transaction costs, improve accounting accuracy, and enhance financial efficiency

(Aristyanto et al., 2025). However, these studies often examine separate relationships rather than integrating digital payment adoption, operational efficiency, and financial performance into one framework.

Previous review-based studies have advanced the literature but remain broad in scope. (Calderon-Monge & Ribeiro-Soriano, 2024) reviewed digitalization in business and management, while Yuwono et al. (2024) reviewed ICT in SMEs. Alsa et al. (2025) focused on digital payments and financial inclusion, and Alfiana Mokoginta & Sendjaja (2025) examined digital payment trends and policy implications in Indonesia. However, these reviews do not specifically synthesize operational efficiency as the mechanism linking digital payment adoption to SME financial performance.

The theoretical foundation of this study integrates Transaction Cost Theory, the Resource-Based View (RBV), and technology adoption theories into a single explanatory framework. TAM and UTAUT explain the initial adoption stage by clarifying why SMEs accept digital payment systems, particularly through perceived usefulness, ease of use, trust, social influence, and facilitating conditions (R. Ly & Ly, 2024). However, adoption theories alone do not sufficiently explain how the use of digital payments leads to financial outcomes after implementation. Transaction Cost Theory addresses this post-adoption process by explaining how digital payments reduce transaction and coordination costs through faster payment processing, lower cash-handling expenses, and improved transaction records (Calderon-Monge & Ribeiro-Soriano, 2024). The RBV then extends the explanation by showing that these technological resources generate value only when they are embedded into organizational routines and converted into internal capabilities, particularly operational efficiency (Escoz Barragan & Becker, 2025). Thus, the three theoretical perspectives are complementary: TAM and UTAUT explain adoption, Transaction Cost Theory explains efficiency gains, and RBV explains how efficiency becomes a capability that supports financial performance. Together, these theories justify the study's structural framework in which digital payment adoption influences financial performance through operational efficiency.

The scientific novelty of this article lies in its systematic synthesis of operational efficiency as the central explanatory mechanism in the relationship between digital payment adoption and SME financial performance. Unlike previous studies that primarily examine direct effects or determinants of adoption (Fauziah et al., 2025; R. Ly & Ly, 2024; Utami, 2025), this review positions operational efficiency as the mechanism by which digital payments may generate financial value. The novelty is not in statistically testing mediation using primary data, but in synthesizing existing evidence to clarify the adoption–efficiency–performance pathway. In addition, this article identifies convergence, contradictions, and boundary conditions in the literature, including digital literacy, technological infrastructure, managerial capability, access to finance, and institutional support (Bindeeba et al., 2025; Kahveci, 2025). This synthesis provides a more integrated explanation of why digital payment adoption produces different financial outcomes across SMEs and contexts.

Several gaps in the existing literature motivate this study. Prior empirical work is largely fragmented, focusing on isolated bilateral associations rather than the complete value-creation chain from digital payment adoption through operational efficiency to financial performance. Systematic reviews in this domain are scarce; there is little evidence of them, and those that are conducted may be narrative and not based on a protocol, which reduces replicability and cumulative learning (Kraus et al., 2020; Paul et al., 2021). Furthermore, a synthesis of contextual boundary conditions, such as users' digital literacy, managerial capability, and infrastructure quality, that determine whether efficiency gains are realized and translated into financial performance, has not been systematically synthesized.

The present study addresses these gaps by conducting a systematic literature review (SLR) of peer-reviewed papers published between 2020 and 2026. The central research question guiding this review is: Does operational efficiency mediate the association between the adoption of digital payment and the financial performance of SMEs, and what contextual factors moderate this mediation?" The study aims to (1) examine the effect of digital payment adoption on operational efficiency of SMEs; (2) test the link between operational efficiency and financial performance; and (3) test the mediation of the relationship between digital payment

JMET Vol. 4, No.2 (July 2026)

adoption and financial outcomes by operational efficiency. This paper aims to bridge gaps across existing empirical studies by logically integrating current findings and identifying the mechanisms of digital transformation in SMEs, offering evidence-based support to managers, policymakers, and fintech providers.

This article contributes to the literature by systematically reviewing and synthesizing peer-reviewed studies on digital payment adoption, operational efficiency, and SME financial performance. Specifically, it clarifies how digital payment adoption influences operational efficiency, how operational efficiency contributes to financial performance, and how contextual factors shape the adoption–efficiency–performance relationship (Chen & Xiao, 2025; Yudianto & Latte, 2026). Theoretically, this study advances the literature by integrating Transaction Cost Theory, the Resource-Based View, and technology adoption perspectives into a review-based explanatory framework. This integration provides a clearer understanding of operational efficiency as the central mechanism through which digital payment adoption can generate financial value for SMEs. In practical terms, the study offers insights for SME managers, policymakers, financial institutions, and fintech providers by emphasizing that the benefits of digital payment adoption depend not merely on technology uptake but also on process integration, digital capability development, infrastructure readiness, access to finance, and institutional support.

2. Literature Review

2.1 Digital Payment Adoption among SMEs

Digital payment adoption involves utilizing electronic payment systems such as QR codes, mobile wallets, and other cashless transaction platforms for business transactions. The importance of digital payment systems for SMEs has grown as they offer a more secure, traceable, and quick payment process. (Fauziah et al., 2025; B. Ly et al., 2025; Sutrisno & Nainggolan, 2025) reported in previous studies that some of the reasons SMEs use digital payment systems are perceived usefulness, ease of use, transaction convenience, customer demand, customer trust, and availability of supporting infrastructure. In emerging economies, the adoption of digital payment is also closely associated with financial inclusion, as it helps small businesses to have more active participation in the formal financial system (Alsa et al., 2025; Niankara & Traoret, 2023).

However, the uptake of digital payments does not necessarily bring financial rewards. Some SMEs use digital payment methods solely as transaction instruments and do not include them in accounting, financial planning, or management. The mixed results of the direct impact of the adoption of digital payment on the financial performance of SMEs are explained by this. This accounts for the mixed results of the direct impact of the adoption of digital payment on the financial performance of SMEs reported in the previous studies (Gao et al., 2023; Zakariya & Arifin, 2025). Thus, the internal mechanisms that digital payment adoption can create value need to be explored.

2.2 Operational Efficiency

Operational efficiency is the ability of a company or business to perform business functions more efficiently and effectively, with the advantage of operating at lower costs, faster rates, and lower error rates. In SMEs, operational efficiency becomes an important aspect because small businesses tend to have limited resources, both financial, technological, and managerial. By being efficient, SMEs can cut down on unnecessary expenses, speed up transactions, enhance financial control, and optimize resource allocation (Rahmiyati et al., 2024).

Digital payment systems can enhance operational efficiency by automating transaction processes, minimizing manual cash handling, accelerating the reconciliation process, and ensuring financial records are more accurate (Go et al., 2025; Isma Nurrokhim et al., 2025; Yudianto & Latte, 2026). Automated transaction records also make it more transparent and less prone to the mistakes often associated with informal or manual bookkeeping systems. Digital payment technologies, as studied by Saleh et al. (2025) and Zakariya & Arifin (2025), can often boost the efficiency of SMEs by streamlining operations and simplifying financial management. The operational efficiency thus offers a rational basis for how digital payment can go beyond technology use and become a business improvement tool.

2.3 SME Financial Performance

SME financial performance is the level of performance in terms of positive financial outcomes that include profitability, growth of revenue, liquidity, cost reduction, and financial sustainability of the Small and Medium Enterprises. Good financial results help SMEs to withstand competitive pressure in the market, increase their business, and obtain external funding. Based on the previous research, the efficiency of the business is significantly related to the financial performance of SMEs, as efficient businesses can control costs, improve margins, and utilize resources effectively (Chen & Xiao, 2025; Rahmiyati et al., 2024).

Digital payment services can help enhance the financial performance of SMEs by increasing the transparency of transactions and creating accurate financial records. These records can also aid in financial planning and help lenders gauge the worth of the business more accurately, which can make it easier to access credit, monitor cash flow, and plan for financial growth (Chen & Xiao, 2025). However, the connection between the adoption of digital money and financial results is contradictory in various studies. Despite the positive findings on the increase in revenue, profitability, and financial sustainability, other studies have demonstrated that adoption of IMTA cannot be achieved without internal capabilities and appropriate contextual conditions (Gao et al., 2023; Zakariya & Arifin, 2025).

2.4 Theoretical Foundations

This study is based on the theories of Transaction Cost Theory, Resource-Based View, and technology adaptation theory. The Transaction Cost Theory would suggest that companies can increase their performance by minimizing transaction, coordination, and information processing costs. Digital payment systems can help facilitate this process by decreasing the cost of payment processing, which limits the chance of mistakes, and enhancing the verification of payments (Calderon-Monge & Ribeiro-Soriano, 2024).

According to the Resource-Based View, technology can only be a source of competitive advantage when it is unique, valuable, rare, and costly to imitate. The Resource-Based View states that technology does not necessarily provide a competitive advantage. In contrast, digital technologies are only useful when they are integrated into organizational processes and practices and become internal competencies (Escoz Barragan & Becker, 2025). In this study, operational efficiency is regarded as one of the important internal capabilities that can facilitate the conversion of acceptance of digital payments into the financial performance of SMEs.

Several technology adoption theories, including TAM and UTAUT, can be used to explain the rationale behind SMEs' adoption of digital payment systems. These theories highlight variables like perceived usefulness, ease of use, trust, social influence, and facilitating conditions (B. Ly et al., 2025). These theories, however, largely account for adoption-related behaviors and offer little insight into post-adoption outcomes. Thus, the use of technology adoption theories augmented by the Transaction Cost Theory and the Resource-Based View can provide a more robust explanation of the relationship between the adoption of digital payments and financial performance as a result of operational efficiency.

2.5 Conceptual Link among Digital Payment Adoption, Operational Efficiency, and SME Financial Performance

Literature indicates that the adoption of digital payment can be a driver of improved financial performance for SMEs through operational efficiency. The first benefit of digital payment systems is that digital systems promote important benefits in internal processes, such as faster transaction speed, lower administrative expenses, better financial record accuracy, and increased transparency (Bindeebe et al., 2025; Rahmiyati et al., 2024; Yudianto & Latte, 2026). The operational enhancement, in turn, leads to better financial performance, such as profitability, sustainability, and increased access to finance (Chen & Xiao, 2025; Zakariya & Arifin, 2025).

Meanwhile, there are contextual factors that influence this pathway. The benefits of SMEs' digital payment adoption can be strengthened or weakened by digital literacy, infrastructure quality, managerial capability, access to credit, and institutional support (Kahveci, 2025; Niankara & Traoret, 2023; Yuwono et al., 2024). Hence, this review asserts that within the context of the digital payment adoption and SME

financial performance relationship, the intermediary mechanism is operational efficiency, which is understood to be affected by contextual boundary conditions.

3. Research Method

The study employs a Systematic Literature Review (SLR) as its research design. Unlike primary data collection studies, the SLR does not collect data directly from respondents or field settings; instead, it systematically identifies, screens, and synthesizes findings from published, peer-reviewed literature. The method was chosen for its ability to produce a structured, transparent, and replicable synthesis of available empirical and theoretical research while reducing selection bias (Kraus et al., 2020; Paul et al., 2021).

The review protocol is based on the SPAR-4-SLR framework proposed by Paul et al. (2021), which outlines the scientific procedures and rationale for conducting a systematic literature review in management and business research. To ensure transparency in the identification, screening, and inclusion of studies, the study follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (De Cassai et al., 2025). The review process went through four stages: identification, screening, eligibility assessment, and final inclusion.

2.1 Research Design

This study adopts a qualitative, non-experimental research design, consistent with the systematic review methodology. There is no primary data collected from people, experiments, or field observations. The unit of analysis is the peer-reviewed journal article, not individuals or organizations. The study aims to synthesize and integrate existing evidence to formulate a theoretically grounded model of the relationship among digital payment adoption, operational efficiency, and the financial performance of SMEs, making this design well-suited to the study.

An SLR is appropriate for this study because the existing evidence on digital payment adoption, operational efficiency, and SME financial performance is fragmented, making a structured synthesis necessary to identify patterns, contradictions, and explanatory mechanisms across prior studies.

2.2 Population and Sample

This population of this review comprises all peer-reviewed journal articles addressing digital payment adoption, operational efficiency, and financial performance of SMEs from 2020 to 2026. Five major academic databases were used for searches: Scopus, Web of Science, ScienceDirect, SpringerLink, and Emerald Insight. The databases chosen were those that provide detailed coverage of high-quality journals in the field of business and management and financial technology research (Supriani et al., 2023). The initial database search identified 212 records. After duplicate removal, title and abstract screening, full-text eligibility assessment, and quality appraisal, 29 peer-reviewed articles met the inclusion criteria and were included in the final synthesis.

2.3 Search Strategy and Inclusion Criteria

A comprehensive literature search was conducted using the following Boolean query applied consistently across all five databases: (Digital payment OR QRIS OR mobile payment OR e-wallet) AND (SMEs OR MSMEs OR small business) AND (financial performance OR profitability OR firm performance) AND (operational efficiency OR process efficiency OR cost efficiency). The studies included in the analysis met the following criteria: (1) peer-reviewed journal articles, (2) written in English, (3) published between 2020 and 2026, (4) the primary unit of analysis was SMEs or MSMEs, (5) the focus was on digital payment systems, including QRIS, e-wallets, or mobile payments, and (6) a digital object identifier (DOI) was available in addition to complete bibliographic information. Studies with no DOIs, incomplete metadata, or duplicate papers were excluded, as were studies that were not substantively related to the key constructs of digital payment adoption, operational efficiency, or financial performance, respectively.

2.4 Screening and Quality Appraisal

The selection process was divided into four steps in accordance with PRISMA guidelines. The initial database search identified 212 records from Scopus, Web of Science, ScienceDirect, SpringerLink, and

JMET Vol. 4, No.2 (July 2026)

Emerald Insight. After removing 35 duplicate records, 177 records remained for title and abstract screening. During this stage, 93 records were excluded because they were not directly related to digital payment adoption, operational efficiency, SME financial performance, or the review's objectives. Therefore, 84 articles were retained for full-text eligibility assessment.

At the full-text assessment stage, 55 articles were excluded for failing to meet the inclusion criteria. The reasons for exclusion included limited methodological clarity, incomplete bibliographic information, absence of a DOI, weak relevance to the key constructs, or insufficient focus on SMEs. As a result, 29 peer-reviewed articles met all inclusion criteria and were included in the final systematic literature review.

All 29 included studies underwent a quality appraisal procedure adapted from systematic review standards in management research (De Cassai et al., 2025; Kraus et al., 2020; Paul et al., 2021). Each article was assessed using four criteria: clarity of research design, appropriateness of variable measurement, analytical rigor, and relevance to the study constructs. Each criterion was scored using a three-point scale: 2 = clearly met, 1 = partially met, and 0 = not met. Thus, each article could obtain a maximum score of 8. Articles scoring 6–8 were classified as high quality and retained; articles scoring 4–5 were retained only when they were directly relevant to the review objectives; and articles scoring below 4 were excluded. This procedure ensured that the final synthesis was based on studies with acceptable methodological clarity, analytical relevance, and substantive alignment with digital payment adoption, operational efficiency, and SME financial performance.

2.5 Data Extraction

A structured data extraction process was conducted for each of the 29 selected articles using a standardized extraction form. The form was developed before data extraction to ensure consistency across all reviewed studies. The extracted information included author(s), year of publication, country or regional context, research method, main variables examined, analytical approach, and principal findings. Each article was coded based on its contribution to the review's three analytical themes: digital payment adoption, operational efficiency, and SME financial performance. The extracted data were then organized into a synthesis matrix to support cross-study comparison and thematic interpretation, with selected results presented in Table 1 in the Results and Discussion section.

2.6 Data Analysis Techniques

Data analysis was conducted using a thematic synthesis approach, following Donthu et al. (2021), to integrate findings from studies with heterogeneous methodological designs. The thematic synthesis process involves three steps: (1) Descriptive themes: line-by-line coding of findings from each included study; (2) Analytical themes: the process of relating and comparing the descriptive themes across studies; and (3) Synthesized interpretive model: the process of developing a model that transcends the content of the included studies to create a new theory.

Thematic synthesis was used in this study in three analytical threads that aligned with the research objectives, namely (a) the effect of digital payment adoption on operational efficiency, (b) operational efficiency and SMEs' financial performance, and (c) the mediating role of operational efficiency in the relationship between digital payment adoption and financial performance of small and medium-sized enterprises. Each included study was coded by the type of evidence it contributed to one or more of the above threads, and the results of individual studies were systematically compared to detect patterns, contradictions, and contextual moderators.

In addition to thematic synthesis, a descriptive profile of the reviewed studies was prepared to summarize the distribution of articles by publication year, geographical context, and research method. No specialized bibliometric software was used, as the purpose was not to conduct citation mapping, co-authorship analysis, keyword co-occurrence analysis, or network visualization. Instead, simple descriptive categorization was applied to provide an overview of the reviewed literature, identify dominant research contexts, and highlight methodological concentrations and gaps in the evidence base. The first author first conducted the thematic synthesis and descriptive profiling, and then the co-authors reviewed them to reduce subjectivity and

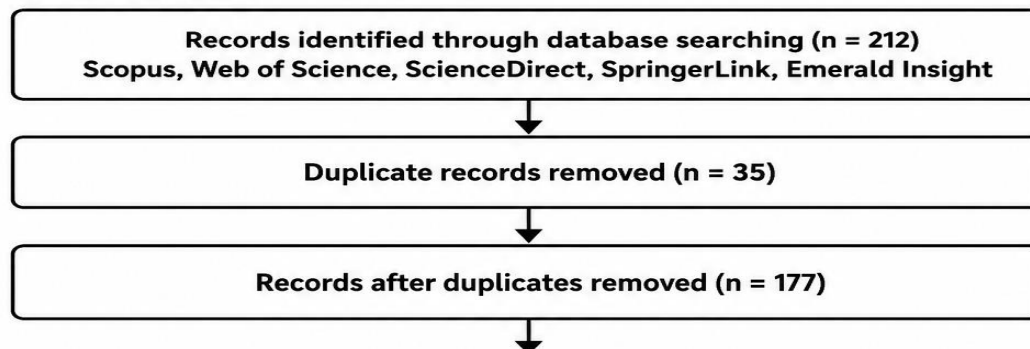
JMET Vol. 4, No.2 (July 2026)

improve consistency. To evaluate agreement, the co-authors independently checked the coding categories, extracted themes, and interpreted the study findings against the original articles. Any differences in interpretation were discussed until consensus was reached. This validation process helped ensure that the final themes accurately reflected the reviewed evidence and that the synthesis was credible, transparent, and reproducible.

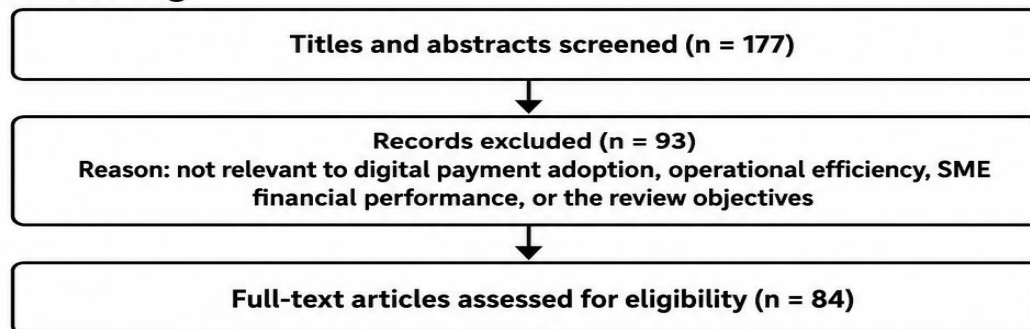
A multi-database search strategy was conducted, clearly documented, and systematically appraised, using a predefined protocol and consistent inclusion criteria, reducing the risk of selection and interpretation bias (Paul et al., 2021). One limitation of this study is that it may not include relevant studies published in languages other than English or in book or monograph form. Furthermore, methodological differences between the studies included in the review and differences in measurement instruments could limit the ability to draw direct inferences across studies, which is partly addressed by the thematic synthesis rather than the meta-analysis.

2.7 Research Flow

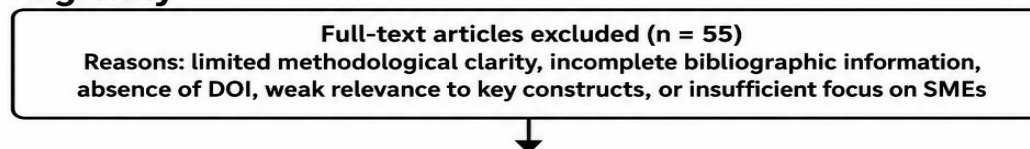
Identification



Screening



Eligibility



Included



Figure 1. PRISMA Flow Diagram of the Study Selection Process

4. Result and Discussion

4.1 Overview of Reviewed Studies

The final sample of 29 peer-reviewed articles spans both empirical and review-based contributions published between 2020 and 2026. The literature is mainly focused on the emerging-economy context, particularly in Indonesia, where digital payment services have experienced rapid growth, including QRIS and mobile wallet platforms (Fauziah et al., 2025; Sutrisno & Nainggolan, 2025; Yudianto & Latte, 2026). Methodologically, the sample includes quantitative analyses, conceptual models, and systematic reviews, which help incorporate a wide range of evidence to synthesize the analysis comparatively (Calderon-Monge & Ribeiro-Soriano, 2024; Yuwono et al., 2024). Three constructs are investigated: Digital Payment Adoption, Operational Efficiency, and Financial Performance. A summary of the ten most representative studies from the literature reviewed is shown in Table 1.

Table 1. Summary of Selected Prior Studies on Digital Payment Adoption, Operational Efficiency, and Financial Performance

No	Authors & Year	Variables Examined	Key Findings
1	Bindeeba et al. (2025)	Digital process integration, operational efficiency, sustainability, and credit access	Operational efficiency significantly mediates the relationship between digital integration and sustainability; credit access strengthens this effect.
2	Saleh et al. (2025).	Digital technology adoption, operational efficiency	Digital adoption significantly improves SME operational efficiency through process optimization.
3	Isma Nurrokhim et al. (2025)	QRIS adoption, transaction costs, efficiency	QRIS reduces transaction costs and enhances operational efficiency in SMEs.
4	Aristyanto et al. (2025).	Digital payment adoption, financial accuracy, and accounting efficiency	Digital payments improve accounting accuracy and financial management efficiency.
5	Yudianto & Latte (2026)	Digital payment adoption, financial efficiency	Digital payment systems significantly enhance financial efficiency, especially in rural SMEs.
6	Rahmiyati et al. (2024).	Operational efficiency, profitability, and financial sustainability	Operational efficiency has a strong positive effect on financial sustainability and firm performance.
7	Gao et al. (2023).	Digital adoption, financial performance, and sustainability	Digital technologies positively affect financial and sustainability performance through improved operations.
8	Zakariya & Arifin (2025)	Digital payment adoption, transaction efficiency, and financial performance	Strong impact on efficiency, but mixed direct impact on financial performance.
9	Sipayung (2025)	Digitalization, operational effectiveness,	Digitalization improves performance indirectly through operational effectiveness and innovation.

JMET Vol. 4, No.2 (July 2026)

No	Authors & Year	Variables Examined	Key Findings
10	Chen & Xiao (2025)	innovation, and financial performance. Digital payments, financial access, and credit availability	Digital payments improve financial transparency and increase access to formal and informal credit.

4.2 Digital Payment Adoption and Operational Efficiency

The literature review indicates that digital payment adoption is positively correlated with operational efficiency. Numerous empirical studies have shown that digital payment systems can speed up transactions, reduce operational expenses, and enhance financial accuracy, among other key aspects of operational efficiency.

The main way in which efficiency is improved is through process automation. Digital payment systems also eliminate the need for manual cash handling procedures, decrease the time needed for payment reconciliation, and allow for real-time recording of transactions, all of which help to minimize the risk of human error and enhance coordination among business functions (Go et al., 2025; Isma Nurrokhim et al., 2025). (Saleh et al., 2025) measure this effect, finding that improved SME operational efficiency is closely related to the adoption of digital technology, with process optimization being the biggest benefit, especially in high-volume transactions.

Cost reduction is a second aspect of efficiency improvement. Digital payments can reduce the need for costly physical cash management operations, such as transportation, security, and manual processing costs (Yudianto & Latte, 2026). The impact is particularly evident in rural microenterprises, which have traditionally been highly constrained in cash logistics. (Yudianto & Latte, 2026) discovered that the implementation of digital payment has tangible effects on the costs of financial management of microenterprises in rural Indonesia.

A third dimension is the quality and transparency of the financial information. Automated payment systems produce digital records of transactions that are automatically generated and time-stamped, minimizing discrepancies, increasing the reliability of financial data, and making it easier to audit and track transactions (Aristyanto et al., 2025). This will be especially important for SMEs where financial records have traditionally been maintained informally, as the quality of those records will help improve cost management and planning.

However, there is some interesting variation in the magnitude of these efficiency gains across both firms and contexts. The adoption translates to operational improvements to a certain extent, which is moderated by digital literacy, managerial competence, and the quality of digital infrastructure (Saleh et al., 2025). These moderation factors suggest that the adoption of digital payments is a prerequisite but not sufficient for achieving efficiency gains, highlighting the need for complementary organizational capabilities.

4.3 Operational Efficiency and Financial Performance:

The findings from the literature review clearly indicate strong, consistent support for the relationship between operating efficiency and the financial performance of SMEs. Operating with control, reducing process delays, and managing costs and financial resources efficiently regularly outperform other firms that are less efficient on financial indicators, such as profitability, revenue stability, and sustainability.

The relationship between operational efficiency and profitability or financial sustainability is directly confirmed by Rahmiyati et al. (2024), who found that operational efficiency had a significant positive impact on profit and financial sustainability of SMEs. According to the theoretical basis of this finding, there are two theories: the Transaction Cost Theory, stating that efficiency lowers the costs of the operational transactions, which in turn increases margins; and the Resource-Based View, stating that efficiency is an organizational competence that gives a durable competitive advantage (Escoz Barragan & Becker, 2025).

Another indirect financial benefit of operational efficiency is its impact on financial transparency and data accessibility. With better financial records, SMEs have greater access to formal and informal credit markets, as lenders can determine their creditworthiness more accurately, as Chen & Xiao (2025) have shown. This greater access to external financing magnifies the direct benefits of efficiency gains on profitability, indicating that the efficiency–profitability relationship is not linear.

Of course, it is not a rule that efficiency and performance have to go hand in hand. Even though several studies suggest otherwise, external constraints, such as high market competition or a poor regulatory environment, can negate the benefits of internal efficiency improvements (Calderon-Monge & Ribeiro-Soriano, 2024). This observation echoes the notion that operational efficiency contributes to financial performance but is not the only factor, and that context plays a role in research and management practice.

4.4 Operational Efficiency as a Mediating Mechanism

The most theoretically relevant result of this review concerns the dynamics between digital payment adoption and financial performance. The direct effect of digital payment adoption is reported in some studies to be positive, but in other studies, it appears weak, inconsistent, or context-dependent. This difference is not an indication of contradictory evidence but a reflection of the working of an indirect path: efficiency of operations as the intermediary element.

The most direct evidence for this interpretation comes from studies that explicitly model the intermediate variables. Operational efficiency significantly mediates the relationship between digital process integration and sustainability performance, and credit access serves as a reinforcing moderator in this relationship, as shown by Bindeeba et al. (2025). In the context of digitalization financing, similar results are reported in Sipayung (2025), where the positive impacts of digitalization on financial performance are mediated by its effects on operational efficiency and innovation. The results suggest that including mediating constructs in analyses may lead to underestimation or failure to capture the financial returns of digital payment adoption.

The mediation mechanism aligns with both Transaction Cost Theory and the Resource-Based View. Digital payments also lower operational transaction costs, freeing up resources for value creation and positively impacting financial results from a transaction-cost perspective. Operational efficiency is the internal dynamic capability of firms to transform technological resources into competitive advantage and financial performance from an RBV perspective (Escob Barragan & Becker, 2025). Both theories predict that the relationship between technology and performance will be through internal organizational processes and that these effects will be quite small.

4.5 Contextual Boundary Conditions

There are also several boundary conditions identified in the synthesis that are critical for setting the digital payment adoption–efficiency–performance pathway in motion, and the extent to which it moves. The first and most often mentioned boundary condition is digital literacy and users' ability. According to Ly et al. (2025), trust, perceived usability, and user competence are important factors influencing the extent of digital payment system usage. SMEs that are more digitally literate are much more likely to benefit from efficiency gains resulting from adoption.

The second key boundary condition is technological infrastructure. Digital payment systems would work best if they had access to a reliable Internet connection and interoperable digital platforms. However, as noted by Yuwono et al. (2024), the benefits of digital adoption are limited by infrastructure challenges, especially in low-connectivity settings such as rural and peri-urban areas. In addition to acquiring technology, digital transformation must involve organizational readiness, process redesign, and strategic integration, which are represented by managerial capability and strategic alignment, as emphasized by Kahveci (2025).

Financial resources are a fourth boundary condition. (Bindeeba et al., 2025) show that credit availability plays a moderating role between digital integration and performance, suggesting that financial constraints may hinder SMEs from realizing efficiency benefits by limiting their ability to invest in complementary capabilities. Lastly, the institutional environment is important: Natalios Peter Sipasulta et al. (2026) and

JMET Vol. 4, No.2 (July 2026)

Niankara & Traoret (2023) emphasize the need for financial inclusion policies, the development of digital ecosystems, and regulatory support for SMEs to create conditions for the effective use of digital payments.

5. Discussion

5.1 Theoretical Interpretation

The findings show that digital payment adoption should be understood not only as a technological change but also as a mechanism for improving SME operations. From the perspective of Transaction Cost Theory, digital payment systems reduce transaction-related costs by minimizing cash handling, shortening reconciliation time, reducing payment errors, and improving transaction records (Calderon-Monge & Ribeiro-Soriano, 2024; Go et al., 2025; Yudianto & Latte, 2026). These improvements explain why digital payment adoption is frequently associated with stronger operational efficiency among SMEs.

5.2 Operational Efficiency as a Mediating Mechanism

The Resource-Based View explains why digital payment adoption does not always directly improve financial performance. Technology creates value only when it is integrated into organizational routines and transformed into internal capabilities (Escoz Barragan & Becker, 2025). In this review, operational efficiency represents the key capability through which digital payment adoption generates financial benefits. This explains why some studies report positive financial outcomes, while others find weak or context-dependent effects (Gao et al., 2023; Zakariya & Arifin, 2025). Therefore, the relationship between digital payment adoption and SME financial performance is better understood as indirect, operating through operational efficiency.

5.3 Conceptual Contribution

The main conceptual contribution of this review is clarifying the pathway linking digital payment adoption, operational efficiency, and SME financial performance. The evidence suggests that digital payment adoption improves transaction speed, cost control, record accuracy, and financial transparency, thereby contributing to profitability, sustainability, and access to finance (Bindeeba et al., 2025; Chen & Xiao, 2025; Rahmiyati et al., 2024). Thus, the proposed framework positions operational efficiency as the central mediating mechanism in the adoption–efficiency–performance relationship.

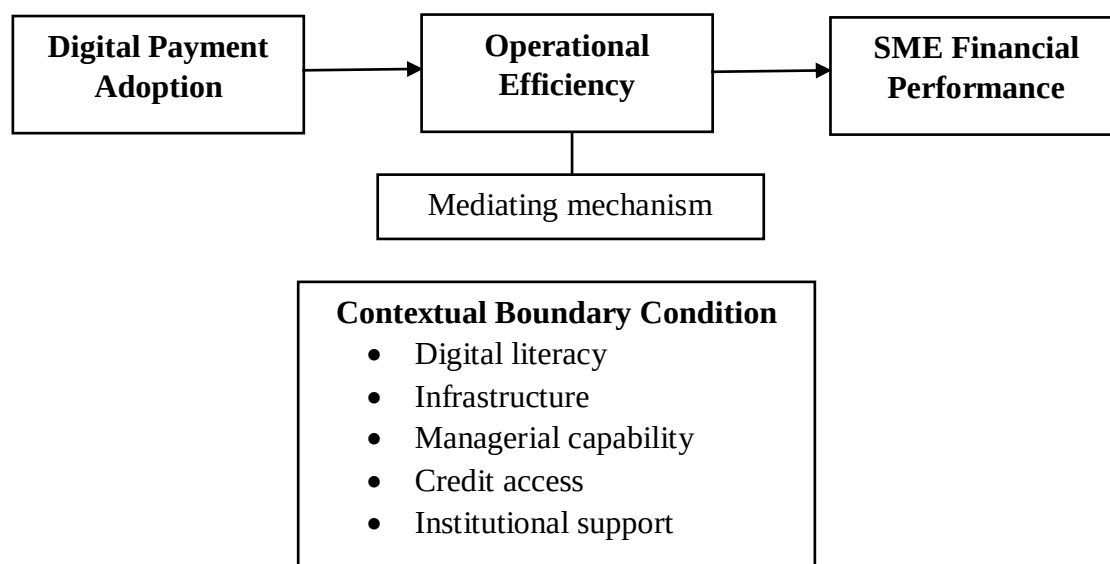


Figure 2. Proposed conceptual framework linking digital payment adoption, operational efficiency, and SME financial performance

5.4 Boundary Conditions and Future Research

The adoption–efficiency–performance pathway depends on contextual conditions such as digital literacy, infrastructure quality, managerial capability, credit access, and institutional support (Kahveci, 2025; B. Ly et al., 2025; Niankara & Traoret, 2023). These factors explain why SMEs may experience different benefits from adopting digital payments. Future research should empirically test operational efficiency as a mediator and examine how these contextual factors strengthen or weaken the relationship across different SME sectors and geographical contexts.

6. Conclusion

This systematic literature review examined how digital payment adoption relates to SME financial performance through operational efficiency. Based on a synthesis of 29 peer-reviewed studies, the findings show that digital payment adoption improves SME operations by accelerating transactions, reducing cash-handling costs, improving the accuracy of financial records, and strengthening transparency. However, the evidence also indicates that digital payment adoption does not always yield direct gains in financial performance. Its financial value is more clearly realized when adoption is translated into operational efficiency.

The main theoretical contribution of this study is the development of a mediation-based conceptual model linking digital payment adoption, operational efficiency, and SME financial performance. By integrating Transaction Cost Theory and the Resource-Based View, the review explains that digital payments create value by reducing transaction-related inefficiencies and by becoming embedded in organizational routines as an internal capability. This contribution clarifies why previous studies have reported mixed findings regarding the direct relationship between digital payment adoption and SME financial performance.

In practice, the findings suggest that SME managers should not focus solely on adopting digital payment systems but also on integrating them into daily business processes, financial recording, cost control, and decision-making. Policymakers and fintech providers should support SMEs through digital literacy programs, reliable infrastructure, accessible financing, and institutional support to ensure that the adoption of digital payments yields meaningful operational and financial benefits.

This review is limited to peer-reviewed English-language studies published between 2020 and 2026 and may not capture relevant evidence from non-English publications, grey literature, or country-specific policy reports. In addition, the proposed mediation framework is conceptual and requires empirical validation.

Future research should test the proposed model using longitudinal designs, examine operational efficiency as a mediating variable, and conduct cross-country comparisons to assess whether the adoption–efficiency–performance pathway differs across institutional, technological, and economic contexts.

Recommendation

Based on the review findings, SME managers should move beyond simply adopting digital payment systems and focus on integrating them into daily transaction management, financial recording, cost control, and cash-flow monitoring. This will help transform the use of digital payments into measurable operational efficiency and financial benefits. Policymakers should design digital payment programs that emphasize effective use rather than adoption rates alone. Priority should be given to improving digital literacy, strengthening digital infrastructure, expanding SME access to credit, and supporting interoperable payment ecosystems such as QR-based payment systems. Financial institutions and fintech providers should develop digital payment solutions that integrate easily with SME accounting and financial management systems. They should also use digital transaction records to support alternative credit assessment for unbanked and underbanked SMEs. Future research should empirically test the proposed mediation model by examining operational efficiency as a mediator between digital payment adoption and SME financial performance. Longitudinal studies, cross-country comparisons, and studies testing boundary conditions such as digital

literacy, infrastructure quality, managerial capability, credit access, and institutional support are also recommended.

Data availability

The data used in this systematic literature review were obtained from previously published peer-reviewed articles. The reviewed articles are listed in the reference section, and the extraction matrix can be made available from the corresponding author upon reasonable request.

Declaration of the use of artificial intelligence (AI)

The authors used ChatGPT as an AI-assisted writing tool to support language refinement, organization, and manuscript editing. All arguments, interpretations, citations, and conclusions were reviewed and validated by the authors.

Funding

This research received no specific grant from any public, commercial, or not-for-profit funding agency.

Acknowledgment

The authors would like to thank the Faculty of Economics and Business, Universitas Muhammadiyah Malang, for the institutional support in preparing this study. The authors have no conflicts of interest to declare. No funding was obtained from outside sources.

References

- Alfiana Mokoginta, E., & Sendjaja, T. (2025). Impression: Jurnal Teknologi dan Informasi Adopsi Pembayaran Digital di Era Pasca-Pandemi: Telaah Literatur tentang Tren, Tantangan, dan Implikasi Kebijakan di Indonesia. Dalam Jurnal Teknologi dan Informasi (Vol. 4, No. 2).
- Alsa, A., Wasilah, K., Rakhmad, D., Ashari, W., & Naimah, N. N. (2025). The Role Of Digital Payment Systems in Enhancing Financial Inclusion: A Literature Review in the Context of Indonesian Banking. *ESPAS Journal of Economics and Banking*, 2(1), 45–57. <https://doi.org/10.28926/espas.v2i1.1827>
- Aristyanto, E., Hardaningtyas, R. T., Shakhnoza, A., & Kizi, A. (2025). <https://economics.ifrel.org/index.php/HarmoniEconomics> The Impact of Digital Payment Adoption on Financial Accuracy and Accounting Efficiency in Small and Medium Enterprises. <https://doi.org/10.70062/harmonieconomics.v1i1.394>
- Bindeeba, D. S., Atuhair, S., Bakashaba, R., & Tukamushaba, E. K. (2025). Digital business process integration and sustainability among SMEs: the mediating role of operational efficiency and the moderating role of credit access. *Journal of Sustainable Business*, 10(1). <https://doi.org/10.1186/s40991-025-00121-6>
- Calderon-Monge, E., & Ribeiro-Soriano, D. (2024). The role of digitalization in business and management: a systematic literature review. *Review of Managerial Science*, 18(2), 449–491. <https://doi.org/10.1007/s11846-023-00647-8>
- Chen, B., & Xiao, J. (2025). Digital payments enhance both formal and informal credit access for rural households: evidence from China. *Frontiers in Sustainable Food Systems*, 9. <https://doi.org/10.3389/fsufs.2025.1676462>
- De Cassai, A., Dost, B., Tulgar, S., & Boscolo, A. (2025). Methodological Standards for Conducting High-Quality Systematic Reviews. In *Biology* (Vol. 14, Number 8). Multidisciplinary Digital Publishing Institute (MDPI). <https://doi.org/10.3390/biology14080973>
- Demirgüç-Kunt, A., Klapper, L., Singer, D., & Ansar, S. (2022). *Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19*. <https://doi.org/10.1596/978-1-4648-1897-4>

- Escoz Barragan, K., & Becker, F. S. R. (2025). Keeping pace with the digital transformation — exploring the digital orientation of SMEs. *Small Business Economics*, 64(3), 1361–1385. <https://doi.org/10.1007/s11187-024-00947-7>
- Fauziah, F., Made Sudarma, & Erwin Saraswati. (2025). MSMEs in Digital Transformation: Determinants of QRIS E-Payment Acceptance. *Jurnal Manajemen*, 29(2), 379–399. <https://doi.org/10.24912/jm.v29i2.2681>
- Gao, J., Siddik, A. B., Khawar Abbas, S., Hamayun, M., Masukujjaman, M., & Alam, S. S. (2023). Impact of E-Commerce and Digital Marketing Adoption on the Financial and Sustainability Performance of MSMEs during the COVID-19 Pandemic: An Empirical Study. *Sustainability (Switzerland)*, 15(2). <https://doi.org/10.3390/su15021594>
- Go, R. Y., Aini, N., Mutiarani, T., Yolanda, R. O., & Sarbinny, N. (2025). The Role of Digital Payment Technology in Improving Retail Operational Efficiency: A Review. *KERNEL: Jurnal Riset Inovasi Bidang Informatika dan Pendidikan Informatika*, 6(1), 43–51. <https://doi.org/10.31284/j.kernel.2025.v6i1.7774>
- Isma Nurrokhim, Yuni Astriana Khamidah, Izzatun Maghfirah, Nenny Syahrenny, & Nuzul Ibnu Hajar. (2025). Interoperability of Digital Payment Platforms (QRIS) and its Effect on Micro, Small, and Medium Enterprise (MSME) Transaction Costs. *Perspectives on Advanced New Generations of Global and Local Economic Horizons*, 1(3), 11–21. <https://doi.org/10.69855/panggaleh.v1i3.300>
- Kahveci, E. (2025). Digital Transformation in SMEs: Enablers, Interconnections, and a Framework for Sustainable Competitive Advantage. *Administrative Sciences*, 15(3). <https://doi.org/10.3390/admsci15030107>
- Kraus, S., Breier, M., & Dasí-Rodríguez, S. (2020). The art of crafting a systematic literature review in entrepreneurship research. *International Entrepreneurship and Management Journal*, 16(3), 1023–1042. <https://doi.org/10.1007/s11365-020-00635-4>
- Ly, B., Ly, R., & Ma, S. (2025). User-centric drivers of QR payment adoption in emerging economies: trust, quality, and social influence. *Future Business Journal*, 11(1). <https://doi.org/10.1186/s43093-025-00681-w>
- Ly, R., & Ly, B. (2024). Digital payment systems in an emerging economy. *Computers in Human Behavior Reports*, 16. <https://doi.org/10.1016/j.chbr.2024.100517>
- Natalios Peter Sipasulta, Dionysia Kowanda, & Siti Nurafiah. (2026). Qris as Supporters and Drivers of Economic Growth in Retail Transaction Processing in the Digital Era. *International Journal of Management and Economics*, 5(1), 79–86. <https://doi.org/10.56127/ijme.v5i1.2535>
- Niankara, I., & Traoret, R. I. (2023). The digital payment-financial inclusion nexus and payment system innovation within the global open economy during the COVID-19 pandemic. *Journal of Open Innovation: Technology, Market, and Complexity*, 9(4). <https://doi.org/10.1016/j.joitmc.2023.100173>
- Paul, J., Lim, W. M., O’Cass, A., Hao, A. W., & Bresciani, S. (2021). Scientific procedures and rationales for systematic literature reviews (SPAR-4-SLR). *International Journal of Consumer Studies*. <https://doi.org/10.1111/ijcs.12695>
- Rahmawaty1, R. A. R. M. S. (2025). The Influence of QRIS and E-Wallet Adoption on Transaction Efficiency and Profitability of MSMEs in Makassar City. *Jurnal Informasi Dan Teknologi*.
- Rahmiyati, N., Wahidhani, E. H., Fitrianingsih, D., & Rachmawati, T. (2024). The Effect of Working Capital Management, Operational Efficiency, and Profitability on Financial Sustainability of SMEs. In *Universitas Nusa Bangsa* (Vol. 5, Number 2). <https://ijble.com/index.php/journal/index>
- Saleh, C., Mohamad, S., Talipi, N., & Budiawan, S. (2025). Measuring the Impact of Digital Technology Adoption on the Operational Efficiency of MSMEs in Indonesia. *Amsir Accounting & Finance Journal*, 3(1), 27–34. <https://doi.org/10.56341/aafj.v3i1.570>

- Sipayung, T. D. (2025). The Impact of Financing Digitalization on MSME Operational Effectiveness: The Mediating Role of Innovation, Digital Infrastructure, and Fintech. *Jurnal Ilmiah Manajemen Kesatuan*, 13(3), 1621–1634. <https://doi.org/10.37641/jimkes.v13i3.3258>
- Supriani, I., Mubarroq, U. S., & Info, A. (2023). Islamic economics, banking, and finance literature bibliometrics approach: Guidelines for journal databases. *Review of Islamic Social Finance and Entrepreneurship (RISFE)*, 2023(1), 29. <https://doi.org/10.20885/RISFE>
- Sutrisno, E., & Nainggolan, R. (2025). Unlocking the Potential of Digital Payment: How Financial Habits Drive Digital Payment Adoption Among Indonesia's MSMEs. *Jurnal Aplikasi Manajemen*, 23(1), 111–133. <https://doi.org/10.21776/ub.jam.2025.023.1.07>
- Utami, N. (2025). Adopsi Pembayaran Digital melalui Qris dan Dampaknya terhadap Kinerja Finansial Umkm di Daerah Istimewa Yogyakarta. *Jurnal Transaksi*, 17(1).
- Yudianto, A., & Latte, J. (2026). Adoption of Digital Payment Systems and Its Effect on the Financial Efficiency of Micro Enterprises in Rural Areas. *Jurnal Ilmiah Manajemen Kesatuan*, 14(1), 279–288. <https://doi.org/10.37641/jimkes.v14i1.4605>
- Yuwono, T., Suroso, A., & Novandari, W. (2024). Information and communication technology in SMEs: a systematic literature review. In *Journal of Innovation and Entrepreneurship* (Vol. 13, Number 1). Springer Science and Business Media Deutschland GmbH. <https://doi.org/10.1186/s13731-024-00392-6>
- Zakariya, A., & Arifin, Ah. A. (2025). The Application of Digital Payments (QRIS & E-Wallet) on the Efficiency of MSME Transactions. *Journal of Finance, Economics and Business*, 4(2), 1–19. <https://doi.org/10.59827/jfeb.v4i2.326>