

The Impact of Digital Payments and Financial Inclusion on the Financial Performance of Culinary MSMEs

Suhaidar Suhaidar, Vebtasvili Vebtasvili*

Faculty of Economics and Business, University of Bangka Belitung

*Corresponding Author: Vebtasvili Vebtasvili,

Abstract: *The development of digital technology has encouraged Micro, Small, and Medium Enterprises (MSMEs) to adopt digital payments and formal financial services in running their businesses, yet the effectiveness of these two factors on financial performance still shows mixed results. This study analyzes the impact of digital payments and financial inclusion on the financial performance of MSMEs in the culinary sector in Pangkalpinang City. A quantitative survey method was applied to 99 culinary MSME actors selected through purposive sampling, and data were analyzed using multiple linear regression in SPSS. The results show that digital payments do not have a significant effect on financial performance, indicating that the use of digital payment systems alone has not directly increased revenue, profit, or asset growth. In contrast, financial inclusion has a positive and significant effect on financial performance: better access to formal financial services such as savings, financing, and banking helps business actors manage their finances and grow their businesses. Simultaneously, digital payments and financial inclusion together have a significant effect on financial performance. This study emphasizes that expanding access to and utilization of formal financial services is a critical factor in improving the financial performance of culinary MSMEs in Pangkalpinang City.*

Keywords: Digital Payments, Financial Inclusion, Financial Performance, Culinary MSMEs

I. INTRODUCTION

Digital transformation has reshaped how Micro, Small, and Medium Enterprises (MSMEs) operate, from marketing and payment transactions to financial management. In Indonesia, MSMEs play a strategic role in the national economy, absorbing a large share of the workforce and contributing significantly to gross domestic product. Their ability to adapt to technological change is therefore an important factor for competitiveness and sustainability [1], [2]. One of the most visible forms of this transformation is the growth of digital payments. Platforms such as digital wallets, QRIS, and mobile banking allow transactions to be completed quickly, securely, and efficiently, while also helping business actors record transactions more systematically. The rising adoption of digital payments in Indonesia reflects growing public acceptance of technology as a practical transaction tool [3], [4].

Alongside digital payments, financial inclusion – defined as access to and the ability to use formal financial services such as savings, credit, insurance, and payment services – is another important enabler of MSME development. Greater financial inclusion gives business actors access to funding, helps them manage cash flow, and expands their capacity to grow [5], [6]. Financial performance, reflecting a firm's ability to generate profit, manage assets, and sustain operations, is a key indicator of business success. For MSMEs, sound financial performance underpins survival in an increasingly competitive market, making the factors that drive it – such as revenue growth, cost efficiency, and effective financial management – worthy of closer attention [7], [8].

The culinary sector is among the MSME segments with the largest contribution to local and national economies, sustained by consistently high demand for food and beverages. As consumer behavior shifts toward more practical and efficient transactions, culinary businesses have increasingly adopted digital payments and formal financial services to support their operations [9]. Pangkalpinang City, the capital of Bangka Belitung Islands Province, hosts a fast-growing population of culinary MSMEs. Yet not all business actors have been able to optimally use digital payments and formal financial services, due to limited digital literacy, limited understanding of financial products, and weak financial

management practices—conditions that may constrain their financial performance and long-term sustainability [10]. Although prior studies have examined the relationship between digital payments, financial inclusion, and MSME financial performance, findings remain mixed across contexts: some report strong positive effects of digital payment adoption, others find no significant effect once other internal capabilities are controlled for, and the relative weight of financial inclusion versus digital payments appears to vary by sector and region. This inconsistency motivates further investigation in the specific context of culinary MSMEs in Pangkalpinang City, where the interplay between these two factors has not previously been examined [11], [12].

The purpose of this study is to analyze the impact of digital payments and the financial inclusion on the financial performance of MSMEs in the culinary sector in Pangkalpinang City. This study focuses on MSMEs in the culinary sector in Pangkalpinang City that have used digital payment services—such as QRIS, e-wallets, and mobile banking—for at least the last six months.

II. LITERATURE REVIEW

Resource-Based Theory

Resource-Based Theory (RBT) originates from Edith Penrose's *The Theory of the Growth of the Firm*, which views the firm as an organized collection of productive resources whose growth depends on management's ability to combine and deploy internal resources effectively [13]. The theory was formalized by Barney (1991), who argued that a firm achieves sustainable competitive advantage when its resources are Valuable, Rare, Inimitable, and Non-substitutable (VRIN) [14]. Under this view, performance differences between firms stem primarily from how internal resources—both tangible and intangible—are owned and managed, rather than from external market conditions alone [15].

RBT rests on two core assumptions: resource heterogeneity, meaning firms possess different bundles of resources and capabilities, and resource immobility, meaning those resources cannot easily be transferred or replicated by competitors [16], [17]. When resources are unique and difficult to imitate, the resulting performance advantage tends to persist over time [18]. Applied to MSMEs, capabilities such as financial literacy and the use of digital payment technology (e.g., QRIS) can be viewed as internal strategic resources. When managed effectively, these resources improve capital management, transaction recording, and ultimately financial performance [19], [20], [21].

Financial Performance

Financial performance reflects a firm's operational achievements over a given period, traditionally assessed through liquidity, solvency, and profitability ratios [22]. For MSMEs, it is often used as a practical indicator of how optimally a business utilizes its assets to generate income, and is shaped by factors such as financial literacy, financial inclusion, and digital payment adoption [23], [24]. Within the RBT framework, superior financial performance reflects a firm's success in combining tangible assets (e.g., equipment, technology) with intangible assets (e.g., managerial competence, financial literacy) into a competitive advantage that is difficult for competitors to replicate [25].

Digital Payments

Digital payments are cashless transaction systems conducted through mobile banking, internet banking, e-wallets, electronic cards, or QR codes. The growth of financial technology has driven a shift from conventional to digital-based payment systems that are faster, more practical, and more efficient, offering benefits such as transaction speed, accurate digital recordkeeping, and reduced cash-handling costs [26]. Evidence on their performance effects is mixed: while digital payments can improve operational efficiency and transaction monitoring, ease of use does not always translate into significantly improved MSME financial performance [27]. Within RBT, digital payments can be classified as a tangible, technology-based resource capable of generating competitive advantage when used optimally—by increasing efficiency, expanding market reach, and improving financial recordkeeping [28], [29].

Financial Inclusion

Financial inclusion refers to the access and ability of individuals and businesses to use formal financial products and services—savings, credit, payments, and insurance—that are affordable, safe, and suited to their needs. The Financial Services Authority (OJK, 2023) and the World Bank (2022) both frame financial inclusion as a central instrument for improving welfare and supporting inclusive economic growth.

From an RBT perspective, financial inclusion functions as a strategic resource that gives MSMEs access to capital, payment services, and savings instruments, enabling them to expand production capacity, manage cash flow, and sustain competitiveness. Prior studies confirm that financial inclusion positively affects MSME financial performance by helping business actors optimize their financial resources [30], [31].

Several studies provide context for the present research. Dampi et al. [32] found that financial literacy and financial inclusion jointly and individually improve MSME financial performance in Kotamobagu City, and comparable studies on Manado City MSMEs likewise found significant effects of both factors. Harbert and Arifin [33] reported that fintech efficiency and financial decision-making positively affect MSME performance, though financial inclusion alone showed no significant effect without complementary usability and decision-making capacity. Andini and Arifin [34] found that financial liquidity, rather than financial literacy, was the stronger performance driver, with financial inclusion affecting performance indirectly through government support. Haikal et al. [35] showed that financial literacy and inclusion affect performance both directly and through debt financing, while Sholeha and Kharisma [36] found that fintech adoption positively affects SME performance through improved access to financing. Putri et al. (2024) found that financial literacy, payment gateways, and financial inclusion positively affect financial performance, while peer-to-peer lending did not, and Wijayana et al. [30] confirmed that financial inclusion, financial self-efficacy, and demographic factors positively affect MSME financial performance. Collectively, these studies show consistent support for the role of financial inclusion, while findings on digital payments and related fintech adoption remain mixed – motivating the present study (Table 1).

Table 1. Summary of Selected Previous Research

Researcher (Year)	Focus	Key Finding
Dampi et al. (2026)	Financial literacy & inclusion on MSME performance	Both factors positively and significantly affect performance
Manado City study (2025)	Financial literacy & inclusion on MSME performance	Both factors have a significant effect
Harbert & Arifin (2025)	Fintech efficiency, financial decisions & inclusion	Fintech efficiency significant; inclusion alone not significant
Andini & Arifin (2025)	Literacy, liquidity & inclusion (gov't support as mediator)	Liquidity significant; inclusion mediated by gov't support
Haikal et al. (2025)	Literacy & inclusion with debt financing as mediator	Inclusion significant directly and via debt financing
Sholeha & Kharisma (2025)	Fintech and SME performance	Fintech improves access to financing and performance
Putri et al. (2024)	Literacy, payment gateway, P2P lending & inclusion	Inclusion and payment gateway significant; P2P lending not
Wijayana et al. (2023)	Inclusion, self-efficacy & demographics	All factors positively and significantly affect performance

Building on RBT, digital payments represent a tangible technological resource expected to improve transaction efficiency, expand market access, and generate accurate, real-time financial data [22]. Evidence on this relationship is mixed: some studies report a positive effect of digital payment adoption on MSME financial performance, while others find no significant effect once financial literacy and operational management are accounted for [37], [38]. This study proposes:

H₁: Digital payments have a positive effect on the financial performance of MSMEs in the culinary sector in Pangkalpinang City

Financial inclusion

Financial inclusion is treated as a strategic resource that gives MSMEs access to savings, credit, financing, and payment services, supporting more effective cash-flow management and business development [14], [15]. Prior studies consistently report a positive relationship between financial inclusion and MSME financial performance [30], [39]. This study proposes:

H₂: Financial inclusion has a positive effect on the financial performance of MSMEs in the culinary sector in Pangkalpinang City

Digital Payments and Financial Inclusion

Digital payments and financial inclusion are also expected to complement one another: digital payments improve transaction speed and recordkeeping, while financial inclusion expands access to the formal financial services needed for business growth [21], [40]. This study proposes:

H₃: Digital payments and financial inclusion simultaneously have a positive effect on the financial performance of MSMEs in the culinary sector in Pangkalpinang City

The research framework provides a diagrammatic representation of the relationships among variables in this study, as shown in Figure 1.

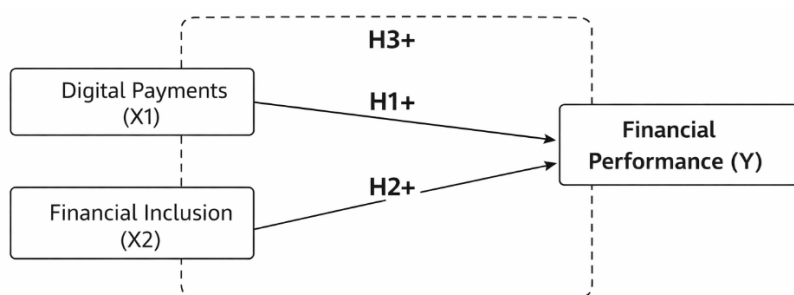


Figure 1. Research Framework

III. RESEARCH METHOD

This study uses a quantitative, explanatory (causal) research design to test and explain the causal relationships among variables, following the positivist research tradition in which hypotheses are tested using statistical analysis of sample data [41], [42]. The research was conducted in Pangkalpinang City, Bangka Belitung Islands Province, with primary data collected through questionnaires (5-point Likert scale) between March and June 2026. The reference population consists of 28,863 MSME units in Pangkalpinang City, of which 9,778 units operate in the culinary sector (BPS Pangkalpinang, 2021). The minimum sample size was determined using the Slovin formula:

$$n = N / (1 + N e^2)$$

where N = 9,778 and e = 0.10 (10% margin of error), giving n = 9,778 / (1 + 9,778 × 0.01) ≈ 98.99, rounded to 99 respondents at a 90% confidence level [41].

Table 1 Sampling Criteria

No	Criterion	Sum	Accumulation
1	Sampling used a non-probability, purposive sampling method, with samples drawn proportionally across Pangkalpinang’s seven sub-districts. Respondents were required to: (1) operate a culinary MSME physically located in Pangkalpinang City; (2) have actively used a digital payment system (QRIS, e-wallet, or mobile banking) for at least the last six months; and (3) be the owner or manager directly responsible for day-to-day operations and financial decisions.		99

Source: processed by the author (2025)

Table 2 Variable Measurements

Table 2. Operational Definitions and Variable Measurement

Variable	Definition	Indicators	Scale
Digital Payments (X1)	Level of adoption and perceived benefit of non-cash, QRIS-based payment systems	Ease of use; Sustainability; User satisfaction; Willingness to recommend	Ordinal
Financial Inclusion (X2)	Access to and use of formal financial institutions, products, and services (OJK)	Financial quality (access, speed/accuracy); Welfare (credit as capital, financing adequacy)	Ordinal
Financial Performance (Y)	Results/ achievements of MSMEs in the financial aspect over a given period [49]	Revenue growth; Profit growth; Asset growth; Working capital	Ordinal

Source: processed by the author (2025)

IV. RESULTS AND DISCUSSION

Results

Tabel 3 Overview of Respondents

Culinary MSMEs are the most dominant and fastest-growing MSME segment in Pangkalpinang City, encompassing snack producers, beverage vendors, street food sellers, food stalls, and coffee shops. According to the Pangkalpinang City Cooperatives, Trade, and MSMEs Office (2025), the sector comprises 9,778 business units, concentrated mainly in Rangkui (2,249), Gerunggang (2,146), Girimaya (2,026), and Gabek (1,451) sub-districts, with smaller numbers in Pangkal Balam (960), Taman Sari (675), and Bukit Intan (271).

The 99 respondents in this study were drawn proportionally from all seven sub-districts. Table 3 summarizes their demographic and business characteristics.

Table 3. Respondent Characteristics (n = 99)

Category	Group	n	%
Gender	Male	38	38.4%
	Female	61	61.6%
Age	< 25 years	13	13.1%
	25–35 years	39	39.4%
	36–45 years	29	29.3%
	46–55 years	10	10.1%
	> 55 years	5	5.1%
Last Education	Elementary/Junior High	2	2.0%
	Senior High/Vocational	84	84.8%
	Diploma	2	2.0%
	Bachelor’s	10	10.1%
	Postgraduate	1	1.0%
Business Duration	< 6 months	13	13.1%
	6–8 months	5	5.1%
	8–10 months	7	7.1%
	10–12 months	12	12.1%
	> 12 months	62	62.6%
Business Type	Coffee shop	6	6.1%
	Street food vendor	25	25.0%
	Snack business	29	29.0%

Category	Group	n	%
	Beverage business	28	28.0%
	Food stalls	11	11.0%
Domicile (sub-district)	Bukit Intan	3	3.0%
	Gabek	14	14.1%
	Gerunggang	23	23.2%
	Girimaya	19	19.2%
	Pangkal Balam	10	10.1%
	Rangkui	23	23.2%
	Taman Sari	7	7.1%

The respondent profile is dominated by women (61.6%) aged 25–35 years (39.4%), with a senior-high/vocational education background (84.8%), who have operated their businesses for more than 12 months (62.6%) – mainly in the snack (29.0%) and beverage (28.0%) segments – and are concentrated in Gerunggang and Rangkui sub-districts (23.2% each).

Tabel 4 Instrument Test Results

All 18 questionnaire items across the three variables were declared valid, with calculated r-values ranging from 0.726 to 0.939, exceeding the table r-value at the 0.05 significance level. Reliability testing likewise confirmed strong internal consistency, with Cronbach’s Alpha values well above the 0.70 threshold for all three variables (Table 4).

Table 4. Validity and Reliability Test Results

Variable	Calculated r-value Range	Cronbach’s Alpha	Remarks
Digital Payments	0.843 – 0.907	0.931	Valid & Reliable
Financial Inclusion	0.742 – 0.939	0.932	Valid & Reliable
Financial Performance	0.726 – 0.885	0.900	Valid & Reliable

Classical Assumption Test Results

The normality test produced an Asymptotic Significance (2-tailed) of 0.147, exceeding the 0.05 threshold, confirming that the regression residuals are normally distributed. The multicollinearity test showed identical VIF values of 4.946 and tolerance values of 0.202 for both independent variables – well within the acceptable range (VIF < 10, tolerance > 0.10) – indicating no multicollinearity. The Glejser heteroscedasticity test produced significance values of 0.389 (digital payments) and 0.362 (financial inclusion), both exceeding 0.05, indicating no heteroscedasticity. The regression model therefore satisfies the classical assumptions required for hypothesis testing.

Table 5 Multiple Linear Regression Results

Table 5. Multiple Linear Regression Results

Model	B	Std. Error
(Constant)	6.320	1.189
Digital Payments (X1)	0.156	0.099
Financial Inclusion (X2)	0.575	0.105

The resulting regression equation is:

$$\hat{Y} = 6.320 + 0.156X1 + 0.575X2 + \epsilon$$

The constant of 6.320 indicates that financial performance would equal 6.320 if both digital payments and financial inclusion were zero, suggesting other factors outside the model also influence financial performance. The coefficient for digital payments (0.156) is positive, indicating that financial performance rises as digital payment use increases, holding financial inclusion constant. The coefficient for financial inclusion (0.575) is also positive and substantially larger, indicating a stronger association between financial inclusion and financial performance.

Table 6 and 7 Hypothesis Test Results

Partial effects were tested using the t-test (Table 6). The calculated t-value for digital payments (1.574) is below the t-table value (1.661), with a significance of 0.119 (> 0.05), so H1 is rejected. The calculated t-value for financial inclusion (5.470) exceeds the t-table value, with a significance of 0.000 (< 0.05), so H2 is accepted.

Table 6. Results of the t-test

Variable	t-calculated	t-table	Sig.	Result
Digital Payments (X1)	1.574	1.661	0.119	H1 rejected
Financial Inclusion (X2)	5.470	1.661	0.000	H2 accepted

The F-test produced $F = 118.176$ with a significance of 0.000 (< 0.05), confirming that digital payments and financial inclusion simultaneously have a significant effect on financial performance (H3 accepted). The Adjusted R^2 of 0.705 indicates that the model explains 70.5% of the variation in financial performance, with the remaining 29.5% explained by factors outside the model.

Table 7. F-test and Coefficient of Determination

F-calculated	Sig.	Adjusted R ²	Result
118.176	0.000	0.705	H3 accepted – model explains 70.5% of variance

Discussion

Impact of Digital Payments on Financial Performance

Digital payments were found to have no significant effect on the financial performance of culinary MSMEs in Pangkalpinang City, leading to the rejection of H1. Viewed through Resource-Based Theory, a resource generates competitive advantage only when it is valuable, rare, inimitable, and non-substitutable (VRIN) [14]. In this context, digital payment adoption is no longer rare among culinary MSMEs – most business actors now use it – so it no longer functions as a source of distinctive advantage, even though it remains a valuable technological resource.

This finding is consistent with prior studies reporting that ease of digital payment use does not significantly affect MSME performance, with financial literacy and financial management emerging as the stronger drivers [37]. Similar results have been reported for e-payment adoption specifically, in contrast to e-commerce services, which showed a significant positive effect [56], [57]. Together, these findings suggest that digital payments function primarily as a transaction tool rather than a strategic resource unless paired with active use of digital financial data for business decision-making. Among the culinary MSMEs studied, digital payment use remains largely passive and limited to transaction processing, which may explain why its financial benefits have not yet translated into measurable gains in revenue, profit, or asset growth.

This pattern also reflects a broader diffusion effect: as digital payment adoption becomes near-universal within a sector, it shifts from being a differentiator to a baseline operating requirement. Business actors who have not yet adopted it risk losing customers, but those who have already adopted it do not necessarily gain a measurable performance edge over peers who did the same. For culinary MSMEs in Pangkalpinang City, this suggests that future performance gains are more likely to come from how digital transaction data is used – for example, in cash-flow forecasting, expense tracking, or loan applications – rather than from the mere presence of a QRIS code at the point of sale.

Impact of Financial Inclusion on Financial Performance

Financial inclusion was found to have a positive and significant effect on financial performance, supporting H2. Under RBT, financial inclusion functions as a valuable strategic resource: access to savings, credit, financing, and other formal financial services allows MSME actors to manage working capital more effectively, expand operations, and strengthen financial management overall [14].

This result aligns with previous research showing that better access to and use of formal financial services improves MSME financial performance [30], [32], [35]. Culinary MSMEs in Pangkalpinang City with wider access to formal financial

services appear better able to maintain operational stability, manage transactions, and sustain profitability. The findings reinforce financial inclusion's role as a critical lever – more so than digital payment adoption alone – for improving the financial performance of culinary MSMEs in the city, and they highlight the importance of continued efforts to expand formal financial access for this segment.

Practically, this implies that financial institutions and local authorities may achieve greater impact on MSME performance by prioritizing access-side interventions – such as simplified loan products, savings programs tailored to micro-enterprises, and financial literacy training bundled with account opening – over payment-infrastructure rollouts alone. Given that financial inclusion explains the larger share of the variance in financial performance, programs that combine digital payment adoption with active financial inclusion (for example, linking QRIS transaction histories to micro-financing eligibility) may offer a more effective pathway to improving culinary MSME performance than either factor pursued in isolation.

V. CONCLUSION

The results shows that digital payments do not have a significant effect on the financial performance of MSMEs in the culinary sector in Pangkalpinang City, financial inclusion has a positive and significant effect on the financial performance of MSMEs in the culinary sector in Pangkalpinang City, and digital payments and financial inclusion simultaneously have a significant effect on financial performance, jointly explaining 70.5% of its variation. Future research should incorporate additional variables – such as business innovation, digital marketing strategy, digital literacy, and entrepreneurial orientation – for a more comprehensive model, extend the analysis to other MSME sectors and regions with differing levels of digital development, to assess whether the influence of digital payments and financial inclusion varies across contexts, and complement the quantitative approach with in-depth interviews to better understand how MSME actors use digital payments and manage business finances in practice. Overall, these findings suggest that policy and institutional support aimed at improving the financial performance of culinary MSMEs in Pangkalpinang City should prioritize expanding access to formal financial services, while treating digital payment infrastructure as a complementary, baseline enabler rather than a standalone performance driver.

Acknowledgements

Thank you to Universitas Bangka Belitung and LPPM UBB for their support for research. The author would like to thank the culinary MSME owners and managers in Pangkalpinang City who participated as respondents in this study, as well as the Pangkalpinang City Cooperatives, Trade, and MSMEs Office for providing the sectoral data used in this research.

REFERENCES

- [1] Ministry of Cooperatives and Small and Medium Enterprises of the Republic of Indonesia, 2023 Performance Report of the Secretariat of the Ministry of Cooperatives and SMEs, Jakarta: Ministry of Cooperatives and SMEs, 2023.
- [2] Bank Indonesia, Indonesia's Economic Report 2023, Jakarta: Bank Indonesia, 2023.
- [3] Bank Indonesia, Indonesian Payment System Statistics 2024, Jakarta: Bank Indonesia, 2024.
- [4] Indonesian Internet Service Providers Association, Indonesian Internet User Penetration and Behavior Report 2024, Jakarta: APJII, 2024.
- [5] Financial Services Authority, Indonesia Financial Inclusion Report 2023, Jakarta: OJK, 2023.
- [6] World Bank, Global Findex Database 2022: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19, Washington DC: World Bank, 2022.
- [7] E.F. Brigham and J.F. Houston, *Fundamentals of Financial Management*, 15th ed., Boston: Cengage Learning, 2019.
- [8] Kasmir, *Financial Statement Analysis*, Jakarta: Rajawali Press, 2019.
- [9] Ministry of Tourism and Creative Economy of the Republic of Indonesia, 2023 Performance Report, Jakarta: Ministry of Tourism and Creative Economy, 2023.
- [10] Pangkalpinang City Cooperatives, MSMEs and Trade Office, Pangkalpinang City MSME Annual Report 2024, Pangkalpinang: Pangkalpinang City Government, 2024.
- [11] A. Pratama and T. Haryono, The effect of financial literacy on the performance of MSMEs in Indonesia, *Journal of Economics and Business*, 12(2), 2023, pp. 45–56.
- [12] D. Sari and M. Putri, Digitalization of MSMEs and their impact on business performance, *Journal of Management and Entrepreneurship*, 26(1), 2024, pp. 77–89.

- [13] E. Penrose, *The Theory of the Growth of the Firm*, Oxford: Oxford University Press, 2009.
- [14] J. Barney, Firm resources and sustained competitive advantage, *Journal of Management*, 17(1), 1991, pp. 99-120.
- [15] I.V. Kozlenkova, S.A. Samaha and R.W. Palmatier, Resource-based theory in marketing, *Journal of the Academy of Marketing Science*, 42(1), 2014, pp. 1-21.
- [16] M.A. Helfat and M.A. Peteraf, The dynamic resource-based view: Capability lifecycles, *Strategic Management Journal*, 24(10), 2003, pp. 997-1010.
- [17] N. Khotimah, Resource immobility and competitive advantage in SMEs, *Indonesian Journal of Economics and Business*, 32(3), 2017, pp. 211-223.
- [18] R. Adner and C.E. Helfat, Corporate effects and dynamic managerial capabilities, *Strategic Management Journal*, 24(10), 2003, pp. 1011-1025.
- [19] R. Ayusita, B. Santoso and D. Lestari, QRIS adoption and financial literacy in SMEs, *Journal of Finance and Banking*, 27(4), 2023, pp. 512-523.
- [20] S. Dewi and H. Sutanto, Digital payment and SME performance, *Indonesian Journal of Digital Economy*, 5(1), 2024, pp. 33-45.
- [21] A. Putri, Y. Nugroho and F. Rahman, Financial literacy and fintech adoption in SMEs, *Journal of Financial Management*, 14(3), 2022, pp. 201-214.
- [22] H. Harahap, Analysis of the financial performance of MSMEs, *Journal of Accounting and Finance*, 20(1), 2025, pp. 15-27.
- [23] R. Hutabarat, S. Simanjuntak and L. Siregar, Financial performance measurement in SMEs, *Journal of Microeconomics*, 10(2), 2022, pp. 88-99.
- [24] Y. Yulaiha, A. Prasetyo and M. Hidayat, Financial performance indicators in SMEs, *Journal of Small Business Management*, 9(1), 2021, pp. 55-67.
- [25] R.M. Grant, The resource-based theory of competitive advantage: Implications for strategy formulation, *California Management Review*, 33(3), 1999, pp. 114-135.
- [26] H. Hutahaean, A. Sihombing and D. Manurung, Digital payments and SME efficiency, *Journal of Financial Technology*, 8(2), 2024, pp. 101-115.
- [27] M. Monica, A. Wijaya and R. Susanto, Digital payment adoption and SME performance, *Journal of Digital Economics and Business*, 12(1), 2024, pp. 66-78.
- [28] J. Barney, Resource-based theories of competitive advantage: A ten-year retrospective, *Journal of Management*, 27(6), 2001, pp. 643-650.
- [29] R. Rositasari, Cashless society and SME adaptation, *Journal of Socio-Economics*, 14(2), 2022, pp. 99-110.
- [30] A. Wijayana, B. Nugroho and L. Sari, Financial inclusion and SME performance, *Journal of Finance and Business*, 18(3), 2023, pp. 201-215.
- [31] J. Ingkiriwang, R. Manoppo and F. Langi, Financial literacy and inclusion in SMEs, *Journal of Economics and Management*, 20(2), 2025, pp. 144-158.
- [32] R. Dampi, A. Yusuf and H. Karim, Financial literacy and inclusion effects on SME performance, *Journal of Financial Management*, 15(1), 2026, pp. 33-47.
- [33] T. Harbert and M. Arifin, Fintech efficiency and SME decision-making, *Journal of Financial Technology*, 9(1), 2025, pp. 55-70.
- [34] S. Andini and M. Arifin, Liquidity and SME performance, *Indonesian Journal of Economics and Business*, 33(2), 2025, pp. 122-134.
- [35] R. Haikal, D. Prasetyo and N. Lestari, Financial literacy, inclusion, and debt financing in SMEs, *Journal of Finance and Banking*, 28(2), 2025, pp. 211-225.
- [36] A. Sholeha and Y. Kharisma, Fintech services and SME financing access, *Journal of Digital Economy*, 6(1), 2025, pp. 77-91.
- [37] R. Pramesylia and A. Malik, Digital payment adoption and SME performance, *Journal of Economics and Business*, 13(1), 2026, pp. 55-67.
- [38] D. Wardhani, R. Suryani and H. Putra, Digital payment and customer satisfaction in SMEs, *Journal of Management and Entrepreneurship*, 27(2), 2025, pp. 88-99.

- [39] N. Yanti, Financial inclusion and SME performance, *Journal of Economics and Business*, 10(1), 2019, pp. 33–45.
- [40] B. Hermawan, M. Lestari and P. Nugroho, Fintech adoption and SME financial management, *Journal of Financial Technology*, 9(2), 2025, pp. 144–158.
- [41] Sugiyono, *Quantitative, Qualitative, and R&D Research Methods*, Bandung: Alfabeta, 2019.
- [42] D. Hikmawati, *Social Research Methodology*, Jakarta: Rajawali Press, 2020.
- [43] N. Hidayati and Sugiyono, *Educational Research Methods*, Bandung: Alfabeta, 2018.
- [44] A. Suriani and M. Jailani, Sampling techniques in social research, *Journal of Social Research*, 15(2), 2023, pp. 77–89.
- [45] F. Lakens, Sample size determination in social sciences, *Journal of Applied Research Methods*, 11(1), 2022, pp. 33–45.
- [46] R. Ramadani, S. Putra and L. Sari, Generalization in social research, *Journal of Research Methodology*, 18(3), 2025, pp. 122–134.
- [47] A. Djollong, Operational definition of research variables, *Journal of Social Sciences*, 9(2), 2014, pp. 55–66.
- [48] M. Hardiyansyah, *Public Administration Research Methods*, Yogyakarta: Gava Media, 2018.
- [49] A. Subkhan, R. Dewi and H. Sutanto, Financial performance indicators in SMEs, *Journal of Economics and Business*, 13(2), 2024, pp. 77–88.
- [50] M. Adil, S. Prasetyo and N. Lestari, Quantitative analysis in SME research, *Journal of Quantitative Methods*, 7(1), 2023, pp. 33–45.
- [51] D. Anggraini, Y. Nugroho and F. Rahman, Validity testing in financial research, *Journal of Statistics and Research*, 14(2), 2022, pp. 99–110.
- [52] R. Subhaktiyasa, Reliability testing in social sciences, *Journal of Research Methodology*, 19(1), 2024, pp. 55–67.
- [53] S. Martaningtyas, A. Putri and B. Santoso, Classical assumption testing in regression, *Journal of Economics and Statistics*, 12(3), 2024, pp. 144–158.
- [54] I. Ghozali, *Application of Multivariate Analysis with SPSS Program*, Semarang: Diponegoro University Publishing Agency, 2019.
- [55] Z. Puspitaningtyas, Coefficient of determination in investment research, *Journal of Accounting and Finance*, 17(2), 2015, pp. 77–89.
- [56] S. Ayem, Y. Nugroho and F. Rahman, Financial literacy and digital business on MSME performance, *Journal of Digital Economics and Business*, 2025.
- [57] R. Chandra and M. Pabulo, E-payment and e-commerce on the performance of MSMEs, *Journal of Financial Technology*, 2024.