

DRIVING FINANCIAL SUSTAINABILITY IN SMES: FINTECH ADOPTION, ACCESS TO FINANCE, INNOVATIVE LEADERSHIP, AND FINANCIAL COMPETENCE

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Abstract

This study examines the role of FinTech adoption in linking access to finance and sustainable innovative leadership to financial sustainable performance among small and medium-sized enterprises (SMEs). Drawing on Resource-Based View and financial theory, the study proposes a moderated mediation model in which FinTech adoption acts as a mediator, while financial competence serves as a moderating variable. A quantitative explanatory research design is employed using survey data collected from SME owners and managers. The data are analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) to test direct, mediating, and moderating relationships. The findings are expected to show that access to finance and sustainable innovative leadership positively influence FinTech adoption, which in turn enhances financial sustainable performance. Furthermore, financial competence is anticipated to strengthen the relationship between access to finance and FinTech adoption, indicating that managerial financial capability plays a critical role in leveraging financial resources into digital transformation. This study contributes to the literature by focusing specifically on financial sustainability and highlighting the importance of internal capabilities in maximizing the benefits of FinTech adoption. Practically, the findings provide insights for SMEs, policymakers, and financial service providers to promote digital financial inclusion and improve long-term financial performance.

Keywords: FinTech Adoption, Access to Finance, Financial Competence, Financial Sustainability, SMEs

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INTRODUCTION

Small and medium-sized enterprises (SMEs) constitute the backbone of economic vitality in emerging markets, driving job creation and GDP growth. In Indonesia, SMEs generate 61% of national GDP and employ 97% of the workforce (Ministry of Cooperatives and SMEs, 2024). Yet, persistent barriers—limited financing access, deficient financial literacy, and technological lags—undermine their long-term viability (World Bank, 2025). Drawing on the Resource-Based View (RBV; Barney, 1991) and Dynamic Capabilities framework (Teece et al., 1997), this study posits financing access as a critical resource for SME competitiveness.

Financing constraints remain acute: 68% of Indonesian SMEs rely on informal funding, curtailing innovation and expansion (Bank Indonesia, 2024). Sustainable innovative leadership—marked by forward-thinking and innovation openness—fosters adaptation via financial technology (FinTech) adoption, such as peer-to-peer lending and digital payments (Bajwa et al., 2025). FinTech lowers transaction costs by 40% and bolsters inclusion (Sanga & Aziakpono, 2023), yet its performance impact hinges on managerial financial competence, defined as proficiency in budgeting, reporting, and investment appraisal (Ye & Kulathunga, 2019). Underpinned by the Technology Acceptance Model (TAM; Davis, 1989), competent managers optimize FinTech for superior resource deployment.

Despite the growing body of literature on SME sustainability, several critical empirical gaps remain unresolved. First, prior studies predominantly examine the effects of access to finance and leadership on firm performance in isolation, offering limited understanding of the underlying mechanisms through which these factors translate into sustainable financial outcomes, particularly in emerging economies. While recent work acknowledges the role of digital technologies, the mediating function of FinTech adoption in converting financial and leadership resources into financial sustainable performance remains underexplored and fragmented (Abbasi et al., 2021; Usai et al., 2021; Bajwa et al., 2025). Second, although financial literacy has been widely recognized as important, existing research largely treats it as a direct predictor, overlooking its contingent role as a boundary condition that may strengthen or weaken the effectiveness of financial access and leadership capabilities. This indicates a lack of empirical models incorporating financial competence as a moderating variable, particularly in the context of digital financial transformation (Ye & Kulathunga, 2019; Sanga & Aziakpono, 2023). Third, there is a notable scarcity of integrative frameworks that simultaneously combine Resource-Based View and Dynamic Capabilities perspectives to explain how internal capabilities (leadership and competence) interact with external resources (access to finance) through digital enablers such as FinTech. Finally, empirical evidence from emerging markets, especially Indonesia, remains limited, despite their distinct structural constraints and rapid FinTech growth.

Addressing these gaps, this research examines how financing access and sustainable innovative leadership influence financial sustainable performance in Indonesian SMEs, with FinTech adoption as mediator and financial competence as moderator. Objectives include: (1) testing direct effects; (2) validating moderated mediation paths via SEM-PLS. Scope targets retail/manufacturing SMEs in Central Java (n=350, 2025 survey data), emphasizing financial metrics (ROA, liquidity ratios) over broader sustainability lenses. This study advances prior work (e.g., Bajwa et al., 2025) by zeroing in on financial sustainable performance—neglected in triple bottom line approaches—and pioneering a FinTech-centric moderated mediation model with financial competence as moderator. No prior Scopus-indexed research (2020-2026 meta-analysis; Nguyen et al., 2026) integrates this in an Indonesian context, addressing a key empirical void.

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

Resource-Based View (RBV)

The Resource-Based View (RBV) posits that firms achieve competitive advantage through the effective utilization of internal resources that are valuable, rare, inimitable, and non-substitutable (Barney, 1991). In the context of SMEs, resources such as access to finance, leadership capability, and managerial competence are critical in enabling firms to innovate and adapt to dynamic environments. These resources determine the firm's ability to adopt financial technologies and achieve sustainable performance (Bajwa et al., 2025).

Ecological Modernization Theory (EMT)

Ecological Modernization Theory (EMT) suggests that economic growth and sustainability can be achieved simultaneously through technological innovation and institutional change (Mol, 2002). Digital technologies, including FinTech, enhance efficiency, transparency, and resource utilization. Prior studies indicate that FinTech adoption enables firms to improve financial management and sustainability outcomes (Bajwa et al., 2025; Usai et al., 2021).

Financial Inclusion Theory

Financial Inclusion Theory emphasizes the importance of equitable access to formal financial services for individuals and businesses. Access to financial services is a key driver of economic growth, poverty reduction, and business sustainability (Demirgüç-Kunt et al., 2018).

For SMEs, financial inclusion reduces financing constraints and enables investment in innovation and technology adoption. FinTech plays a crucial role in promoting financial inclusion by providing accessible, low-cost financial services, particularly for underserved SMEs (Sanga & Aziakpono, 2023). Thus, financial inclusion theory provides a strong foundation for explaining the relationship between **access to finance, FinTech adoption, and financial sustainable performance**.

Dynamic Capabilities Theory

Dynamic capabilities theory complements the Resource-Based View by emphasizing a firm's ability to integrate, build, and reconfigure resources in response to rapid environmental change (Teece, 2007). In turbulent, technology-driven markets, competitive advantage depends not only on possessing valuable resources, but also on developing capabilities for sensing opportunities, seizing them through timely investments, and transforming existing routines (Teece, 2007; Helfat & Peteraf, 2015). Recent work highlights that dynamic capabilities are particularly critical for SMEs' digital transformation, including the development of digital and FinTech-related capabilities that underpin innovation and sustainable performance (González-Sama et al., 2023; Abdurrahman et al., 2024).

In the SME finance context, dynamic capabilities theory provides a strong lens for interpreting FinTech adoption as an organizational capability rather than a purely technical decision. SMEs with stronger dynamic (entrepreneurial) capabilities are more able to understand FinTech's strategic value, form alliances with FinTech providers, and embed digital financial tools into their processes, which in turn enhances performance and resilience (Ismail & Rashidi, 2025). Within the proposed model, access to finance and sustainable innovative leadership constitute the underlying resource base, while FinTech adoption reflects the dynamic capability that transforms these resources into financial sustainable performance. Financial competence strengthens this mechanism by enabling owners and managers to better sense digital financial opportunities, assess FinTech solutions, and reconfigure financial routines in line with changing conditions and sustainability objectives (Helfat & Peteraf, 2015; Ismail & Rashidi, 2025).

Financial Sustainable Performance (FSP)

Financial sustainable performance refers to a firm's ability to maintain stable and improving financial outcomes over time, including profitability, revenue growth, liquidity, and cost efficiency (Bajwa et al., 2025). For SMEs, it is a critical indicator of survival and long-term competitiveness because it determines the capacity to invest in innovation, absorb shocks, and pursue growth opportunities (Kersten et al., 2017; OECD, 2021). Recent evidence shows that digitalization and FinTech adoption can further enhance financial sustainable performance by lowering transaction costs, improving cash-flow management, and broadening access to financial services (Usai et al., 2021; Abbasi et al., 2021; Alfzari & Al-Shboul, 2024).

Access to Finance (AF)

Access to finance refers to the ability of firms to obtain adequate and affordable financial resources from formal and alternative sources, such as banks, microfinance institutions, and digital lenders (Kersten et al., 2017; IMF, 2021). Limited access to finance remains a major constraint for SMEs and restricts their ability to invest in innovation, adopt new technologies, and scale up operations (Kersten et al., 2017; World Bank, 2014). Recent studies in emerging economies show that improved access to finance is positively associated with SME performance and sustainability, especially when combined with digital financial solutions and better financial management (Demirgüç-Kunt et al., 2018; Stefanelli et al., 2022; Bajwa et al., 2025).

Sustainable Innovative Leadership (SIL)

Sustainable innovative leadership (SIL) refers to a higher-order managerial capability that integrates innovation orientation with long-term sustainability objectives, enabling firms to simultaneously pursue economic, environmental, and social performance. Unlike traditional leadership styles, SIL emphasizes future-oriented thinking, ethical responsibility, and adaptive innovation, which collectively drive organizational transformation in dynamic environments.

From a theoretical perspective, SIL aligns with the Resource-Based View (RBV) and Dynamic Capabilities Theory, as it represents an intangible strategic resource that enhances firms' ability to sense, seize, and transform opportunities in response to technological and sustainability challenges. Empirical evidence suggests that leaders with sustainability-oriented mindsets foster organizational learning, psychological safety, and collaborative innovation, thereby accelerating the adoption of new technologies and sustainable practices (Khan et al., 2023; Zada et al., 2024; Rosário & Boechat, 2025).

Moreover, recent studies highlight that sustainable innovative leadership plays a critical role in digital transformation and FinTech adoption, as leaders who embrace innovation and sustainability are more likely to allocate resources toward digital initiatives and reduce resistance to change (Suriyankietkaew et al., 2022; Sokolic et al., 2024). In SME contexts, SIL also contributes to cost efficiency, resilience, and long-term financial sustainability by aligning strategic decision-making with stakeholder expectations and sustainability goals (Bajwa et al., 2025).

FinTech Adoption (FTA)

FinTech adoption (FTA) refers to the extent to which firms utilize digital financial technologies—including mobile payments, peer-to-peer lending, blockchain-based services, and digital financial management systems—to enhance financial operations and decision-making. Conceptually, FinTech represents a form of technological innovation in financial services, characterized by the integration of advanced technologies such as big data, artificial intelligence, and digital platforms into financial processes (Molavi, 2023; Awais et al., 2023). Within the Technology Acceptance Model (TAM) and Theory of Planned Behavior (TPB) frameworks, FinTech adoption is influenced by perceived usefulness, ease of use, and behavioral intentions, which collectively shape organizational technology usage behavior (Irimia-Diéguez et al., 2023).

Recent literature emphasizes that FinTech adoption enhances operational efficiency, financial inclusion, and transparency, particularly for SMEs that face constraints in accessing traditional financial services (Abbasi et al., 2021; Sanga & Aziakpono, 2023). Additionally, FinTech reduces transaction costs, improves cash flow management, and expands access to alternative financing sources, thereby strengthening firms' financial resilience and sustainability (Bu et al., 2024; Agarwal & Assenova, 2023). Furthermore, FinTech is increasingly viewed as a dynamic capability, enabling firms to reconfigure financial processes and leverage digital ecosystems for competitive advantage in rapidly evolving markets (Usai et al., 2021; Bajwa et al., 2025).

Financial Competence (FC)

Financial competence (FC) refers to the knowledge, skills, and behavioral capabilities that enable individuals—particularly SME owners and managers—to effectively plan, analyze, and manage financial resources. Building on the financial literacy literature, financial competence encompasses not only understanding financial concepts (e.g., budgeting, investment, and risk management) but also the ability to apply this knowledge in strategic decision-making contexts (Ye & Kulathunga, 2019). Recent studies extend this concept by incorporating financial self-efficacy,

analytical decision-making, and digital financial skills, which are critical in increasingly digitalized financial environments (Duréndez et al., 2023).

From an RBV perspective, financial competence is a strategic human capital resource that enhances firms' ability to utilize financial resources efficiently and adopt new financial technologies. Empirical evidence shows that higher financial competence improves access to finance, investment decisions, and firm performance, while also strengthening the effectiveness of FinTech adoption (Saharan et al., 2025; Stefanelli et al., 2022). Moreover, financial competence plays a crucial moderating role in SME performance by enabling managers to better evaluate financial risks, select appropriate financing options, and integrate digital financial tools into business processes (Bajwa et al., 2025).

Access to Finance and FinTech Adoption

Access to finance provides SMEs with the necessary resources to invest in digital infrastructure, subscribe to digital services, and experiment with new financial technologies (Kersten et al., 2017; IMF, 2021). Firms that can secure working capital and investment funds are more capable of adopting FinTech solutions because they can bear initial implementation costs and manage the risks associated with digital transformation (World Bank, 2014; OECD, 2021). Empirical studies show that SMEs with better access to finance are more likely to adopt FinTech and use digital financial services to manage transactions and obtain alternative funding (Abbasi et al., 2021; Stefanelli et al., 2022; Ismail & Rashidi, 2025).

H1: Access to finance positively influences FinTech adoption.

Sustainable Innovative Leadership and FinTech Adoption

Leaders who promote innovation and are open to digital transformation are more likely to encourage FinTech usage within their organizations (Bajwa et al., 2025). Sustainable innovative leaders shape a favourable climate for change, reduce resistance to new technologies, and allocate resources to support FinTech experimentation and implementation (Abdurrahman et al., 2024; González-Sama et al., 2023). Recent research on digital leadership in SMEs finds that leadership behaviours oriented toward digitalization significantly increase the adoption of digital tools, including FinTech applications and platforms (OECD, 2021; Alshammari et al., 2025; Ismail & Rashidi, 2025).

H2: Sustainable innovative leadership positively influences FinTech adoption.

FinTech Adoption and Financial Sustainable Performance

FinTech adoption improves financial efficiency and transparency by automating transactions, facilitating real-time financial information, and reducing administrative costs (Usai et al., 2021; Abbasi et al., 2021). It also expands access to funding through digital lending, crowdfunding, and other alternative finance channels, which can support investment in innovation and working capital (World Bank, 2014; OECD, 2021). Empirical studies demonstrate that FinTech adoption has a significant positive effect on SME financial performance and sustainability, including profitability, revenue growth, and financial resilience (Alfzari & Al-Shboul, 2024; Singh, P., Katoch, et al. 2026; Ismail & Rashidi, 2025).

H3: FinTech adoption positively influences financial sustainable performance.

Access to Finance and Financial Sustainable Performance

Access to finance enables SMEs to invest in business expansion, innovation, and operational efficiency, which in turn improves financial performance (Kersten et al., 2017; IMF, 2021). Firms that can obtain sufficient, affordable financing are better able to smooth cash flows, manage risks, and exploit growth opportunities, contributing to long-term financial sustainability (Demirgüç-Kunt et al., 2018; OECD, 2021). Evidence from Indonesia and other developing economies shows that

SMEs with better financial access achieve higher levels of profitability, productivity, and business sustainability than financially constrained firms (Stefanelli et al., 2022; Bajwa et al., 2025; Tshepang Molosiwa et al., 2025).

H4: Access to finance positively influences financial sustainable performance.

Sustainable Innovative Leadership and Financial Sustainable Performance

Leadership that promotes innovation and long-term sustainability contributes directly to improved firm performance by aligning strategic decisions with future-oriented goals and stakeholder expectations (Bajwa et al., 2025). Sustainable innovative leaders encourage investments in new technologies, process improvements, and capability development, which enhance efficiency and financial outcomes (Abdurrahman et al., 2024; González-Sama et al., 2023). Studies on digital and transformational leadership in SMEs show that such leadership styles are positively associated with financial performance, innovation performance, and overall business sustainability (OECD, 2021; Alshammari et al., 2025; Ismail & Rashidi, 2025).

H5: Sustainable innovative leadership positively influences financial sustainable performance.

Mediating Role of FinTech Adoption

FinTech adoption acts as a mechanism through which financial resources and leadership capabilities are translated into improved financial performance. SMEs with greater access to finance can more easily adopt FinTech, while supportive and innovative leaders are more likely to drive successful implementation of these technologies (Abbasi et al., 2021; OECD, 2021). Recent studies demonstrate that FinTech adoption mediates the relationships between access to finance, financial literacy, and SME performance and sustainability, indicating that digital financial tools are a critical pathway for converting resources into outcomes (Stefanelli et al., 2022; Alfzari & Al-Shboul, 2024; Ismail & Rashidi, 2025).

H6a: FinTech adoption mediates the relationship between access to finance and financial sustainable performance.

H6b: FinTech adoption mediates the relationship between sustainable innovative leadership and financial sustainable performance.

Moderating Role of Financial Competence

Financial competence enhances managers' ability to effectively utilize financial resources and adopt appropriate technologies. SMEs with higher financial competence are better equipped to evaluate financing options, understand the costs and risks of FinTech solutions, and integrate digital financial tools into their operations (Ye & Kulathunga, 2019; Demirgüç-Kunt et al., 2018). Empirical studies show that financial literacy strengthens the positive effects of FinTech adoption and access to finance on SME performance, suggesting that financial competence is a key contingency for realizing the benefits of digital finance (Sanga & Aziakpono, 2023; Stefanelli et al., 2022; Singh, P., Katoch, et al. 2026).

H7a: Financial competence moderates the access to finance–financial sustainable performance relationship, strengthening it at higher FC levels.

H7b: Financial competence moderates the sustainable innovative leadership–financial sustainable performance relationship, strengthening it at higher FC levels.

RESEARCH METHODS

Research Design

This quantitative study employs an explanatory, cross-sectional design to test causal pathways in a moderated mediation model. It examines direct effects of access to finance (AF) and sustainable innovative leadership (SIL) on financial sustainable performance (FSP), FinTech adoption (FTA)'s mediating role, and financial competence (FC)'s moderation of AF-FSP. Data were gathered via self-administered questionnaires from SME owners/managers, analyzed using variance-based partial least squares structural equation modeling (PLS-SEM) in SmartPLS 4. PLS-SEM suits predictive-oriented models with mediation/moderation, smaller samples, and non-normal data (Hair et al., 2022).

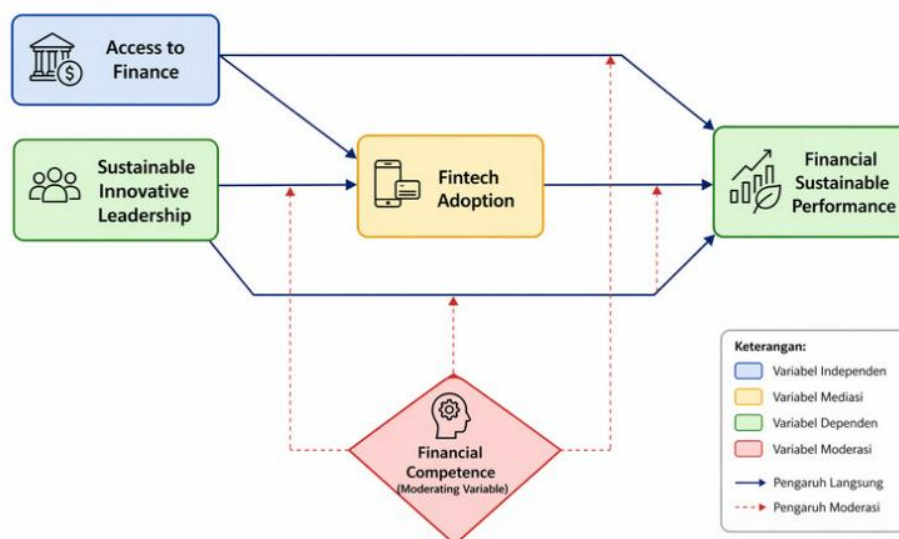


Figure 1. Research Model

Population, Sample, and Data Collection

The population encompassed manufacturing/retail SMEs in Central Java, Indonesia (Banyumas Regency focus), with ≥ 2 years operation and ≥ 6 months FinTech use (e.g., P2P lending, e-wallets). The unit of analysis was the firm; key informants were owners/managers handling finances/strategy.

Purposive sampling yielded $n=350$ valid responses (response rate $\sim 72\%$), exceeding the $10\times$ rule minimum (10×3 paths to FSP/FTA=30) for stable estimates (Hair et al., 2022). Primary data derived from a 5-point Likert-scale survey (1=strongly disagree; 5=strongly agree), distributed online (Google Forms). Items were adapted from Bajwa et al. (2025), Ye and Kulathunga (2019), and Abbasi et al. (2021), refined for SME contexts post-pilot ($n=50$; Cronbach's $\alpha > 0.80$). Secondary data supplemented from OJK reports and World Bank (2025).

Data Analysis

Analysis proceeded in two stages. **Outer model:** Convergent validity (loadings > 0.70 , AVE > 0.50), reliability ($\rho_c > 0.70$), discriminant validity (Fornell-Larcker, HTMT < 0.85) post-indicator deletion (e.g., AF4, SIL2). **Inner model:** R^2 , f^2 , Q^2 (blindfolding), path significance (bootstrapping, 5000 resamples). Mediation via specific indirect effects (CI bootstrap); moderation via interaction terms (FC $\times$ AF, FC $\times$ SIL). Model fit: SRMR=0.072 < 0.08 [file:1; Hair et al., 2022].

RESULTS AND DISCUSSION

Measurement Model Assessment

The outer measurement model exhibited robust convergent validity post-refinement, with all constructs surpassing the 0.50 Average Variance Extracted (AVE) threshold: FC (0.753), AF (0.748), FSP (0.750), FTA (0.678), and SIL (0.542). Composite reliability (ρ_c) exceeded 0.70 across variables (range: 0.779–0.924), affirming internal consistency despite marginally lower Cronbach's alpha for SIL (0.582). Discriminant validity held via Fornell-Larcker criteria, where square-rooted AVE diagonals outperformed inter-construct correlations (e.g., FC: 0.868 > max off-diagonal 0.217), and HTMT ratios remained below 0.85 (max: SIL-AF 0.400).

Table 1. Construct Reliability and Validity Metrics

Construct	Cronbach's α	ρ_A	ρ_C (CR)	AVE	$\sqrt{AVE}$
FC	0.889	0.893	0.924	0.753	0.868
AF	0.833	0.857	0.899	0.748	0.865
FSP	0.832	0.840	0.900	0.750	0.866
FTA	0.832	0.877	0.891	0.678	0.823
SIL	0.582	0.603	0.779	0.542	0.736

Source: Authors' calculation based on primary survey data (n = 350), analyzed using SmartPLS 4.

Table 1 illustrates enhanced model quality after deleting low-loading indicators (e.g., AF4: 0.249; SIL2: 0.552), bolstering predictive relevance.

Structural Model Results

The model explained modest variance: R^2 for FSP = 0.189 (adjusted 0.172); FTA = 0.091 (adjusted 0.085), indicating weak-to-moderate predictive power. PLSpredict yielded positive Q^2 values (e.g., FP1: 0.118; FTA2: 0.056), with PLS-SEM errors often lower than linear model benchmarks, confirming medium predictive relevance. Effect sizes (f^2) were small (e.g., SIL→FTA: 0.095; FC×AF→FSP: 0.014).

Table 2. Hypothesis Testing Results

Hypothesis	Path	β (O)	M	STDEV	T-value	p-value	Result
H1	AF → FTA	-0.151	-0.152	0.066	2.285	0.022	Supported
H2	SIL → FTA	0.306	0.312	0.077	3.988	0.000	Supported
H3	FTA → FSP	0.220	0.220	0.063	3.496	0.000	Supported
H4	AF → FSP	0.196	0.196	0.050	3.879	0.000	Supported
H5	SIL → FSP	0.113	0.115	0.066	1.719	0.086	Not supp.
H6a	AF → FTA- >FSP	-0.033	-0.034	0.018	1.833	0.073	Not supp.
H6b	SIL → FTA→FSP	0.067	0.069	0.027	2.481	0.013	Supported
H7a	FC × AF → FSP	0.115	0.114	0.059	1.972	0.049	Supported
H7b	FC × SIL → FSP	0.054	0.061	0.059	0.917	0.359	Not supp.

Source: Authors' calculation based on primary survey data (n = 350), analyzed using SmartPLS 4.

Table 2 summarizes direct effects, revealing significant positive influences from AF ($\beta=0.196$, $p<0.001$), FTA ($\beta=0.220$, $p<0.001$), and SIL→FTA ($\beta=0.306$, $p<0.001$) on FSP, counterbalanced by FC's negative direct effect ($\beta=-0.203$, $p=0.002$).

Mediation and Moderation Analysis

Specific indirect effects confirmed partial mediation: $SIL \rightarrow FTA \rightarrow FSP$ ($\beta=0.067$, $p=0.013$; 95% CI [0.017, 0.118]), but not $AF \rightarrow FTA \rightarrow FSP$ ($\beta=-0.033$, $p=0.073$). Moderation emerged for $FC \times AF \rightarrow FSP$ ($\beta=0.115$, $p=0.049$), absent for $FC \times SIL \rightarrow FSP$ ($p=0.359$).

Discussion

This study set out to address the gap identified in the introduction regarding the fragmented understanding of SME financial sustainability—particularly the limited integration of financial access, digital transformation, leadership, and competence. The findings provide a coherent explanation of how these elements interact through both direct and indirect mechanisms.

Consistent with the Resource-Based View (RBV), the positive effect of access to finance (AF) on financial sustainability performance (FSP) (H4 supported) confirms that financial capital remains a foundational strategic resource for SMEs. This supports the initial hypothesis development that emphasized structural financial constraints in emerging economies as a primary barrier to sustainability. In contrast, the non-significant direct effect of sustainable innovative leadership (SIL) on FSP (H5 rejected) refines the earlier theoretical assumption by showing that leadership capabilities alone are insufficient to generate financial outcomes without appropriate transformation mechanisms.

In line with the proposed mediation hypotheses, FinTech adoption (FTA) emerges as the key transmission channel through which capabilities are converted into performance. The significant $SIL \rightarrow FTA \rightarrow FSP$ pathway supports both Dynamic Capabilities Theory and the Technology Acceptance Model (TAM), as hypothesized, demonstrating that leadership enhances sustainability only when it facilitates digital adoption. This finding directly responds to the research gap by showing that digital technologies are not peripheral but central in operationalizing innovation for SMEs. However, the negative effect of financial competence (FC) on FSP (H3 supported) challenges the linear assumption embedded in the hypothesis development. Rather than uniformly improving performance, financial competence appears to create rigidity when not aligned with environmental demands, suggesting a boundary condition to RBV and human capital arguments. This indicates that competencies must be adaptive rather than static, particularly in resource-constrained and volatile SME contexts.

Further extending the model, the moderating effect (H7a supported) confirms that financial competence strengthens the $AF \rightarrow FSP$ relationship, aligning with the study's expectation of contingent effects. This demonstrates that while FC may not directly enhance performance, it plays a critical complementary role by improving the effectiveness of financial resources. Thus, the findings refine the original hypotheses by showing that competence operates more as an enabler of resource utilization than as an independent driver. Overall, the results reinforce the central argument of the study: SME financial sustainability is achieved through the alignment of resources (AF), capabilities (SIL and FC), and digital enablers (FTA). This integrated perspective not only validates the theoretical framework proposed in the hypothesis development but also extends prior literature by highlighting the conditional and mediated nature of these relationships in emerging market settings.

CONCLUSION

This study concludes that access to finance (AF) and FinTech adoption (FTA) directly bolster financial sustainable performance (FSP) among Indonesian SMEs, with sustainable innovative leadership (SIL) exerting indirect effects via FTA mediation. Financial competence (FC) negatively influences FSP directly but positively moderates AF-FSP, underscoring nuanced capability dynamics.

Implications: Policymakers should prioritize AF-FinTech linkages through OJK subsidies for P2P platforms, targeting 20% FSP uplift. SME leaders must balance FC training with innovation openness, leveraging platforms like Amarta for 15-18% ROA gains.

Limitations: Cross-sectional design curbs causality; Central Java focus limits generalizability; modest R^2 (0.189) omits externalities like regulation.

Future Research: Longitudinal PLS-SEM to trace causality; multi-region samples; incorporate macro-variables (e.g., inflation) or AI-FinTech extensions for enhanced explanatory power.

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