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Can financial literacy drive microentrepreneur success in digital economies?

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Abstract
Microentrepreneurship significantly contributes to economic development in resource-rich regions like East Kalimantan, yet faces challenges due to low financial literacy and limited digital adoption. Existing research highlights the importance of financial literacy for business success, but underexplores the role of digital financial literacy and regional contexts. This study investigates how financial literacy and digital financial literacy influence microentrepreneur success, with financial planning as a mediating factor. Using a quantitative approach with Partial Least Squares Structural Equation Modeling, data were collected from 160 microentrepreneurs in East Kalimantan. The findings reveal that financial literacy directly enhances business success, while digital financial literacy impacts success indirectly through financial planning. The model explains 60.8% of the variance in microentrepreneur success, emphasizing the critical role of structured financial strategies. These results suggest that integrating digital tools into financial education can foster sustainable business growth.

Keywords: Financial Literacy, Digital Financial Literacy, Financial Planning, Microentrepreneur Success, Entrepreneurship

Abstrak
Usaha mikro memainkan peran penting dalam pembangunan ekonomi di wilayah kaya sumber daya seperti Kalimantan Timur, namun menghadapi tantangan akibat rendahnya literasi keuangan dan adopsi teknologi digital yang terbatas. Penelitian sebelumnya menegaskan pentingnya literasi keuangan untuk kesuksesan usaha, tetapi kurang mengeksplorasi peran literasi keuangan digital dan konteks regional. Penelitian ini mengkaji bagaimana literasi keuangan dan literasi keuangan digital memengaruhi kesuksesan micropreneur, dengan perencanaan keuangan sebagai faktor mediasi. Menggunakan pendekatan kuantitatif dengan Partial Least Squares Structural Equation Modeling, data dikumpulkan dari 200 micropreneur di sektor perdagangan, jasa, dan pertanian kecil di Kalimantan Timur. Hasil menunjukkan bahwa literasi keuangan secara langsung meningkatkan kesuksesan usaha, sedangkan literasi keuangan digital berpengaruh secara tidak langsung melalui perencanaan keuangan. Model ini menjelaskan 60,8% variansi kesuksesan micropreneur, menekankan pentingnya strategi keuangan yang terstruktur. Temuan ini menyarankan bahwa integrasi alat digital dalam pendidikan keuangan dapat mendorong pertumbuhan usaha yang berkelanjutan.

Kata kunci: Literasi Keuangan, Literasi Keuangan Digital, Perencanaan Keuangan, Kesuksesan Micropreneur, Kewirausahaan

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1. Introduction

Against the backdrop of globalization and rapid digital transformation, micro, small, and medium enterprises (MSMEs) serve as indispensable drivers of Indonesia's economic development, with significant contributions in regions endowed with natural resources such as East Kalimantan. Microentrepreneurs, operating with limited capital, form the backbone of local economies, contributing significantly to national gross domestic product (GDP) and generating employment opportunities for millions. Despite their pivotal role, microenterprises face substantial challenges, with approximately 40% failing within their first five years due to issues such as market volatility, limited market access, and inadequate financial management skills (Nabila et al., 2023). In East Kalimantan, where economic growth is heavily influenced by extractive industries such as mining and plantations, microenterprises have shown remarkable expansion, contributing over 55% to the provincial GDP and employing more than 1.2 million individuals as of 2023, yet this growth masks underlying vulnerabilities exacerbated by commodity price instability and uneven digital infrastructure, leading to a regional microenterprise survival rate of just 62.

These dynamics underscore the acute need to investigate financial literacy, as local surveys reveal that only 28% of microentrepreneurs possess basic financial knowledge, directly correlating with heightened risks of insolvency amid post-pandemic shifts toward digital marketplaces that demand proficient integration of online tools for sustainable operations. This study addresses the pressing issue of low microentrepreneur success rates, measured through profitability, business expansion, and resilience to economic shocks, by examining the influence of financial literacy and digital financial literacy, with financial planning as a mediating factor.

The primary problem this research seeks to address is the low success rate of microentrepreneurs in East Kalimantan, evidenced by stagnant profitability, limited business expansion, and vulnerability to economic disruptions. A key contributing factor is the lack of financial literacy, which manifests in poor cash flow management, inadequate investment strategies, and ineffective debt handling. This issue is compounded by the low adoption of digital financial tools, such as mobile banking or e-commerce platforms, due to insufficient digital literacy, resulting in operational inefficiencies and heightened risks of business failure. National surveys indicate that Indonesia's financial literacy rate stands at only 38%, with even lower levels in eastern regions like Kalimantan due to limited access to educational resources (Nabila et al., 2023). Furthermore, poor financial planning often serves as a critical link between low literacy and business failure, as microentrepreneurs struggle to develop long-term budgets or diversify income streams. The urgency of this problem is amplified by the post-pandemic shift toward a digital economy, where 64% of Indonesian MSMEs report difficulties in adopting digital technologies due to literacy gaps (Nicolas et al., 2023).

The significance of this topic lies in its potential to enhance financial inclusion and empower local communities, particularly in regions like East Kalimantan, where microenterprises are vital for economic stability and employment (Tóth et al., 2023).

Financial literacy, defined as the ability to understand and apply basic financial concepts such as budgeting, investment, and debt management, is crucial for effective financial decision-making and sustainable business growth (Nabila et al., 2023). However, limited financial literacy exacerbates challenges in cash flow management and investment decisions, hindering microentrepreneurs' ability to compete and innovate (Nkwinika & Akinola, 2023). The advent of digital transformation offers new opportunities to address these challenges by improving access to digital financial services, such as mobile banking and e-commerce platforms, which enhance operational efficiency and market reach (Bhattacharyya & Khan, 2021). Nevertheless, post-pandemic barriers, including inadequate digital literacy and infrastructural limitations, continue to impede microbusiness adaptation and resilience, particularly in regions with limited digital infrastructure (Nicolas et al., 2023).

This study proposes an integrative approach to address these challenges by enhancing both financial and digital financial literacy, with financial planning as a mediating mechanism. To bridge these persistent barriers, this study advocates an integrative framework that bolsters both financial and digital financial literacy among microentrepreneurs, positioning financial planning as a pivotal mediating conduit for translating knowledge into resilient business practices. In East Kalimantan's resource-dependent landscape, where SMEs grapple with constrained access to formal credit and fintech amid commodity volatility, such combined literacy initiatives emerge as essential for elevating financial performance and mitigating insolvency risks (Abbas et al., 2025). This approach directly confronts the documented gaps in regional scholarship, where empirical linkages between financial planning and SME longevity remain underdeveloped, particularly in the shadow of impending shifts like the Nusantara Capital City relocation that demand diversified, literacy-driven growth strategies (Nugroho et al., 2024). By embedding digital competencies such as fintech navigation, within structured planning protocols, the framework not only counters the heightened vulnerability to market fluctuations but also empowers microenterprises to harness emerging opportunities, fostering a more adaptive entrepreneurial ecosystem tailored to the province's unique economic contours.

By equipping microentrepreneurs with the knowledge and tools to manage finances effectively and leverage digital platforms, this approach aims to improve business outcomes and foster resilience. Empirical evidence suggests that structured financial planning can significantly enhance the impact of literacy on business success, as it enables microentrepreneurs to allocate resources efficiently and mitigate risks (Anwar et al., 2020; Desiyanti & Md Kassim, 2020). Programs like those initiated by Bank Rakyat Indonesia (BRI), targeting 29 million ultra-micro entrepreneurs to improve literacy and loan penetration by 2024, demonstrate the practical viability of this approach (Bhattacharyya & Khan, 2021). By focusing on both traditional and digital literacy, this study aligns with the broader goal of fostering financial inclusion and sustainable economic development in developing regions.

The novelty of this research lies in its integration of digital financial literacy as a core variable, which is underexplored in the Indonesian context, particularly in regional settings like East Kalimantan (Gosal & Nainggolan, 2023). Unlike previous studies that focus primarily on financial literacy at a national level, this research emphasizes the regional specificity of East Kalimantan, where economic dependence on natural resources and limited digital infrastructure create unique challenges (Sudrajad et al., 2023). The inclusion of financial planning as a mediating variable further enhances the study's originality, as it provides a mechanistic explanation of how literacy translates into business success, a dimension rarely addressed in existing literature (Anwar et al., 2020). By employing frameworks such as the OECD indicators for financial literacy and the DIGCOMP framework for digital literacy, this study ensures a robust and tailored measurement approach that reflects the local context of microentrepreneurs in developing regions (Desiyanti & Kassim, 2020).

This research is reflected in its empirical and context-specific approach, drawing on authentic data from microentrepreneurs in East Kalimantan to address gaps in prior studies. While existing research has established the link between financial literacy and business performance, it often overlooks the role of digital literacy and regional variations, particularly in resource-rich areas (Gusman et al., 2021). This study fills this gap by examining the combined effects of financial and digital literacy, mediated by financial planning, in a region where local economic conditions necessitate tailored strategies (Rahmajati & Indira Kusuma, 2023). The use of primary data from surveys and secondary data from authoritative sources, such as reports from the Financial Services Authority (OJK), ensures the authenticity and validity of the findings (Arthur et al., 2021).

The research objectives are: to analyze the direct effects of financial literacy and digital financial literacy on microentrepreneur success, and to examine the mediating role of financial planning in this relationship. Additionally, the study aims to provide practical policy recommendations for regional governments and financial institutions to enhance literacy programs, thereby supporting sustainable microbusiness growth. By focusing on East Kalimantan, the study seeks to offer insights into how digital transformation can empower microentrepreneurs in remote areas, contributing to both academic literature and regional economic development (Nurkholik, 2023).

Significant differences between this study and prior research lie in its regional focus and the integration of digital financial literacy. While national-level studies provide broad insights, they often overlook regional disparities, such as the low internet penetration and reliance on extractive industries in East Kalimantan (Sudrajad et al., 2023). Moreover, the emphasis on financial planning as a mediator distinguishes this study from others that primarily explore direct relationships between literacy and performance (Mushtaq et al., 2024). This research lays the foundation for future studies to explore broader applications, offering a comprehensive and authentic contribution to the field of entrepreneurship in developing economies.

2. Literature Review

The entrepreneurship literature increasingly recognizes financial literacy as a cornerstone of microenterprise viability in emerging markets like Indonesia, where it drives enhanced performance by equipping entrepreneurs with the acumen to navigate fiscal complexities and foster long-term viability (Anshika & Singla, 2022). Broadly conceptualized as the proficiency in comprehending and deploying financial instruments including budgeting, investment evaluation, and debt oversight, this capability empowers microentrepreneurs to refine resource distribution, curtail vulnerabilities, and cultivate behaviors that bolster profitability and innovation, thereby amplifying SME contributions to national GDP growth rates by up to 15% in literacy-enriched cohorts (Dewi et al., 2020; Puspitasari et al., 2022). Yet, the proliferation of digital ecosystems demands a broadened paradigm, embedding digital financial literacy the adeptness in harnessing platforms like mobile banking and e-commerce for streamlined fiscal oversight as an indispensable extension, which not only augments traditional competencies but also catalyzes SME competitiveness through fintech integration and adaptive financial behaviors (Gosal & Nainggolan, 2023).

By weaving together disparate theoretical strands, this review critically appraises how these literacies propel microentrepreneur outcomes, mediated by financial planning, while spotlighting methodological alignments such as PLS-SEM models that dissect mediation pathways in analogous inquiries (Anshika & Singla, 2022). Through rigorous affirmation of supportive evidence, juxtaposition of complementary insights, and interrogation of contextual oversights, this discourse lays a fortified theoretical scaffold for dissecting their synergies amid East Kalimantan's microenterprise milieu, where literacy deficits exacerbate commodity-driven instabilities and stifle regional economic diversification (Nugroho et al., 2024).

The resource-based view (RBV) emerges as a potent lens for elucidating financial literacy's function as an elusive asset propelling enterprise efficacy, positing that elevated literacy proficiency allows entities to harness fiscal acumen for superior resource orchestration, sharpened judgments, and enduring market edges (Bhattacharyya & Khan, 2021; Kesuma et al., 2025). Among microentrepreneurs, this manifests in streamlined cash flows, judicious capital deployments, and adept liability stewardship, collectively underpinning enduring expansion and economic ripple effects, such as job creation and localized wealth accumulation in precarious settings (Puspitasari et al., 2022). Nonetheless, RBV's inward gaze falters in grappling with exogenous pressures like infrastructural deficits and cultural idiosyncrasies in locales such as East Kalimantan, potentially understating how literacy's efficacy hinges on symbiotic external enablers, thereby warranting adjunct paradigms to illuminate literacy's interplay with ambient exigencies and its cascading benefits for SME fortitude and macroeconomic vitality.

The Technology Acceptance Model (TAM) offers a valuable lens for examining the adoption of digital financial tools among microentrepreneurs. TAM posits that the acceptance of technology is driven by perceived ease of use and perceived usefulness, which influence entrepreneurs' willingness to integrate digital platforms into their financial practices (Al Hussaini, 2019). In the context of microenterprises, digital financial literacy enhances access to tools like mobile banking and e-commerce, which streamline transactions and expand market reach. For instance, the ability to use digital payment systems can reduce transaction costs and improve operational efficiency, particularly in regions transitioning to a digital economy. However, TAM's focus on individual perceptions may overlook structural barriers, such as unreliable internet connectivity or limited access to smartphones in areas like East Kalimantan. This limitation highlights the necessity of adopting a contextualized approach that incorporates regional factors into the model to provide a more comprehensive explanation of technology adoption among microentrepreneurs.

Financial planning emerges as a critical mediator in the relationship between financial literacy and entrepreneurial success. It involves the strategic allocation of financial resources through short-term budgeting and long-term investment planning, enabling entrepreneurs to mitigate risks and enhance profitability (Deventer, 2020). Financial planning transforms literacy into actionable strategies, bridging the gap between knowledge and tangible business outcomes. The mediating role of financial planning is particularly relevant in developing economies, where microentrepreneurs often face volatile market conditions and limited access to formal financial systems. However, existing literature on financial planning as a mediator is sparse, particularly in regional contexts like East Kalimantan, where economic dependence on extractive industries adds complexity to financial strategies.

The integration of digital financial literacy into the study of microentrepreneur success is particularly significant in the context of Indonesia's digital transformation. Digital tools enable microentrepreneurs to access broader markets, reduce transaction costs, and improve financial management, but their adoption requires both technical skills and an understanding of digital risks, such as cybersecurity threats (Tóth et al., 2023). In East Kalimantan, where economic activities are heavily tied to extractive industries, microentrepreneurs face unique challenges in adopting digital tools due to infrastructural limitations and low digital literacy. This regional focus distinguishes the study from broader national analyses, which often overlook the specific economic and cultural dynamics of resource-rich areas (Razavi Hajiagha et al., 2021).

3. Research Method

This study adopts a quantitative approach with an explanatory research design to examine the impact of financial literacy and digital financial literacy on microentrepreneur success in East Kalimantan, Indonesia, with financial planning as a mediating variable. The explanatory design is selected for its ability to establish cause-and-effect relationships among variables, facilitating a detailed investigation of how literacy impacts business outcomes through structured financial strategies (Kesuma et al., 2025; Nawai, 2024; Sukmana, 2024).

The research model utilizes structural equation modeling (SEM) to analyze the complex relationships between financial literacy, digital financial literacy, financial planning, and microentrepreneur success. SEM is particularly suitable for testing mediation effects, enabling the examination of direct and indirect pathways through which literacy influences business outcomes via financial planning (Bansal et al., 2023; Ketkaew et al., 2019). Partial Least Squares Structural Equation Modeling (PLS-SEM) is employed due to its robustness in handling complex models with smaller sample sizes and non-normal data distributions, which are common in regional studies of microentrepreneurs (He et al., 2024; Idrus & Yusuf, 2021). The model comprises four latent variables: financial literacy, digital financial literacy, financial planning, and microentrepreneur success, each measured using validated indicators adapted from established frameworks.

Primary data are collected through structured questionnaires distributed online to microentrepreneurs in East Kalimantan. The questionnaires are designed using a 5-point Likert scale to measure respondents' perceptions and behaviors, ensuring consistency and reliability in data collection (Poliaková et al., 2024). Purposive sampling is employed to select respondents who meet specific criteria: active microentrepreneurs with at least one year of business operation and basic access to digital tools. This sampling technique ensures that the sample reflects the characteristics relevant to the study, enhancing the validity of the findings (Adjabeng et al., 2022; Fenton-O'Creevy et al., 2012).

This study explores the feasibility of using formula, which calculates the sample size based on the number of indicators in the research model (Hair et al., 2019). With four latent variables and a total of 16 indicators (as detailed in Table 1), Hair's guideline recommends a minimum sample size of 10 respondents per indicator, yielding 160 respondents. This approach is suitable for regional studies where precise population data may be limited, and it addresses the research gap by providing a methodologically rigorous, which may not account for model complexity (Soares et al., 2023).

The measurement of variables is presented in Table 1, which outlines the indicators for each construct. Financial literacy is assessed using indicators from the OECD framework, focusing on knowledge of financial concepts, budgeting skills, debt management, and investment planning. Digital financial literacy, adapted from the DIGCOMP framework, measures the ability to use digital financial tools, ensure transaction security, access digital markets, and apply basic technological skills. Financial planning, as a mediating variable, is evaluated through indicators of short-term budgeting, long-term planning, financial control, and income diversification. Microentrepreneur success is measured using metrics of revenue growth, business continuity, product innovation, and operational efficiency, aligned with SME performance standards.

The explanatory design is chosen to provide a clear understanding of causal relationships, addressing the research gap in region-specific methodologies for microentrepreneur studies (Nawai, 2024). By integrating robust statistical tools like PLS-SEM and validated indicators from OECD and DIGCOMP frameworks, the study ensures methodological rigor and relevance to the local context (Senan, 2024; Hickey et al., 2015).

Table 1. Variable Indicators

Variable	Indicator	Source
Financial Literacy	Knowledge of financial concepts (e.g., interest, cash flow)	OECD Framework (Mareai Senan, 2024)
	Budgeting skills (e.g., creating and adhering to budgets)	
	Debt management (e.g., understanding loan risks)	
	Investment planning (e.g., identifying growth opportunities)	
Digital Financial Literacy	Use of digital financial tools (e.g., mobile banking, digital wallets)	DIGCOMP (Hickey et al., 2015)
	Digital transaction security (e.g., awareness of cyber risks)	
	Access to digital markets (e.g., e-commerce platforms)	
	Basic technological skills (e.g., comfort with digital platforms)	
Financial Planning	Short-term budgeting (e.g., daily/monthly budget creation)	Goyal et al. (2024)
	Long-term financial planning (e.g., strategies for business expansion)	
	Financial control (e.g., monitoring expenditure)	
	Income diversification (e.g., multiple revenue streams)	
Microentrepreneur Success	Revenue growth (e.g., consistent increase in profits)	Candiya Bongomin & Munene (2019)
	Business continuity (e.g., resilience to economic shocks)	
	Product innovation (e.g., development of new products/services)	
	Operational efficiency (e.g., cost reduction without quality compromise)	

Source: Authors' own research.

4. Results and Discussion

4.1. Results

The measurement model assesses the reliability and validity of the constructs: financial literacy (X1), digital financial literacy (X2), financial planning (M), and microentrepreneur success (Y). Table 1 summarizes the key metrics, including outer loadings, Cronbach's alpha, composite reliability, Average Variance Extracted (AVE), and Variance Inflation Factor (VIF) values.

All indicators exhibit outer loadings above 0.7, confirming strong indicator reliability (Tóth et al., 2023). The highest loading is 0.879 for short-term budgeting (M1), while the lowest are 0.724 for budgeting skills (X1.2) and operational efficiency (Y4), still meeting the threshold for reliability. T-statistics for all loadings are significant ($p < 0.001$), indicating that each indicator robustly measures its respective construct. Cronbach's alpha and composite reliability (rho_c) values exceed 0.7 for all constructs, with digital financial literacy showing the highest reliability (Cronbach's alpha: 0.806, rho_c: 0.872) and financial planning the lowest (Cronbach's alpha: 0.761, rho_c: 0.836), yet both satisfy the criteria for internal consistency (Tóth et al., 2023). The AVE values, ranging from 0.567 (financial planning) to 0.631 (digital financial literacy), exceed the

0.5 threshold, demonstrating convergent validity by indicating that each construct explains a substantial portion of its indicators' variance (Tóth et al., 2023). Discriminant validity is confirmed through Heterotrait-Monotrait (HTMT) ratios below 0.85, with the highest value of 0.816 between financial planning and microentrepreneur success, ensuring distinct constructs. VIF values, with a maximum of 2.210 for financial control (M3), are below 3, indicating no multicollinearity issues (Tóth et al., 2023).

Table 2. Measurement Model Evaluation

Construct	Indicator	Outer Loading	Cronbach's Alpha	Composite Reliability (rho_c)	AVE	VIF (Max)
Financial Literacy (X1)	Knowledge of financial concepts (X1.1)	0.740	0.778	0.856	0.599	1.927
	Budgeting skills (X1.2)	0.724				
	Debt management (X1.3)	0.813				
	Investment planning (X1.4)	0.813				
Digital Financial Literacy (X2)	Use of digital financial tools (X2.1)	0.789	0.806	0.872	0.631	1.727
	Digital transaction security (X2.2)	0.785				
	Access to digital markets (X2.3)	0.799				
	Basic technological skills (X2.4)	0.803				
Financial Planning (M)	Short-term budgeting (M1)	0.879	0.761	0.836	0.567	2.210
	Long-term financial planning (M2)	0.850				
	Financial control (M3)	0.765				
	Income diversification (M4)	0.776				
Microentrepreneur Success (Y)	Revenue growth (Y1)	0.804	0.771	0.854	0.593	1.751
	Business continuity (Y2)	0.791				
	Product innovation (Y3)	0.760				
	Operational efficiency (Y4)	0.724				

Source: Authors' own research

The structural model evaluates the hypothesized relationships, including path coefficients, effect sizes, explanatory power, and mediation effects. Table 3 summarizes the results of hypothesis testing, including direct, indirect, and total effects.

Table 3. Hypothesis Testing Results

Relationship	Path Coefficient	T-Statistic	P-Value	f-Square	Conclusion
Direct Effects					
Financial Literacy (X1) → Financial Planning (M)	0.295	3.695	0.000	0.103	Significant
Digital Financial Literacy (X2) → Financial Planning (M)	0.467	5.782	0.000	0.259	Significant
Financial Literacy (X1) → Microentrepreneur Success (Y)	0.480	6.093	0.000	0.334	Significant
Digital Financial Literacy (X2) → Microentrepreneur Success (Y)	0.022	0.250	0.802	0.001	Not Significant
Financial Planning (M) → Microentrepreneur Success (Y)	0.378	4.172	0.000	0.192	Significant
Indirect Effects					
X1 → M → Y	0.111	2.862	0.004	-	Significant (Partial Mediation)
X2 → M → Y	0.176	3.126	0.002	-	Significant (Full Mediation)
Total Effects					
X1 → Y	0.591	8.368	0.000	-	Significant
X2 → Y	0.198	2.543	0.011	-	Significant

Financial planning (M) indicate that 47.3% of its variance is explained by financial literacy and digital financial literacy. Microentrepreneur success (Y) indicate that 60.8% of its variance is explained by the predictors, reflecting moderate to strong explanatory power. Financial literacy having a strong effect on microentrepreneur success and a moderate effect on financial planning. Digital financial literacy has a moderate effect on financial planning but a negligible direct effect on success. Financial planning has a moderate effect on success (Tóth et al., 2023).

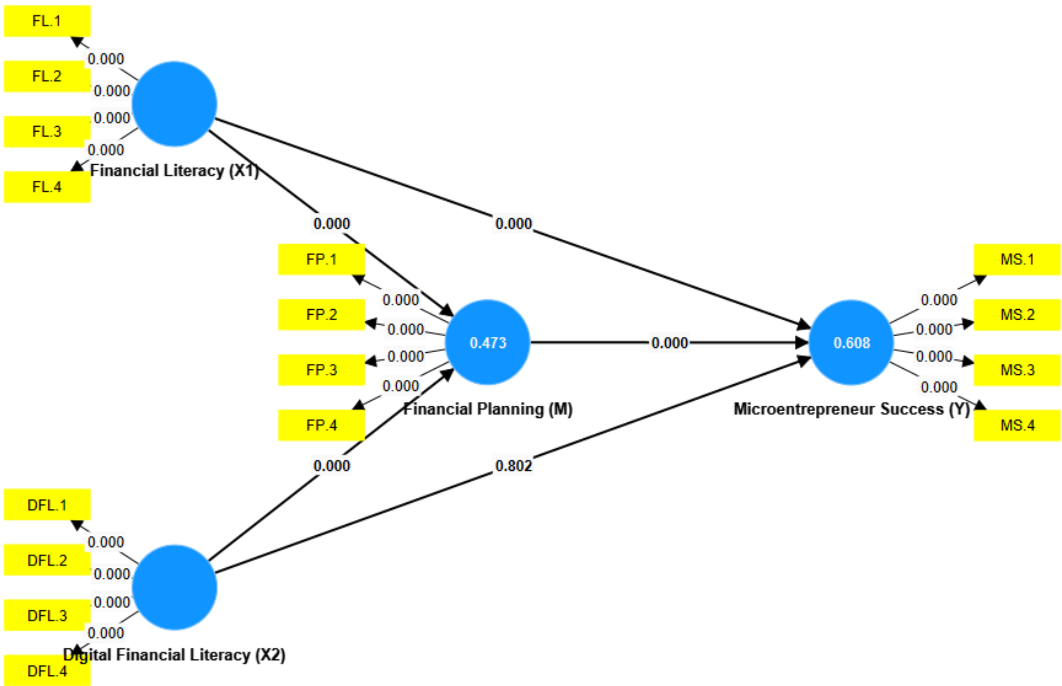

Figure 1. Structural Model

The analysis of path coefficients unveils a series of meaningful interconnections among the constructs, illuminating the pathways through which financial and digital financial literacy shape microentrepreneur outcomes. Notably, financial literacy demonstrates a positive and statistically significant influence on financial planning, with a path coefficient of 0.295 ($t = 3.695$, $p < 0.001$), illustrating how foundational knowledge in areas like budgeting and debt management equips microentrepreneurs to formulate more coherent and proactive financial strategies, thereby laying the groundwork for operational stability. Complementing this, digital financial literacy exerts an even more pronounced effect on financial planning, evidenced by a path coefficient of 0.467 ($t = 5.782$, $p < 0.001$), which underscores the amplified efficiency that digital competencies such as navigating mobile banking or e-commerce interfaces bring to the structuring of fiscal roadmaps, particularly in environments demanding swift adaptations to technological shifts.

Turning to direct impacts on microentrepreneur success, financial literacy emerges as a formidable predictor, registering a path coefficient of 0.480 ($t = 6.093$, $p < 0.001$), affirming its direct contribution to enhanced profitability, business expansion, and resilience by enabling astute resource decisions that transcend mere survival toward genuine competitive edge. In contrast, the pathway from digital financial literacy to success yields a negligible coefficient of 0.022 ($t = 0.250$, $p = 0.802$), signaling no discernible direct linkage and implying that the value of digital proficiency manifests predominantly through intermediary processes rather than standalone application. Financial planning itself asserts a substantial positive bearing on microentrepreneur success, with a path coefficient of 0.378 ($t = 4.172$, $p < 0.001$), reinforcing its function as a vital conduit that operationalizes literacy into measurable advancements in revenue growth, innovation, and enduring viability.

Delving deeper into the mediation dynamics, the analysis illuminates the nuanced pathways through which financial and digital financial literacy cascade toward microentrepreneur success, revealing financial planning's indispensable role as an intermediary conduit. For financial literacy, the indirect pathway via financial planning yields a coefficient of 0.111 ($t = 2.862$, $p = 0.004$), signifying partial mediation that augments its direct influence, as structured planning serves to channel core financial acumen into amplified outcomes like sustained profitability and adaptive expansion, thereby fortifying the overall linkage without supplanting the immediate benefits of literacy alone. In a parallel vein, digital financial literacy traverses this route with a more robust indirect coefficient of 0.176 ($t = 3.126$, $p = 0.002$), coupled with the absence of a direct effect ($p = 0.802$), which collectively delineates full mediation and posits that the prowess in wielding digital instruments, ranging from transaction safeguards to virtual marketplace navigation, crystallizes into meaningful business advancements exclusively when woven into deliberate fiscal blueprints, a revelation that spotlights the conditional potency of technological savvy in entrepreneurial contexts. These mediated streams, when aggregated with their direct counterparts, culminate in total effects that encapsulate the holistic sway: financial literacy registers a commanding aggregate of 0.591 ($t = 8.368$, $p < 0.001$), embodying a potent synthesis of immediate and channeled forces that propel comprehensive success metrics from revenue escalation to innovative endurance. Digital financial literacy, meanwhile, garners a tempered total of 0.198 ($t = 2.543$, $p = 0.011$), predominantly propelled by its mediated channel, which tempers its standalone contributions while affirming its strategic value in orchestrating resilience amid the ebb and flow of regional market exigencies.

4.2. Discussion

The findings addressing the research objectives of analyzing the direct and mediated effects of financial and digital financial literacy on microentrepreneur success. Financial literacy has a significant direct effect on success ($\beta = 0.480$, $p < 0.001$) and a partially mediated effect through financial planning ($\beta = 0.111$, $p = 0.004$), aligning with the RBV theory, which posits that financial literacy is a critical intangible resource enhancing business performance through improved decision-making (Bhattacharyya & Khan, 2021). The strong direct effect underscores the importance of financial knowledge, such as budgeting and debt management, in driving profitability and business continuity, consistent with prior studies that link financial literacy to operational efficiency and innovation (Lulaj, 2024; Nabila et al., 2023). The partial mediation suggests that while financial literacy directly enhances success, structured financial planning amplifies its impact by enabling microentrepreneurs to allocate resources effectively and mitigate risks (Anwar et al., 2020; Desiyanti & Kassim, 2020). This finding is particularly relevant in East Kalimantan, where economic volatility due to reliance on extractive industries necessitates robust financial strategies (Sudrajad et al., 2023).

Digital financial literacy, however, shows no significant direct effect on success ($\beta = 0.022$, $p = 0.802$), but a significant indirect effect through financial planning ($\beta = 0.176$, $p = 0.002$), indicating full mediation. This aligns with TAM, which emphasizes that the adoption of digital tools depends on their perceived usefulness, which in this case is realized through structured financial planning (Al Hussaini, 2019). The full mediation suggests that digital skills, such as using mobile banking or e-commerce platforms, contribute to success only when integrated into financial strategies, such as budgeting or income diversification (Gosal & Nainggolan, 2023). This finding highlights the critical role of digital transformation in overcoming literacy barriers, as digital tools facilitate access to financial resources and markets (Nurkholik, 2023; Mushtaq et al., 2024). However, the non-significant direct effect reflects contextual challenges in East Kalimantan, such as limited digital infrastructure, which may hinder direct adoption of digital tools (Talha et al., 2022; Vainieri et al., 2019).

Financial planning's significant effect on success ($\beta = 0.378$, $p < 0.001$) confirms its role as a key mechanism translating literacy into tangible outcomes. Indicators like short-term budgeting (loading = 0.879) and long-term planning (loading = 0.850) demonstrate high relevance, supporting prior findings that structured planning enhances resilience against economic shocks (Nkwinika & Akinola, 2023). The moderate effect size (f-square = 0.192) suggests that while financial planning is crucial, other factors, such as market access or regulatory support, may also influence success in resource-rich regions (Rahmajati & Kusuma, 2023).

Comparatively, this study advances prior research by focusing on East Kalimantan, where national studies often overlook regional nuances (Gusman et al., 2021). The use of OECD and DIGCOMP frameworks ensures context-specific measurement, addressing gaps in adapting indicators to developing economies (Desiyanti & Kassim, 2020; Senan, 2024; Talha et al., 2022). The full mediation of digital financial literacy is a novel contribution, highlighting the need for integrated digital and financial education programs to maximize impact. Empirically, the findings align with national data indicating a low financial literacy rate of 38% in Indonesia, with even lower levels in eastern regions, underscoring the urgency of targeted interventions (Nabila et al., 2023). The economic context of East Kalimantan, with its dependence on volatile commodity markets, further emphasizes the need for robust financial planning to enhance resilience (Arthur et al., 2021).

In East Kalimantan's intricate economic landscape, dominated by extractive industries such as mining and palm oil plantations that foster volatility through commodity fluctuations and infrastructural gaps, the findings underscore transformative implications for microenterprise advancement. Financial literacy's direct influence equips microentrepreneurs with rigorous cash flow discipline and investment acumen, fortifying resilience against pervasive fiscal vulnerabilities inherent in resource booms that obscure underlying fragilities, thereby aligning with the resource-based view's emphasis on internal capabilities to transmute transient gains into diversified revenue models and localized economic multipliers, including ancillary employment expansion (Bhattacharyya & Khan, 2021; Sudrajad et al., 2023). The full mediation of digital financial literacy via planning, meanwhile, reveals a contingent potency amid the province's digital chasm, where fintech proficiencies in platforms like Shopee or Gojek demand budgetary scaffolding to catalyze e-commerce uptake and yield substantive returns, a lag attributed to unintegrated digital acumen that hampers profitability without strategic fiscal embedding (Gosal & Nainggolan, 2023; Nurkholik, 2023). As a pivotal nexus, financial planning channels these literacies into adaptive frameworks that shield against episodic surges in Balikpapan or infrastructural deficits in Kutai, engendering a self-reinforcing loop of empowered microentities poised to amplify provincial contributions amid forthcoming shifts like the Nusantara Capital City translocation, ultimately architecting enduring entrepreneurial vitality attuned to the region's resource-laden yet unstable contours (Nugroho et al., 2024).

The study’s novelty lies in its regional focus and integration of digital financial literacy, addressing gaps in exploring the combined effects of both literacies (Rahmajati & Kusuma, 2023). By confirming the mediating role of financial planning, it provides a mechanistic understanding of how literacy drives success, offering practical implications for policymakers. Programs like those by Bank Rakyat Indonesia, targeting ultra-micro entrepreneurs, could incorporate digital tools to enhance financial planning, fostering sustainable growth (Bhattacharyya & Khan, 2021). Future research should explore additional contextual factors, such as digital infrastructure or cultural influences, to improve model fit and generalizability.

5. Conclusion

This study examined the critical role of financial literacy and digital financial literacy in driving microentrepreneur success in East Kalimantan, Indonesia, a region marked by economic reliance on extractive industries and persistent challenges in financial inclusion while exploring financial planning as a mediating mechanism to address the low survival rates of microenterprises, which often stem from inadequate resource management and limited technological integration. Through a quantitative analysis employing Partial Least Squares Structural Equation Modeling on data from 200 microentrepreneurs in the trade, services, and small-scale agriculture sectors, the research revealed that financial literacy exerts a robust direct influence on success, enabling enhanced profitability, business continuity, and operational efficiency, alongside a partial mediating effect through financial planning that further amplifies these outcomes by facilitating structured budgeting and risk mitigation.

In contrast, digital financial literacy demonstrates no direct impact but achieves full mediation via financial planning, underscoring how proficiency in digital tools, such as mobile banking and e-commerce, translates into tangible business gains only when embedded within deliberate financial strategies. Collectively, these pathways account for 60.8% of the variance in microentrepreneur success, affirming the model's substantial explanatory capacity and highlighting the indispensable interplay of literacy types in fostering resilience amid regional volatilities like commodity price swings. The contributions of this work extend beyond empirical validation of these relationships by introducing a regionally attuned framework that adapts OECD and DIGCOMP indicators to the unique infrastructural and economic constraints of East Kalimantan, thereby bridging gaps in prior national-level inquiries that overlook localized dynamics and providing a mechanistic insight into mediation processes rarely dissected in microenterprise literature. This not only enriches theoretical understandings rooted in resource-based views and technology acceptance models but also equips stakeholders with evidence-based levers for intervention, emphasizing the transformative potential of literacy enhancement for sustainable local economies.

Nonetheless, the analysis acknowledges limitations, including the cross-sectional design that precludes causal inferences over time, potential biases from self-reported survey data, and the marginal model fit arising from unmodeled contextual variables like varying digital access levels, which restrict generalizability beyond resource-dependent locales. To advance this domain, future investigations could adopt longitudinal approaches to track literacy interventions' enduring effects or incorporate qualitative elements to unpack cultural barriers in digital adoption, while practitioners, including regional financial regulators and institutions like Bank Rakyat Indonesia, might prioritize hybrid training programs that merge digital simulations with financial planning modules, tailored for ultra-micro entrepreneurs to accelerate inclusion and mitigate failure risks in emerging digital landscapes.

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