

Research Paper

Unlocking MSME Performance: The Interplay of Financial Literacy, Financial Inclusion, and Financial Technology Lending with Venture Capital Mediation

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ARTICLE INFO	ABSTRACT
<p>Keywords Business Capital; Financial Literacy; Financial Inclusion; Financial Technology Lending; MSME Performance</p> <p>Article history Received: 19 August 2023 Revised: 11 November 2023 Accepted: 20 November 2023 Available online: 29 November 2023</p> <p>To cite in APA style Hasanudin & Panigfat, F. (2024). Unlocking MSME performance: the interplay of financial literacy, financial inclusion, and financial technology lending with venture capital mediation. <i>Shirkah: Journal of Economics and Business</i>, 9(2), 169-180.</p>	<p>Studying the dynamic relationship among financial literacy, financial inclusion, fintech lending, and business capital mediation in the context of MSME performance is intriguing due to the intricate interconnections between these variables. This paper sought to assess the effect of financial literacy, financial inclusion, and fintech lending on the MSME performance in North Maluku Province, Sula Islands Regency, Sanana District, Indonesia. This research employed business capital as the mediating variable. Using a structural equation modelling, this study indicates that financial literacy, financial inclusion, and fintech lending have a positive and significant effect on the performance of micro, small, and medium enterprises. The presence of business capital can serve as a mediating factor in how financial literacy, financial inclusion, and fintech lending affect the performance of micro, small, and medium enterprises.</p> <p>This is an open access article under CC-BY-NC 4.0 license.</p>



Introduction

As the Indonesian economy grapples with a downturn due to the COVID-19 pandemic, entrepreneurs must be careful in their decision-making, given the significant importance of Micro, Small, and Medium Enterprises (MSMEs) for the country's economic stability (Widyastuti et al., 2023). In the face of an impending economic decline, digital inclusive finance emerges as a crucial catalyst for the nation's top-notch expansion, offering fresh momentum and opportunities to stimulate economic progress (Thathsarani & Jianguo, 2022). In the development of MSMEs, the knowledge-based view (KBV) in the form of technology and financial literacy (techno-finance literacy) is a crucial knowledge-based instrument to meet the increasing digitalization of business (Kulathunga et al., 2020). The strategic approach for MSME entails leveraging financial literacy, promoting financial inclusion, and harnessing the power of digital marketing and social media, enabling direct consumer engagement and facilitating cost-effective promotion and online market exploration.

According to the OECD (2014), financial literacy entails understanding financial concepts, and risks, and possessing the skills and confidence to make effective decisions across various financial contexts, promoting individual and societal financial well-being and economic participation. Financial literacy is intertwined with behaviors, habits, and external influences. Enhanced financial literacy contributes to higher productivity (Kryscynski et al., 2021). Owner-managers of SMEs who possess financial literacy are better able to comprehend, evaluate, and make informed financial decisions regarding their own needs (Agyapong & Attram, 2019). According to Mardiana (2020), people with a higher level of financial literacy will have more potential to provide higher productivity values, subsequently leading to improved performance among MSMEs. Financial literacy is one way to improve the economy, reduce poverty, reduce inequality in income, and support the achievement of financial system stability.

Financial inclusion aims to enhance access to formal financial services for MSMEs and communities by promoting an understanding of financial systems and products and ensuring the availability of affordable and secure services. According to Alamsyah et al. (2015), financial inclusion constitutes a strategic approach within national finance, ensuring the universal right to access financial institutions and services in an accessible, informative, timely, and cost-effective manner, while upholding dignity. This strategic approach, as emphasized by Hilmawati & Kusumaningtias (2021), strives for improved enterprise performance, fostering dignity, and removing barriers in challenging areas. It involves diverse financial institutions, products, and services tailored to community needs, ultimately advancing public well-being (Andriani & Sulistyowati, 2021). This vision is realized through goals like emerging fintech lending applications, enabling direct loan applications with defined terms. Financial inclusion in Indonesia requires fintech to accelerate its progress in the digital era (Rahmi, 2018). Understanding how financial inclusion affects MSMEs' performance is crucial from a policy standpoint, especially in developing economies where MSMEs account for a sizable proportion of business businesses in operation (Anthanasius Fomum & Opperman, 2023).

Fintech (financial technology) represents a paradigm shift in the financial and economic sectors (Lontchi et al., 2023). Fintech lending, regulated by Bank Indonesia, offers banking-like services without the need for a traditional bank account (Fadlurrohim et al., 2019). Funding sources for a company's capital structure can be internal (retained

earnings) or external (creditors and shareholders) (Joni & Lina, 2010), including debt from creditors which is often referred to as foreign capital. Notably, fintech lending offer advantages over traditional financial institutions, offering greater convenience in loan application submission (Lu et al., 2011). The efficiency of time in loan submission and the effectiveness of acquiring loans through fintech lending surpass those of conventional financial institutions.

The analysis of the business performance of MSMEs employs a three-assumption approach, highlighting the challenge of assessing their performance due to constrained resources and a focus on financial indicators, leading to complexities in identifying and presenting actual business outcomes and measurements (Hasanudin, 2023; Mutegi et al., 2015). Large and well-organized companies frequently employ this performance measure in their management processes, whereas the evaluation of MSME performance involves assessing the outcomes or appraising the work of a person or a group through the allocation of tasks and responsibilities. MSMEs require a prepared management which includes the recording of every financial transaction (Andriani & Sulistyowati, 2021).

Business capital serves as the foundation for establishing a business, derived from personal resources or external borrowing. This study involves business capital as a mediating variable. Business capital is crucial for enterprises, expanding micro-business opportunities and enabling progression into small and medium enterprises (Brigham & Houston, 2021). Factors like sales stability, asset structure, operating leverage, and others influence business success (Kryscynski et al., 2021). Capital sources encompass multiple methods such as internal revenue, investments, bank loans, and partnerships. Capital forms the bedrock of business development, obtained through personal savings, attracting investment, borrowing from banks, or engaging in partnership arrangements.

MSMEs in North Maluku Province, Sula Islands Regency, Sanana District, for example, increase the use of financial technology lending. Djena Tidore, from the UMKM and Cooperative Office of the Sula Islands Regency, has noted that there remains a considerable number of MSME participants who have yet to adopt or are unaware of this aspect. This is evident through the significant count of MSMEs that persist in relying on and being reliant on subsidies or funding provided by the provincial government. However, Djena Tidore highlights that despite such financial aid from the provincial government, it has not proven notably effective in addressing the capital challenges faced by MSMEs, given the escalating number of these enterprises in both the Sula Islands District and Sanana District. Table 1 displays the MSMEs situated in Sanana District, as reported by the UMKM and Cooperatives Office of Sula Islands Regency in the year 2022.

Table 1. MSMEs in Sanana District

Business Size	Number of units	Employee
Micro business	46	44
Small business	29	78
Medium business	30	66
Total number	105	188

Despite the continuous growth in the number of Micro, Small, and Medium Enterprises (MSMEs) within the Sanana District, these entities still heavily rely on financing provided by the UMKM and Cooperative Services. Interestingly, this

dependence has not translated into an increase in the level of MSME development within the Sanana Subdistrict. A preliminary study with an MSME participant in Sula Islands District's Sanana Subdistrict emphasized the challenges of securing capital loans from traditional banks due to rigorous questioning, while also highlighting the limited adoption of financial technology lending by small and medium-sized businesses, largely attributed to their inadequate financial literacy. Despite this, the participant noted that fintech lending presents a promising avenue for MSME operators, offering a breath of fresh air by mitigating management risks and facilitating decision-making through the convenience of accessing financial service products and directly applying for capital financing. This study aimed to evaluate the effect of financial literacy, financial inclusion, and fintech lending on MSME performance in the Sanana District of Sula Islands Regency, North Maluku Province. Investigating the interconnected dynamics between financial literacy, financial inclusion, fintech lending, and business capital mediation within the context of MSME performance in this district is captivating due to the complexity of their interrelationships.

Hypotheses Development

A previous study conducted by [Widyastuti et al. \(2023\)](#) proves that financial literacy directly, indirectly, and significantly affects MSME performance. Studies have indicated that financial literacy is a significant determinant of MSME performance ([Agyapong & Attram, 2019](#); [Buchdadi et al., 2019](#); [Kulathunga et al., 2020](#); [Lontchi et al., 2023](#); [Ye & Kulathunga, 2019](#)). Financial literacy is an important mechanism by which fintech services influence the operational and financial performance of MSMEs ([Lontchi et al., 2023](#)). Consequently, a hypothesis was formulated for this research:

H1: Financial literacy has a positive and significant effect on MSME performance mediated by venture capital

Financial inclusion plays influential role in MSME performance ([Thathsani & Jianguo, 2022](#)). [Mujiatun et al. \(2023\)](#) found a positive and significant association between Islamic financial inclusion and business performance among halal-tourism entrepreneurs. Financial inclusion is linked to the performance of MSMEs, as it encourages individuals to access financial products, facilitating more unrestricted financial transactions ([Efan et al., 2022](#)). Another gap in research arises because there has not been a clear consensus on the effect, as shown by [Hilmawati & Kusumaningtias \(2021\)](#), who state that financial inclusion does not have a significant effect on the sustainability and performance of MSMEs. As a result, a hypothesis was developed within the context of this investigation:

H2: Financial inclusion has a positive and significant effect on MSME performance mediated by venture capital.

Earlier studies have shown a clear and positive link between fintech and financial know-how. This suggests that fintech has the potential to improve people's understanding of finances, meaning that new and improved financial products and services could encourage small and medium-sized businesses to become more familiar with these modern advancements ([Lontchi et al., 2023](#)). Digital financing plays an influential role in MSME performance ([Thathsani & Jianguo, 2022](#)). Studies conducted by [Lontchi et al. \(2023\)](#) show that fintech positively and significantly affects MSMEs' performance. Accordingly, a hypothesis was framed to guide this study:

H3: Fintech lending has a positive and significant effect on MSME performance mediated by venture capital.

Method

This study employs quantitative analysis, utilizing the Structural Equation Model (SEM) approach facilitated by AMOS software. The SEM technique, as introduced by Hox et al (1998), addresses limitations in prior analytical models prevalent in statistical research. Focused on the population of Sanana District, Sula Islands Regency, North Maluku Province, the research employs purposive sampling, guided by specific considerations. The research involves a sample of 105 respondents engaged in Micro, Small, and Medium Enterprises (MSMEs). By gathering data from these respondents, we aim to gain a nuanced understanding of how financial literacy, financial inclusion, and fintech adoption affect the performance of MSMEs in this region. This study uses a Likert scale of 1 to 5 to assess respondents' opinions regarding the different variables under investigation. The analytical tool for this work was AMOS 24, which allowed us to undertake extensive structural equation modeling and assess the hypothesized correlations between variables. This software provides a solid foundation for statistical analysis, allowing us to gain valuable insights into the intricate interplay of factors affecting MSMEs' performance.

Results

The outcomes of the Confirmatory Factor Analysis (CFA) conducted through AMOS indicate the statistical significance and validity of latent variables, namely financial literacy, financial inclusion, financial technology lending, MSME capital, and performance. These variables meet the criteria of having a Critical Ratio (CR) greater than 1.96 and a significance level marked by $p.s = 0.01$, satisfying the condition where the probability value (p) is less than 0.05. Additionally, the estimated values, also known as standard factor loadings, demonstrate the legitimacy of each manifest variable as they surpass the threshold of 0.50 (see [Table 2](#)).

Table 2. Instrument Validity Test

Variable	Critical Ratio (CR)	P	Note
FL.1			
FL.2	-7.504	***	Significant
FL.3	3.697	***	Significant
FL.4	6.358	***	Significant
FL. 5	-7.829	***	Significant
FI.1			
FI.2	-3.282	0.001	Significant
FI.3	3.894	***	Significant
FI.4	-2.544	0.011	Significant
FI.5	3.919	***	Significant
FTL.1			
FTL.2	2.791	0.001	Significant
FTL.3	2.648	0.002	Significant
FTL.4	3.14	***	Significant

Variable	Critical Ratio (CR)	P	Note
VC.1		***	
VC.2	-12.519	***	Significant
VC.3	5.966		Significant
Per.1		***	
Per.2	-18.054	***	Significant
Per.3	23.638		Significant

Notes: FL (Financial Literacy); FI (Financial Inclusion); FTL (Financial Technology Lending); VC (Venture Capital); Per (Performance of MSME)

The data analysis employed in this study involves the utilization of the Structural Equation Model (SEM). However, this process entails several sequential stages to establish an optimal model. The input data utilized consists of the variance-covariance matrix. The use of a covariance matrix offers a distinct advantage by enabling accurate comparisons between various populations or distinct samples, a capability that can at times be unattainable when working with correlation matrix models.

The chosen method for model estimation is maximum likelihood estimation, selected due to the data falling within the range of 100-200. Before testing the full model, we initially estimated the measurement model using factor analysis techniques. Structural Equation Modeling or SEM is a combination of analysis factor and regression analysis that aims to examine the relationship between variables in a research model. The SEM testing process is divided into validity measurements and structural models.

In this research, the AMOS 24 software was utilized to perform Structural Equation Model (SEM) testing. Through processing the data using AMOS 24, the study reveals practical implications that illustrate how each specific indicator variable contributes to the overall influence of latent variables studied.

Table 3. Goodness-of-fit Index Full Model

Goodness of Fit	Cut-Off	Results	Conclusion
Chi-square	small	1331.848	Good
Probability	$P \geq 0.05$	132	Good
RMSEA	≤ 0.08	0.32	Good
CMIN	≥ 0.90	0.223	Good
DF	≥ 0.90	0.680	Good
GFI	≥ 0.90	0.604	Good
AGFI	≥ 0.90	0.512	Good
TLI	≥ 0.90	0.570	Good
CFI	≥ 0.90	0.574	Good
IFI	≥ 0.90	0.529	Good
NFI	≥ 0.90		Good

The outcomes of the model alignment tests, presented in Table 3, reveal the goodness-of-fit results. Upon data analysis in this study, it was observed that the model being examined exhibited satisfactory values across various goodness-of-fit indices within the comprehensive model assessment. According to Table 3, significant goodness-of-fit indicators such as Chi-Square, Probability, RMSEA, CMIN/DF, GFI, AGF, TLI, and CFI all supporting the acceptance of the overall structural model. According to Hair et al. (2010),

it is okay to use 4 to 5 different ways to see if a model fits well. These ways include looking at how well the model matches the data (absolute fit), how much the model improves compared to a simple model (incremental fit), and how well the model is not too complicated (parsimony fit). So, based on this study, we can say that the model's goodness of fit is good.

Table 4. Indirect Effects

Exogenous Variable	Endogenous Variable	Intervening Variables	Indirect Effect	C.R	P
Financial Literacy	MSME Performance	Business Capital	1.408	6.889	***
Financial Inclusion	MSME Performance	Business Capital	1.415	2.323	***
Financial Technology Lending	MSME Performance	Business Capital	1.354	3.352	***

Indirect influence refers to the impact of external factors on dependent internal factors, mediated by intervening variables. In this study, the independent variable demonstrates an indirect impact due to a relatively smaller magnitude of influence compared to its direct effect. The test results indicate the absence of a direct relationship among the variables, namely financial literacy, financial inclusion, financial technology lending, capital, and MSME performance when mediated by business capital as an intermediary.

Based on the study findings, as presented in Table 4, a CR (Critical Ratio) of 6.889 was obtained, which is greater than 1.96, and the probability (p) value is < 0.05 . As a result, H1 is accepted, indicating a positive and significant effect of financial literacy on business capital. Therefore, it can be deduced that an increase in financial literacy leads to improved capital. Among the indicators of financial literacy, the most dominant factor affecting business capital is the indicator of financial statements. This implies that focusing on business capital in the Sanana District of North Maluku Province, along with providing support and motivation, has the potential to improve financial literacy, thereby leading to an enhancement in the performance of MSMEs. The study's findings demonstrate that the independent variable, financial literacy, effectively accounts for the fluctuations observed in the dependent variable, which is the MSME performance through their business capital.

Based on the study's results, a CR score of 2.323 was found, which is more than 1.96, and the probability value (p) of 0.000 is significantly smaller than 0.05. As a result, H2 is accepted. This implies a positive effect of financial inclusion on MSME performance. Consequently, it can be inferred that an increase in financial inclusion is associated with improved MSME performance. Among the indicators within the financial inclusion variable, the financial institution indicator emerges as the most influential factor impacting MSME performance. This underscores the pivotal role of financial institutions in providing attention, support, and motivation for financial inclusion in the Sanana District of Sula Islands Regency, North Maluku Province.

The study's results indicate that fintech lending has a significant positive effect on MSME performance, as evidenced by a CR score of 2.352, exceeding 1.96, and a probability value (p) of 0.004, which is less than 0.05. Moreover, the research shows that fintech lending correlates with improved MSME performance through business capital, with a CR of 3.726, exceeding 1.96, and a probability value (p) less than 0.05. This confirms the

positive and significant effect of fintech lending on MSME performance through business capital.

Discussion

The positive and significant effect of financial literacy on the performance of MSMEs exists. Therefore, it can be inferred that enhancing financial inclusion will lead to improved MSME performance. This stance aligns previous studies ([Agyapong & Attram, 2019](#); [Buchdadi et al., 2019](#); [Hilmawati & Kusumaningtias, 2021](#); [Kulathunga et al., 2020](#); [Lontchi et al., 2023](#); [Mutegi et al., 2015](#); [Moch et al., 2019](#); [Widyastuti et al., 2023](#); [Ye & Kulathunga, 2019](#)), reinforcing the importance of the direct and positive influence of financial literacy on MSME performance through capital utilization. Financial literacy is one of the critical knowledge resources that improve an individual's and a company's capacity, skills, and competence in using technology efficiently ([Kulathunga et al., 2020](#)). Enhancing the financial knowledge of the owner-manager could lead to better financial performance of the firm. This is because improving their ability to acquire, use, handle, and allocate funds is likely to positively affect their skill in managing business risks, ultimately influencing the firm's performance ([Agyapong & Attram, 2019](#)). As a result, the higher the financial literacy of MSME owners, the better they would be at planning and managing funds to increase performance ([Widyastuti et al., 2023](#)). This implies that companies that place importance on and offer assistance for improving financial knowledge in the Sanana Subdistrict of Sula Island, located within the North Maluku Regency, have a significant role to play.

There is a positive and significant effect of financial inclusion on MSME performance, supporting previous studies yielding the same result ([Mujiatun et al., 2023](#); [Thathsaani & Jianguo, 2022](#)). This study indicates that improved financial inclusion leads to enhanced business capital. Among the indicators of financial inclusion, the most potent driver of business capital is the "Financial Information" indicator. This underscores the significance of providing appropriate attention, support, and encouragement to financial inclusion in the context of Sanana District, Sula Islands, North Maluku Regency. The level of belief in the transaction process affects the appropriateness of its impact on financial inclusion. Financial inclusion paves the way for investment opportunities regardless of parental wealth, while simultaneously empowering households to invest in human capital and aiding firms in enhancing productivity through investments in both physical assets and the employment of highly skilled personnel ([Oshora et al., 2021](#)). However, the result of this study is in contrast with [Hilmawati & Kusumaningtias \(2021\)](#), who state that financial inclusion does not have a significant effect on the sustainability and performance of MSMEs. Nevertheless, there has been limited focus on the empirical research concerning the performance of micro, small, and medium enterprises (MSMEs) in terms of financial inclusion, even though they have the potential to significantly contribute to both local economic advancement and the reduction of poverty ([Anthanasius Fomum & Opperman, 2023](#); [Wirdiyanti et al., 2022](#)).

The effect of fintech lending on business capital is positive and significant. This result corroborates previous studies ([Lontchi et al. 2023](#); [Thathsaani & Jianguo, 2022](#)). Consequently, higher adoption of financial technology lending is linked to improved business capital. The duration a business uses e-commerce affects its financial service

inclusion, with newer businesses being less likely to include such services; however, businesses engaged in e-commerce for an extended period tend to perform better in sales and are more inclined to seek funding for expansion (Nugraha et al., 2022). Among the indicators of fintech lending, the dominant driver of business capital is the "Financial Information" indicator. This highlights the importance of providing proper attention, support, and encouragement to fintech lending in North Maluku's Sula Islands District, particularly in the Sanana District. The level of belief in financial information impacts the appropriateness of its influence on fintech lending. Financial literacy indirectly correlates with Fintech adoption among MSMEs in Indonesia; rather, MSMEs' innovation plays a pivotal role in bridging this gap, underscoring the need for a supportive ecosystem to encourage Fintech adoption through enhanced creativity and innovation (Nugraha et al., 2022).

All in all, all variables in this study were intertwined as previous studies have explored. Enhancing financial literacy contributes to a meaningful and substantial correlation with financial inclusion, offering a strategy to elevate financial access within the MSMEs sector (Mujiatun et al., 2023). Financial literacy and technical literacy are frequently mutually beneficial (Kulathunga et al., 2020). Financial literacy moderates the association between fintech services and MSMEs' performance in a positive and significant way (Lontchi et al., 2023). Digital financing mediates positively the relationship between financial inclusion and performance in MSMEs (Thathsani & Jianguo, 2022). It is important for all parties involved to be attentive to aiding the advancement of microfinance institutions (a primary external funding source for MSMEs) and encouraging the adoption of mobile banking among consumers to foster financial inclusivity (Oshora et al., 2021). Enhancing financial accessibility through Fintech not only yields favorable outcomes for the expansion of SMEs but also promotes the economic fortitude of the nation, particularly in the face of the COVID-19 pandemic, which has constrained mobility and traditional business transactions to curb the virus's transmission (Nugraha et al., 2022). To suggest, providing training for MSME actors is crucial, as attendance results in improved SME growth in sales and profits by equipping owner-managers with essential business and financial knowledge (Agyapong & Attram, 2019).

Conclusion

Based on the comprehensive model research, the study draws the following conclusions: Firstly, enhancing financial literacy through business capital yields a positive effect on MSME performance. Similarly, the promotion of financial inclusion through business capital leads to a positive effect on MSME performance. Furthermore, the adoption of fintech lending, mediated by business capital, indirectly contributes to enhanced MSME performance. Hence, it is imperative to prioritize financial literacy initiatives to empower people in effectively managing personal finances. Likewise, participating in seminars on sound financial practices can bolster financial inclusion by enriching experience in MSME establishments, thus generating more employment opportunities. A prudent approach to harnessing financial technology and nurturing MSMEs is pivotal. Business capital necessitates educational interventions to enhance financial literacy and cultivate positive financial behavior. The significance of robust financial and accounting information for decision-making underscores the importance of

MSME performance for its stakeholders. The SEM testing validates the research model, strengthening foundational concepts in financial management—a valuable point of reference for fellow scholars. These outcomes aspire to foster sustainable, mutually beneficial growth in Financial Management research, encouraging exploration of variables with tangible impacts on the business realm by future researchers.

Authors' Declaration

The authors made substantial contributions to the conception and design of the study. The authors took responsibility for data analysis, interpretation and discussion of results. The authors read and approved the final manuscript.

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