

Improving Business Performance through Financial Literacy and Financial Technology

Deny Riyanda Defid

Faculty of Economic, Universitas Islam Sultan Agung (UNISSULA) Semarang, Indonesia, E-mail: denyriyandadefid@gmail.com

Abstract. Beyond the number of business units, micro-enterprises also play a significant role in employment. Data shows that the MSME sector will employ 45,305,983 people by 2025, with approximately 97.85% of these employed by micro-enterprises. This confirms the crucial role micro-enterprises play in reducing unemployment and improving social welfare. Although the number of micro-enterprises continues to increase and absorb a significant workforce, structural problems remain evident in the slow transformation of micro-enterprises into small and medium-sized enterprises. Data shows that micro-enterprise growth from 2024 to 2025 reached 30,440 units, or 0.10%, while small businesses only increased by 12 units, or 0.02%, and medium-sized businesses experienced no significant growth. This condition indicates that most micro-enterprises are experiencing stagnation and are struggling to scale up to a higher level. This phenomenon is a serious concern because if micro-enterprises remain stagnant without capacity expansion, their contribution to productivity and economic competitiveness will be limited. Therefore, efforts are needed to encourage improved business performance so that micro-enterprises can grow and transform into larger enterprises. One of the factors suspected of influencing the low ability of micro-businesses to develop is the level of financial literacy of business actors. Financial literacy is a set of skills that enable individuals to make informed and effective decisions to improve their well-being and minimize the loss of time and money. Research shows that financial literacy enables individuals to better prepare for the future, while those with poor financial literacy and skills may struggle. Entrepreneurs with good financial literacy tend to be able to develop financial plans, manage cash flow, and make appropriate investment decisions to improve their business performance.

Keywords: Business; Financial; Performance; Technology.

1. Introduction

MSMEs are a key pillar of the Indonesian economy due to their significant contribution to economic growth, job creation, and income equality. Based on Government Regulation Number 7 of 2021, MSMEs are classified into three categories: micro, small, and medium enterprises. Micro enterprises are business entities with annual sales of up to IDR 2 billion, small enterprises with annual sales of more than IDR 2 billion up to IDR 15 billion, and medium enterprises with annual sales of more than IDR 15 billion up to IDR 50 billion.



Figure Number of MSMEs in Indonesia based on SIDI UMKM

Source : <https://satudata.umkm.go.id>

Based on data from the Single Data Information System for MSMEs (SIDI-UMKM), the number of MSMEs in Indonesia is projected to reach 30,209,069 business units by 2025, up from 30,178,617 units in 2024, representing a growth of approximately 0.10%. This indicates that quantitatively, MSMEs continue to grow and serve as the backbone of the national economy. MSMEs contribute more than 60% to Indonesia's Gross Domestic Product (GDP) annually (Kemenkeu.go.id).

Table Development of Non-Agricultural MSME Data 2024 – 2025

	2024	2025
Micro Enterprises	30,089,488	30,119,928
Small business	73,816	73,828
Medium Enterprises	15,313	15,313
TOTAL	30,178,617	30,209,069

Source: <https://umkm.go.id>

However, the structure of MSMEs in Indonesia is still dominated by micro-enterprises. By 2025, the number of micro-enterprises will reach 30,119,928 units, or approximately 99.71% of the total MSMEs, while small businesses will only account for 0.24% and medium-sized businesses for 0.05%. This dominance of micro-enterprises indicates that the majority of businesses operate on a very small scale.

Table Number of Workers Absorbed by Non-Agricultural MSMEs 2024-2025

	2024	2025
Micro Enterprises	44,289,995	44,332,582
Small business	570,048	570,114
Medium Enterprises	403,305	403,287
TOTAL	45,263,348	45,305,983

Source: <https://umkm.go.id>

Beyond the number of business units, micro-enterprises also play a significant role in employment. Data shows that the MSME sector will employ 45,305,983 people by 2025, with approximately 97.85% of these employed by micro-enterprises. This confirms the crucial role micro-enterprises play in reducing unemployment and improving social welfare.

Although the number of micro-enterprises continues to increase and absorb a significant workforce, structural problems remain evident in the slow transformation of micro-enterprises into small and medium-sized enterprises. Data shows that micro-enterprise growth from 2024 to 2025 reached 30,440 units, or 0.10%, while small businesses only increased by 12 units, or 0.02%, and medium-sized businesses experienced no significant growth. This condition indicates that most micro-enterprises are experiencing stagnation and are struggling to scale up to a higher level.

This phenomenon is a serious concern because if micro-enterprises remain stagnant without capacity expansion, their contribution to productivity and economic competitiveness will be limited. Therefore, efforts are needed to encourage improved business performance so that micro-enterprises can grow and transform into larger enterprises.

One of the factors suspected of influencing the low ability of micro-businesses to develop is the level of financial literacy of business actors.

Financial literacy is a set of skills that enable individuals to make informed and effective decisions to improve their well-being and minimize the loss of time and money (Kefela, 2011). Research shows that financial literacy enables individuals to better prepare for the future, while those with poor financial literacy and skills may struggle (Alshebami & Aldhyani, 2022). Entrepreneurs with good financial literacy tend to be able to develop financial plans, manage cash flow, and make appropriate investment decisions to improve their business performance (Alshebami & Aldhyani, 2022).



Figure 1.2 Number of MSMEs that have Permits and Financial Reports

Source : <https://satudata.umkm.go.id>

Data shows that the level of financial literacy among MSMEs in Indonesia remains relatively low. This is reflected in the lack of legal documents and financial management. Data from the Single MSME Data Information System (SIDT-UMKM) shows that of a total of 30,209,069 business units, only around 368,753 units, or 1.22%, have a Business Identification Number (NIB), while the remainder do not have business legality. Furthermore, only around 1,059,072 business units, or 3.51%, have financial reports. The low ownership of NIBs and financial reports indicates that most business actors lack adequate understanding and practice of financial management. This condition can ultimately be one of the causes of less than optimal business performance, which will later make it difficult for them to grow to a higher level.

2. Research Methods

This research is explanatory research aimed at identifying the relationship between the variables involved. The independent variable in this study is financial literacy. Fintech is a moderating variable considered to strengthen the relationship between the independent and dependent variables. The dependent variable in this study is business performance. Through this research, it is hoped that understanding how financial technology can strengthen the relationship between financial literacy and business performance can be achieved.

3. Results and Discussion

3.1. Description of respondent characteristics

Respondent characteristics are grouped by gender, education, business type, number of employees, and business experience. Further details regarding respondent characteristics can be found in the following table.

Table Respondent Characteristics

No	Respondent Characteristics	Dimensions	Amount	%
1	Gender	Man	120	47.06
		Woman	135	52.94

2	Education	High School/Vocational	207	81.18
		School/Equivalent		
		Diploma	28	10.98
		Bachelor	15	5.88
		Postgraduate	4	1.57
		Doctor	1	0.39
3	Type of business	Manufacturing	20	7.84
		Retail/wholesale	58	22.74
		Service	65	25.50
		FNB	97	38.04
		Other	15	5.88
4	Business Experience	3 – 5 Years	79	30.98
		5 – 10 Years	111	43.53
		More than 10 Years	65	25.49
5	Number of employees	1 to 10	185	72.55
		10 to 20	55	21.56
		More than 20	15	5.89

Source: Processed primary data, 2026

3.2. Description of research variables

The description of the research variables is intended to provide an overview of respondents' perceptions of financial literacy, financial technology, and business performance. This description includes an explanation of the perception index values.

This scale is used to determine the level of respondents' perception of the variables being studied. In accordance with the formula and criteria explained in Chapter III, three interpretation criteria were used in this study: high, medium, and low. Low is defined as an index value of 10.00–40.00, medium is defined as an index value of 40.01–70.00, and high is defined as 70.01–100.00.

3.3. Description of Financial Literacy Variables

Financial literacy is the ability to manage finances to improve future well-being (Le et al., 2019). Business owners with good financial literacy can be identified by their ability to analyze financial performance, plan long-term finances, understand inflation risks, and save. The following table illustrates the financial literacy of micro-entrepreneurs.

Table Values of the financial literacy indicator and variable indexes

Financial Literacy Indicators		Respondent Answer Scale										Total	Index Value
		1	2	3	4	5	6	7	8	9	10		
LK 1	F	0	0	15	23	8	117	85	2	3	2	255	
	% (FxS)	0	0	17.6	36.1	15.7	275.3	233.3	6.3	10.6	7.8	60.3	Currently
LK 2	F	0	0	19	20	7	107	95	1	5	1	255	
	% (FxS)	0	0	22.4	31.4	13.7	251.8	260.8	3.1	17.6	3.9	60.5	Currently
LK 3	F	0	0	15	24	9	99	101	4	2	1	255	
	% (FxS)	0	0	17.6	37.6	17.6	232.9	277.3	12.5	7.1	3.9	60.3	Currently

LK 4	F	0	0	9	29	7	123	80	2	3	2	255	
	% (FxS)	0	0	10.6	45.5	13.7	289.4	219.6	6.3	10.6	7.8	60.4	Currently
Average Value of Variable Index												60.3	Currently

Source: Processed primary data, 2026

Based on the results of the descriptive analysis, the financial literacy variable obtained an average index value of 60.3, which is included in the moderate category shows that the level of financial literacy of micro-entrepreneurs is still at a suboptimal level.

Looking at each indicator, long-term financial planning (LK2) achieved the highest index score of 60.5, indicating that most business owners have the ability to plan their business's long-term financial condition. Furthermore, the savings ability indicator (LK4) achieved an index score of 60.4, indicating that respondents have developed a habit of setting aside a portion of their income as savings for business needs and emergencies.

Meanwhile, the indicators for the ability to analyze financial performance (LK1) and knowledge of inflation risk (LK3) each achieved an index score of 60.3. These results indicate that business actors' ability to evaluate their financial condition and understand the impact of inflation on business activities remains moderate. Overall, these results indicate that micro-business actors' financial literacy still needs to be improved, particularly in financial analysis and understanding economic risk to support more effective business decision-making.

a. Description of Financial Technology Variables

Dapp, (2014) defines fintech as a financial service that uses innovative technology to meet financial needs more effectively and efficiently. The level of perception of micro-businesses towards the use of financial technology. This can be seen from the extent to which financial technology meets user needs, operational efficiency, perceived usefulness, and ease of use. Financial technology's ability to analyze financial performance, long-term financial planning, knowledge of inflation risks, and savings capacity.

Table Values of the index of financial technology indicators and variables

Financial Technology Indicators	Respondent Answer Scale										Total	Index Value
	1	2	3	4	5	6	7	8	9	10		

Kindergarten 1	F	0	0	5	4	14	115	90	10	11	6	255	
	% (FxS)	0	0	5.9	6.3	27.5	270.6	247.1	31.4	38.8	23.5	65.1	Currently
Kindergarten 2	F	0	0	6	3	9	111	94	10	17	5	255	
	% (FxS)	0	0	7.1	4.7	17.6	261.2	258.0	31.4	60.0	19.6	66.0	Currently
Kindergarten 3	F	0	0	5	4	8	118	87	9	18	6	255	
	% (FxS)	0	0	5.9	6.3	15.7	277.6	238.8	28.2	63.5	23.5	63.6	Currently
Kindergarten 4	F	0	0	2	3	15	108	96	12	17	2	255	
	% (FxS)	0	0	2.4	4.7	29.4	254.1	263.5	37.6	60.0	7.8	66.0	Currently
Average Value of Variable Index												65.2	Currently

Source: Processed primary data, 2026

The financial technology variable obtained an average index value of 65.2, which is included in the moderate category. This result indicates that micro-business actors' perceptions of the use of financial technology are quite good, although its utilization is not yet fully optimal. Based on each indicator, operational efficiency (TK2) and ease of use (TK4) obtained the highest index values, at 66.0. This indicates that respondents believe the use of financial technology can improve efficiency in carrying out business activities and is easy to learn and use in daily operations. Furthermore, the indicator meeting user needs (TK1) obtained an index value of 65.1, indicating that financial technology services are sufficiently capable of meeting needs transactions and business financial management. The perceived usefulness indicator (TK3) obtained an index value of 63.6, indicating that business owners have perceived the benefits of using financial technology, although there is still room to increase the added value derived from its use. Overall, these results indicate that financial technology has been well-received by micro-businesses and has the potential to support increased business activity.

b. Description of Business Performance Variables

Business performance refers to the extent to which a business is able to achieve predetermined goals within a specific period (Soegihono & Yuniawan, 2023). Micro-enterprises with good business performance can be seen from increased profits, revenue, the ability to develop new products, and increased sales volume.

Table Values of business performance indicator and variable indexes

IndicatorBusiness Performance		Respondent's answer scale										Total	Index Value
		1	2	3	4	5	6	7	8	9	10		
KB 1	F	0	0	21	8	9	104	96	4	10	3	255	
	% (FxS)	0	0	24.7	12.5	17.6	244.7	263.5	12.5	35.3	11.8	62.3	Currently
KB 2	F	0	0	8	25	11	114	86	4	5	2	255	
	% (FxS)	0	0	9.4	39.2	21.6	268.2	236.1	12.5	17.6	7.8	61.3	Currently
KB3	F	0	0	19	5	17	114	90	2	6	2	255	
	% (FxS)	0	0	22.4	7.8	33.3	268.2	247.1	6.3	21.2	7.8	60.6	Currently
KB 4	F	0	0	16	19	5	118	87	3	5	2	255	
	% (FxS)	0	0	18.8	29.8	9.8	277.6	238.8	9.4	17.6	7.8	61.0	Currently
Average Value of Variable Index												61.3	Currently

Source: Processed primary data, 2026

The business performance variable obtained an average index value of 61.3, which is included in the moderate category. This indicates that in general, business actors. Micro businesses have experienced developments in business performance, but the increase has not yet reached a high level.

Based on the index values of each indicator, profit increase (KB1) obtained the highest index value of 62.3, indicating that most respondents felt an increase in profits from their business activities. Furthermore, the income increase indicator (KB2) obtained an index value of 61.3, indicating that micro-enterprises have experienced an increase in income, although not yet significant. The sales volume increase indicator (KB4) obtained an index value of 61.0, indicating that business actors have experienced an increase in sales as an indicator of their business development.

Meanwhile, the new product development capability indicator (KB3) achieved an index value of 60.6, making it the lowest-scoring indicator in the business performance variable. This indicates that business actors' ability to innovate and develop new products is still suboptimal compared to other aspects of business performance. Overall, the analysis shows that micro-enterprise business performance is in the moderate category, requiring further efforts to improve product innovation capabilities, expand markets, and optimize business management to ensure continued performance improvement.

c. The influence of financial literacy on business performance

Based on the results of testing Hypothesis 1 in this study, financial literacy significantly impacts business performance. This finding aligns with research by Lontchi et al. (2023) and Tumba et al. (2022). This means that the higher the level of financial literacy of micro-entrepreneurs, the greater their business performance will be.

d. The moderating effect of financial technology on the relationship between financial literacy and business performance

Based on the results of testing Hypothesis 1 in this study, financial technology significantly moderates the effect of financial literacy on business performance. This means that the higher the level of financial literacy of micro-enterprises strengthened by financial technology, the greater the improvement in business performance.

3.4. Validity Test

a. Convergent Validity

Convergent validity is measured using Outer Loadings and Average Variance Extracted (AVE). The Outer Loading value must be greater than 0.7, while the AVE value must be greater than 0.5.

Table Loading Factor

	Originalsample (O)	Samplemean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
KB 1 <- KB	0.923	0.923	0.013	71,881	0.000
KB 2 <- KB	0.920	0.919	0.011	81,729	0.000
KB 3 <- KB	0.904	0.903	0.015	59,209	0.000
KB 4 <- KB	0.931	0.931	0.010	91,619	0.000
LK 1 <- LK	0.930	0.930	0.009	98,793	0.000
LK 2 <- LK	0.928	0.927	0.010	92,365	0.000
LK 3 <- LK	0.920	0.919	0.012	75,269	0.000
LK 4 <- LK	0.931	0.931	0.009	104,481	0.000
Kindergarten 1 <- Kindergarten	0.913	0.912	0.017	52,976	0.000
Kindergarten 2 <- Kindergarten	0.859	0.855	0.034	25,226	0.000
Kindergarten 3 <- Kindergarten	0.855	0.854	0.029	29,440	0.000
Kindergarten 4 <- Kindergarten	0.846	0.844	0.035	24,275	0.000
Kindergarten x Kindergarten -> Kindergarten x Kindergarten	1,000	1,000	0.000	n/a	n/a

Source: Processed primary data, 2026

Based on the results of the outer loading analysis, it can be concluded that all indicators have good construct validity. The outer loading value for each indicator is above 0.7, indicating that each indicator optimally represents the construct.

Table Average variance extracted (AVE)

	Average variance extracted (AVE)
KB	0.845
LK	0.860
Kindergarten	0.754

Source: Processed primary data, 2026

Based on the results of the Average Variance Extracted (AVE) analysis, the AVE values for each construct also showed good results, with all AVE values greater than 0.5. This indicates that each construct is able to explain more than 50% of the variance in the indicators used.

Thus, it can be concluded that the measurement model used has met the requirements for convergent validity. The indicators in the constructs of financial literacy, financial technology, and business performance have proven valid and reliable in representing each latent construct.

b. Discriminant Validity

Discriminant Validity used to test the extent to which a construct is truly different from other constructs. Discriminant Validity is measured by comparing the Fornell-Larcker Criterion. In Fornell-Larcker, a latent variable is considered to meet discriminant validity if the square root of the AVE (Average Variance Extracted) value on the diagonal of the table must be greater than the correlation between the variable and other variables.

Table Fornell-Larcker Criterion

	KB	LK	Kindergarten
KB	0.919		

LK	0.846	0.927	
Kindergarten	0.466	0.405	0.869

Source: Processed primary data, 2026

The Fornell-Larcker Criterion test yielded positive results. In this table, the diagonal value representing the square root of the Average Variance Extracted (AVE) for each latent variable is greater than the correlation between the other variables.

c. Reliability Test

Reliability testing is conducted by examining composite reliability and Cronbach's alpha. A construct is considered reliable if its composite reliability and Cronbach's alpha values are greater than 0.7.

Table Cronbach's alpha and composite reliability values

	Cronbach's alpha	Composite reliability (rho_c)
KB	0.939	0.956
LK	0.946	0.961
Kindergarten	0.891	0.925

Source: Processed primary data, 2026

The test results show that all constructs in this study have Cronbach's alpha and Composite Reliability values that meet the criteria, namely above 0.7. This proves that the measurement instruments used in this study are consistent and reliable.

4. Conclusion

Based on the results of the research that has been conducted, the following conclusions can be drawn:

1. Financial literacy significantly impacts business performance. The higher the level of financial literacy of micro-entrepreneurs, the greater their business performance.

2. Financial technology significantly moderates the influence of financial literacy on business performance. The higher the level of financial literacy of micro-enterprises strengthened by financial technology, the greater the business performance will be.

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