



## Original Article

**THE NEXUS OF FINANCIAL LITERACY, FINANCIAL TECHNOLOGY, AND FINANCIAL INCLUSION ON FINANCIAL PERFORMANCE: INSIGHTS FROM LAMONGAN'S CULINARY MSMEs****Ihza Zamzara Maulidia Putri<sup>1)</sup>, Fatichatur Rachmaniyah<sup>1)\*</sup>, Siti Shoimah<sup>1)</sup>**<sup>1)</sup> Universitas Islam Darul Ulum Lamongan, Indonesia

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**ABSTRACT**

**Background:** The MSME culinary sector is one of the most popular industries in Indonesia, particularly in Lamongan. MSME entrepreneurs in this sector need to enhance their understanding of financial literacy and financial inclusion to improve their business's financial performance. Additionally, keeping up with modern developments by utilizing financial technology is crucial to optimizing financial management.

**Research Purpose:** This study aims to understand how financial literacy, fintech, and financial inclusion impact the financial performance of culinary micro, small, and medium enterprises in Lamongan.

**Research Method:** This study uses an explanatory quantitative research approach. Data collection was conducted through Likert-scale questionnaires distributed to 140 MSME respondents in the culinary sector in Lamongan. These respondents were selected using purposive sampling, and the data were analyzed using multiple linear regression.

**Findings:** The study reveals that financial literacy and inclusion enhance the financial performance of culinary micro, small, and medium enterprises in Lamongan. While fintech's role is insignificant, a synergistic approach involving all three factors significantly contributes to improved performance.

**Conclusion:** Financial literacy and financial inclusion among MSMEs in Lamongan's culinary sector are relatively good. However, the application of financial technology does not significantly affect financial performance, as most consumers in Lamongan, from lower-middle-income groups, do not widely use fintech for transactions.

**Keywords:** Financial Inclusion, Financial Literacy, Financial Technology, MSMEs.

**BACKGROUND**

In the era of globalization and technological advancement, Micro, Small, and Medium Enterprises (MSMEs) play a vital role in a country's economic growth. Across various nations, MSMEs are the backbone of the economy and a source of innovation and creativity. As a major contributor to national economic strength, MSMEs are crucial for contributing to the Gross Domestic Product (GDP) and absorbing labor [1].

The culinary sector, in particular, is one of the most sought-after MSME industries in Indonesia, driven by the essential nature of food and its broad market opportunities. In addition to fulfilling people's dietary needs, the culinary MSME sector contributes significantly to national income. According to data from the Ministry of Tourism and Creative Economy in 2023, the culinary sector accounts for 41% of the total GDP in the

creative economy, making it the largest contributing subsector. As the culinary MSME sector grows significantly, entrepreneurs must understand and utilize financial services and adapt to available financial products. A good understanding of financial services enables MSME players to access products and services tailored to their business needs, facilitating better financial decisions regarding savings, investments, payment systems, and loans.

However, culinary MSMEs often face significant challenges due to a lack of financial literacy and inclusion. Financial literacy is essential as it helps entrepreneurs manage finances more effectively. Improving financial literacy can strengthen the financial foundation of MSMEs, optimize performance, and overcome financial challenges. Financial inclusion encourages individuals to access and utilize financial products, providing greater flexibility for personal and business financial management.

Given the rapid development of the culinary MSME sector, it is crucial for entrepreneurs to adapt to modern trends by leveraging financial technology. Financial technology offers financial transaction services without requiring conventional banking accounts. Its adoption by MSMEs aims to provide easier and more efficient access to financial resources, including financing, digital payments, and financial management. Implementing financial technology solutions, such as QRIS (Quick Response Code Indonesian Standard), e-wallets, and credit cards, positively impacts MSME financial performance [2].

Early research indicates significant growth in Lamongan's culinary MSME sector over recent years. Many local entrepreneurs have initiated small-scale businesses, such as food stalls, bakeries, cafes, and food carts, indicating promising business opportunities in this sector. To improve the financial performance of MSMEs, specific measures and efforts need to be implemented. Given the large number of MSMEs in Lamongan Regency and the growing development of culinary MSMEs in Lamongan, it is crucial to provide knowledge about financial inclusion and financial literacy to culinary MSME entrepreneurs in the region. Once MSME stakeholders have acquired financial understanding and literacy skills, entrepreneurs must also have access to financial inclusion facilities to apply this knowledge effectively. This is because financial inclusion and financial literacy play a significant role in financial management, which can impact the performance and sustainability of MSMEs [3].

Financial performance encompasses the evaluation and analysis of the financial condition and performance of MSMEs. It is a formal effort conducted by businesses to assess the efficiency and effectiveness of their operational activities in accordance with applicable regulations. Therefore, this study has four objectives: first, to explain the influence of financial literacy on financial performance; second, to explain the influence of financial technology on financial performance; third, to explain the influence of financial inclusion on financial performance; and fourth, to explain the simultaneous influence of financial literacy, financial technology, and financial inclusion on financial performance.

## **RESEARCH METHOD**

This study uses an explanatory quantitative research approach. The data used is utilized primary data collected through Likert-scale questionnaires. The population comprised culinary MSMEs in Lamongan (food and beverage businesses). Purposive sampling was employed with specific criteria:

1. Culinary MSMEs located in Lamongan Regency.
2. Respondents must own or manage culinary MSMEs in Lamongan.
3. Culinary MSMEs that are currently active and operational.
4. Culinary MSMEs that use or have used technology-based payment facilities.

The sample size was determined using a formula [4], yielding 140 respondents. Data analysis employed multiple linear regression.

## FINDINGS

Based on the data collected through the distribution of questionnaires to respondents, an overview of the respondents' characteristics used in this survey was obtained, categorized by gender, age, educational background, monthly turnover, business duration, payment facilities, and duration of payment facility usage. Detailed information about the general characteristics of the respondents is presented in Table 1 as follows:

**Table 1. Characteristics of Respondents**

Characteristics	Count	%	Characteristics	Count	%
<b>Gender</b>			<b>Business Duration</b>		
Male	58	41,4	< 3 years	49	35,0
Female	82	58,6	3-5 years	40	28,6
<b>Total</b>	140	100	6-10 years	33	23,6
<b>Age</b>			> 10 years	18	12,9
18-28 years	68	48,6	<b>Total</b>	140	100
29-39 years	32	22,9	<b>Payment Facilities</b>		
>39 years	40	28,6	QRIS	101	51,5
Total	140	100	OVO	12	6,1
<b>Education Level</b>			GoPay	6	3,1
No Schooling	1	0,7	Dana	43	21,9
Elementary School	8	5,7	ShopeePay	13	6,6
Junior High School	11	7,9	Other (Transfer)	19	9,7
High School	86	61,4	Other (EDC)	1	0,5
Diploma	5	3,6	Other (Finpay)	1	0,5
Bachelor's Degree	28	20,0	Total	140	100
Master's Degree	1	0,7	<b>Duration of Payment Facility Usage</b>		
Total	140	100	< 1 year	57	40,7
<b>Monthly Revenue</b>			1-3 years	62	44,3
< Rp 5.000.000	47	33,6	> 3 years	21	15,0
Rp 5.000.000 - Rp 25.000.000	67	47,9	Total	140	100
Rp 25.000.000 - Rp 50.000.000	20	14,3			
> Rp 50.000.000	6	4,3			
Total	140	100			

Source: Processed Data, 2024

The findings from Table 1 provide valuable insights into the demographic and operational characteristics of culinary MSMEs in Lamongan. The majority of respondents being female (58.6%) reflects the significant role women play in this sector. This demographic dominance could indicate the active participation of women in micro-entrepreneurial ventures, especially in the culinary field, which is often considered a natural extension of household responsibilities. The age distribution shows that most

respondents (48.6%) are within the 18-28 age group, highlighting the sector's appeal to younger entrepreneurs. This suggests that culinary MSMEs in Lamongan may benefit from the energy and innovation associated with younger individuals. However, the relatively lower participation of those aged over 39 years might imply that older individuals face barriers, such as adapting to modern financial technologies or limited entrepreneurial interest.

Education levels indicate that a significant portion of respondents (61.4%) have a high school (SMA) education. While this level of education may be sufficient for basic business operations, it underscores the potential need for targeted training or workshops to enhance financial literacy and entrepreneurial skills. In terms of financial performance, the data shows that most culinary MSMEs generate monthly revenues between IDR 5,000,000 and IDR 25,000,000 (47.9%). While this range is promising for small-scale businesses, it also reflects the need for strategies to increase revenue, such as expanding market reach or optimizing operations. The operational duration reveals that a large portion of MSMEs (35.0%) have been in business for less than three years. This indicates a growing sector with many new entrants, which could benefit from support in sustaining and scaling their businesses over time.

Regarding payment facilities, the adoption of QRIS technology (51.5%) as the most widely used method reflects a positive trend toward embracing digital payment solutions. However, the data showing that most MSMEs have only been using these facilities for 1-3 years (44.3%) suggests that digital payment adoption is relatively recent. This highlights the need for continued encouragement and education to fully integrate digital tools into their financial operations and reach a broader customer base. Overall, the findings suggest a vibrant yet emerging sector with opportunities to enhance financial literacy, broaden the adoption of financial technologies, and support long-term business growth for culinary MSMEs in Lamongan.

### Multiple Linear Regression Analysis

In Table 2, the results of the multiple linear regression analysis can be observed:

**Table 2. Results of Multiple Linear Regression Analysis**

Model		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	5.452	1.271		4.288	.000
	Financial Literacy	.220	.099	.163	2.217	.028
	Financial Technology	.095	.108	.065	.881	.380
	Financial Inclusion	.463	.043	.655	10.858	.000

Source: Processed Data, 2024

Based on Table 2, the multiple linear regression equation can be derived as follows:

$$Y = 5,452 + 0,220X1 + 0,095X2 + 0,463X3 + \varepsilon$$

The multiple linear regression equation can be explained in more detail as follows:

1. Constant (Intercept): When the independent variables—financial literacy (X1), financial technology (X2), and financial inclusion (X3)—are considered as constants (0), the constant value in this study is 5.452. This indicates that the financial performance of MSMEs is 5.452 when all independent variables are at zero.

2. Financial Literacy (X1): The regression coefficient for financial literacy is 0.220. This means that for every one-unit increase in financial literacy, the financial performance of MSMEs increases by 0.220 or 22%. The positive coefficient signifies a positive relationship: as financial literacy improves, the financial performance of MSMEs also increases.
3. Financial Technology (X2): The regression coefficient for financial technology is 0.095. This implies that for every one-unit increase in financial technology, the financial performance of MSMEs increases by 0.095 or 9.5%. The positive coefficient indicates a positive relationship: as financial technology adoption improves, the financial performance of MSMEs also improves.
4. Financial Inclusion (X3): The regression coefficient for financial inclusion is 0.463. This indicates that for every one-unit increase in financial inclusion, the financial performance of MSMEs increases by 0.463 or 46.3%. The positive coefficient shows a strong positive relationship: better financial inclusion leads to improved financial performance for MSMEs.

### t-Test

The t-test is used to evaluate whether the coefficients of the independent variables significantly influence the dependent variable. The significance criteria are met if  $t$  calculated  $>$   $t$  table at a significance level ( $\alpha$ =alpha) of 5% or if the probability value (p-value) is less than 0.05. If these conditions are satisfied, the null hypothesis ( $H_0$ ) is rejected in favor of the alternative hypothesis ( $H_a$ ), indicating a statistically significant positive relationship between the independent and dependent variables. The  $t$  table value is calculated using the formula  $df=n-k$ , where  $n=140$  (sample size) and  $k=4$  (number of variables including the constant), resulting in  $df=136$ . According to the  $t$ -table for  $df=136$ , the critical value is 1.977. Therefore, independent variables with  $t$  calculated  $>1.977$  or  $p$ -value  $< 0.05$  are considered to have a significant impact on the dependent variable.

**Table 3. Results of the t-Test**

Model		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	5.452	1.271		4.288	.000
	Financial Literacy	.220	.099	.163	2.217	.028
	Financial Technology	.095	.108	.065	.881	.380
	Financial Inclusion	.463	.043	.655	10.858	.000

Source: Processed Data, 2024

Based on the  $t$  calculated values and significance levels in Table 3, the conclusions are as follows:

1. The financial literacy variable has a significance level of 0.028, which is less than 0.05, and  $t$  calculated value of 2.217, which is greater than  $t$ -table (1.977). This indicates that financial literacy has a significant positive effect on the financial performance of MSMEs in the culinary sector in Lamongan. Thus,  $H_a$  is accepted, and  $H_0$  is rejected.
2. The financial technology variable exhibits a significance level of 0.380, which is greater than the conventional significance level of 0.05. Additionally, the calculated  $t$ -value of 0.881 is less than the critical  $t$ -value of 1.977. Consequently, it can be concluded that financial technology does not have a statistically significant positive

impact on the financial performance of culinary MSMEs in Lamongan. As such, the alternative hypothesis ( $H_a$ ) is rejected, and the null hypothesis ( $H_0$ ) is accepted.

- The financial inclusion variable has a significance level of 0.000, which is less than 0.05, and  $t$  calculated value of 10.858, which is greater than  $t$ -table (1.977). This indicates that financial inclusion has a significant positive effect on the financial performance of MSMEs in the culinary sector in Lamongan. Thus,  $H_a$  is accepted, and  $H_0$  is rejected.

### F Test

The F-test is used to determine whether all independent variables in the regression model simultaneously have a significant effect on the dependent variable. If  $F$  calculated  $>$   $F$  table or sig.  $F < \alpha$  (0.05), the null hypothesis ( $H_0$ ) is rejected, indicating a significant effect of the independent variables on the dependent variable ( $H_a$  is accepted). To determine the  $F$  table value, the formula  $df = n - k$  is used, where:

- $n=140$  (sample size)
- $k=4$  (number of variables, including the constant)

This calculation gives  $df=140-4=136$   $df = 140 - 4 = 136$   $df=140-4=136$ .

The  $F$  table value is then obtained by referring to the  $F$ -distribution table for  $df$  at 136. Based on this, the  $F$  table value is **2.67** at a significance level ( $\alpha$ ) of 5%.

**Table 4. Results of the F-Test**

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	373.529	3	124.510	49.919	.000 <sup>b</sup>
	Residual	339.214	136	2.494		
	Total	712.743	139			

Source: Processed Data, 2024

From Table 4, the  $F$ -value is  $F$  calculated=49.919, which is greater than  $F$  table=2.67. The significance level is 0.000, which is less than 0.05. This indicates that financial literacy, financial technology, and financial inclusion simultaneously have a significant effect on the financial performance of MSMEs in Lamongan's culinary sector. Thus,  $H_a$  is accepted, and  $H_0$  is rejected.

### Coefficient of determination ( $R^2$ )

$R$ -squared, a key metric in regression analysis, evaluates the model's ability to explain the variability in the dependent variable using the independent variables. A higher  $R$ -squared value indicates a better fit, implying that the model can account for a larger proportion of the variation in the dependent variable.

**Table 5.  $R^2$  Test**

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.724 <sup>a</sup>	.524	.514	1.57931	

Source: Processed Data, 2024

Based on Table 5, the Adjusted  $R$  Square value is 0.514, which, when converted to a percentage, is 51.4%. This indicates that the variables of financial literacy, financial technology, and financial inclusion explain 51.4% of the variance in the financial performance of MSMEs. Factors and aspects outside the scope of this study influence the remaining 48.6%.

## **DISCUSSIONS**

### **The Influence of Financial Literacy on the Financial Performance of Culinary MSMEs**

The study results reveal a positive and significant influence of financial literacy on the financial performance of culinary MSMEs in Lamongan. This indicates that culinary MSME entrepreneurs in Lamongan have an adequate understanding of basic financial concepts. They demonstrate capabilities in managing cash flow, preparing simple financial reports, and planning business finances. This highlights their awareness of the importance of financial recording and management skills for their business growth. This is in accordance with research [5], [6] which states that financial literacy has an influence on the financial performance of small and medium enterprises.

Financial literacy refers to an individual's ability to understand and use financial information to make effective and efficient financial decisions. Higher financial literacy among MSME entrepreneurs leads to better financial performance [7]. Entrepreneurs with good financial literacy are more likely to make sound investment decisions, manage cash flow effectively by creating realistic budgets, avoid excessive debt, enhance profits, and strengthen their business positions [7], [8].

### **The Influence of Financial Technology on the Financial Performance of Culinary MSMEs**

The study finds that financial technology does not have a positive or significant impact on the financial performance of culinary MSMEs in Lamongan. This result contradicts theoretical perspectives suggesting that financial technology can significantly enhance MSME financial performance by improving access to funding sources, streamlining transactions, and reducing operational costs [1], [9], [10].

The results of this research are not in line with previous research [6], [11], [12] which stated that fintech has a positive influence on the financial performance on MSMEs. The inconsistency with theory may be due to the characteristics of MSMEs in Lamongan, where most are still micro and small enterprises. Consumers of culinary MSMEs in Lamongan often prioritize factors like price, taste, and location over the adoption of financial technology by MSME operators. Additionally, limited digital literacy and accessibility to technology among MSME operators pose challenges.

### **The Influence of Financial Inclusion on the Financial Performance of Culinary MSMEs**

The findings show a positive and significant impact of financial inclusion on the financial performance of culinary MSMEs in Lamongan. This indicates that financial inclusion contributes to the development and growth of MSMEs. Entrepreneurs in Lamongan's culinary sector have effectively utilized various available financial services. Easier access to capital and other financial products allows MSMEs to expand their scale, improve operational efficiency, and manage finances more effectively.

The results of this research are in accordance with empirical studies [5], [6], [12] which state that financial inclusion influences the financial performance of MSMEs. This aligns with theories suggesting that financial inclusion plays a critical role in driving MSME growth and development. By providing broader access to financial services, MSMEs can enhance their financial performance, strengthen their market position, and contribute to overall economic growth [13].

## **Simultaneous Influence of Financial Literacy, Financial Technology, and Financial Inclusion on Financial Performance**

The adjusted R-squared value of 0.514 indicates that 51.4% of the variation in financial performance can be attributed to financial literacy, financial technology, and financial inclusion. The remaining 48.6% is influenced by factors not considered in this study. Empirical findings support the notion [6] that these three variables collectively impact the financial performance of culinary MSMEs in Lamongan. A solid grasp of financial literacy empowers MSMEs to manage finances more efficiently, while financial technology facilitates access to and utilization of financial services, such as digital payments. Meanwhile, financial inclusion offers broader and more affordable access to financial services, enabling MSMEs to optimize financial management and business development in the culinary sector [3].

## **CONCLUSION**

Based on the analysis and discussion, the following conclusions can be drawn:

1. Financial literacy improves the financial performance of culinary MSMEs. This indicates that the better the financial literacy of MSME operators, the better their financial performance will be.
2. Financial technology has not yet improved the financial performance of culinary MSMEs. This underscores the need for further efforts to optimize the utilization of financial technology by culinary MSME operators in Lamongan.
3. Financial inclusion improves the financial performance of culinary MSMEs. It can be concluded that the better the financial inclusion level of MSMEs, the greater the potential for improved financial performance.

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