

# Literacy and Performance Drive Inclusion and Sustainability of MSMEs in East Java

Maria Widyastuti<sup>1</sup>  and Anita Permatasari<sup>2</sup> 

<sup>1,2</sup> Faculty of Economics, Universitas Katolik Darma Cendika Surabaya, Indonesia

Correspondence should be addressed to Maria Widyastuti; [maria.widyastuti@ukdc.ac.id](mailto:maria.widyastuti@ukdc.ac.id)

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**ABSTRACT-** This quantitative research examines MSMEs in East Java. The urgency of this research lies in the strategic contribution MSMEs make to GDP and employment. However, they still lack a strong understanding of financial literacy and financial performance, leading to underutilization of the services and products offered by financial institutions. A purposive sampling method was employed to select 290 respondents. Data were collected using a questionnaire and processed using SmartPLS. The results indicate that financial literacy and financial performance significantly influence financial inclusion. Furthermore, both directly and indirectly, financial literacy and financial performance significantly influence business sustainability. The results indicate that for business sustainability to occur, financial performance must be improved through enhancing financial literacy and financial performance among MSMEs, through mentoring on the importance of financial planning and understanding the ability to access financial services. Of the three variables analyzed, financial literacy is the largest contributor to business sustainability.

**KEYWORDS-** Financial Literacy; Financial Performance; Financial Inclusion; Business Sustainability

## I. INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a crucial role in the Indonesian economy. In East Java, MSMEs contribute a significant portion to the Gross Regional Domestic Product (GRDP), absorb a large workforce, and are a driving force of the regional economy [1]. However, despite their significant contribution, MSMEs still face various challenges, particularly related to financial management, access to financing, and business sustainability. One fundamental challenge is the low level of financial literacy among MSMEs. Financial literacy is a crucial skill that influences how business owners manage resources, plan, and make informed decisions [2]. Various studies show that low financial literacy leads to errors in cash flow management, inadequate financial records, and an inability to understand formal financial products [3]. In addition to financial literacy, MSME financial performance is also a determining factor in business sustainability. Good financial performance reflects a business's ability to generate profits, maintain liquidity, and manage assets efficiently [4]. However, many MSMEs in East Java still lack proper bookkeeping or use only simple record-keeping,

ultimately weakening their position when applying for financing from financial institutions. Limited financial literacy and weak financial performance impact low financial inclusion. Financial inclusion is a key factor in increasing business capacity, expanding access to financing, and strengthening the competitiveness of MSMEs [5]. The government, through various financial digitalization programs and expanding access to financing, has provided opportunities, but these have not been optimally utilized by MSMEs.

In the context of business sustainability, financial literacy and sound financial performance have been shown to enhance the ability of MSMEs to survive, adapt, and grow amidst increasingly complex business dynamics [6]. Therefore, examining how financial literacy and financial performance play a role in promoting financial inclusion and the sustainability of MSMEs in East Java is crucial for providing an empirical basis for formulating policies and strategies for MSME empowerment.

## II. LITERATURE REVIEW

### A. Financial Literacy

Financial literacy is an individual's ability to understand the concepts, risks, and skills necessary to make effective financial decisions [7]. Financial literacy serves as a foundation for managing money, assessing risks, using financial services, and making investment decisions. Financial literacy enables individuals to make decisions regarding financial resources based on their knowledge and skills, effectively and efficiently [8]. Literacy finance is program education Which initiated by manager service financial information to provide a set of knowledge that can improve the skills of service users in making effective financial decisions through the use of available information sources [9]. Financial literacy has become part of the marketing strategy of financial institutions, providing various technology-based financial information and knowledge to the public [10]. The MSME sector, as a business sector, still lacks adequate access to financial services [11]. However, a structured financial literacy program can certainly improve knowledge finance for MSMEs (Erlianta et al., 2021). Program literacy Finance is not only aimed at educating the public about financial knowledge, but is also used by manager institution finance For provide service finance [13] Financial literacy encompasses two key dimensions. First, the knowledge

domain refers to the understanding of financial concepts and their application to real-life financial decision-making. This understanding can come from formal education or personal experience and covers a wide range of financial topics. Second, the application domain, as explained by Chang and Cheng [14], Financial literacy involves an individual's confidence and ability to apply their financial knowledge effectively when using financial products and services in practical situations. From this perspective, financial literacy can be understood as an individual's capacity to manage their finances both personal and organizational—through informed and responsible financial decision-making. This ability not only contributes to individual and household well-being but also supports sound financial policy-making within the organization, ultimately enhancing overall life success and financial resilience. According to Huston [15], the dimensions of financial literacy include: **1) Financial Knowledge, 2) Financial Application.** OECD (2018) adding three important dimensions: 1) *Financial knowledge*, 2) *Financial behavior*, 3) *Financial attitude*.

### B. Financial Performance

Financial performance describes a company's ability to manage assets, capital, and liabilities to generate profits and maintain business continuity [4]. Performance is the work results produced by an individual, according to their role and responsibilities. in a company within a certain period, and measured based on agreed-upon values or benchmarks. According to Marija et al. [8] MSME performance is the work produced by MSME actors, from business establishment to achieving predetermined targets based on predetermined company assessment standards. Determining MSME performance levels often uses simple parameters to more easily identify the actual condition of MSMEs. Parameters commonly used in research covering growth company, total sale company, total amount order, And The company's cash position. A cost-effective performance measurement approach is needed to assess the performance of MSMEs, both in the financial and non-financial sectors. Using a perceptual measurement method can help uncover situation current MSMEs. In conclusion that important For socialize method measuring company performance with simple parameters, namely company growth, total profit, number of orders achieved, and company cash flow at a certain time [16]. MSMEs are business entities that operate in the productive economic sector, both individuals and business entities, and operate meet MSME criteria. MSMEs are also the largest driver of the informal business sector, absorbing a large workforce, and playing a crucial role in the Indonesian economy. studies identify various tool for measure performance MSMEs. Lots from studies This emphasizes the importance of innovation in products, processes, and management systems—as well as the survival and competitiveness of MSMEs as key performance indicators. Financial literacy is increasingly being used to convey information related to marketing strategies [17]. The success of financial education for the public is determined by the quality of literacy programs implemented by financial service providers [18]. It was further emphasized that three components are important in evaluating MSME performance: the business's ability to survive, grow, and remain profitable; alignment with the company's

philosophy and values; and maintenance. image public Which strong. Improvement performance MSMEs can reflected in a way more broadly in the economy through increased industrial income, expanded employment opportunities, export growth, and higher productivity levels. **Financial Performance Indicators in MSMEs**

The measurement of MSME financial performance can use: 1) Revenue Growth 2) Operating profit 3) Cash flow 4) Profitability (ROI, ROA) 5) Operational cost efficiency [19]

### C. Financial Inclusion

Financial inclusion is a condition in which individuals or businesses have easy, safe, and affordable access to formal financial services [5]. Access to banking services is a crucial component of economic growth. Ease of access Access to banking services can encourage MSMEs to interact with banking institutions, for example by applying for loans or saving. Ease of banking access is expected to help MSMEs in building assets and supporting their operational activities. Financial inclusion is also expected to improve the overall standard of living of the community [20]. Improving community welfare can be achieved if the performance of MSMEs is in line with the programs implemented by business actors. so that profit Which expected can come true in accordance with plan business Which The objectives of financial inclusion focus on increasing public access and involvement in the financial system. This objective includes increasing access to financial institutions, products, and services across all levels of society; expanding the availability of financial products and services that suit the diverse capacities of the community; encouraging the effective use of financial products and services according to the specific needs and capabilities of the community; and ultimately, improving the quality of financial product utilization to align with the community's financial needs and capabilities. Financial inclusion makes it easier for MSMEs to obtain financing, manage business risks (for example, through insurance), access digital payment services, and expand markets. According to the Financial Services Authority (OJK), the dimensions of financial inclusion are : 1) Access to the availability of financial services, 2) Intensity and frequency of use, 3) Quality of service suitability to customer needs.

### D. Business Sustainability

Business sustainability is the ability of a business to survive in the long term through managing economic, social and environmental aspects, known as the Triple Bottom Line concept [21]. Many businesses try to maintain their sustainability, but many also close due to poor management and the inability to maintain their existence, one of the factors the cause is lack of literacy finance. Growth business and method Measuring it usually involves specific standards or parameters, such as relative and absolute growth, sales changes, asset condition, performance, productivity, and profitability. The growth and success of MSMEs are considered vital in any development policy. Business sustainability is often assessed through aspects such as innovation, employee and customer management, and financial planning strategies. Panggabean et al. [22] emphasizes that business sustainability is influenced by a company's success in innovation and employee and customer management. Furthermore, sustainability is also

influenced by several other factors, including business plan development, competitor analysis, ease of doing business, and knowledge of business risk assessment. To ensure business sustainability, MSMEs must work hard to become more adaptive to changing conditions and are also required to improve their competitive advantages to survive and thrive amidst intense competition [22]. Creating excellence enables companies not only to survive but also to thrive. With this excellence, businesses can maintain their sustainability and move towards a more prosperous future. Superior competitiveness is a key component in helping companies achieve their primary goal: sustainability with a profit orientation. Sustainable competitiveness is the path to improving corporate sustainability. A company's accuracy in providing the right products, meeting consumer needs, and achieving market dominance reflects the results of sustainable competition. Competitiveness can also be demonstrated by the ability to anticipate new competitors, suppliers, products, distribution methods, and competition from existing businesses. Financially literate companies tend to implement sound financial management practices, which in turn improves their overall performance and sustainability. Therefore, financial literacy is considered to have a positive impact on the sustainability of MSMEs. Factors Affecting MSME Sustainability: 1) Financial literacy, 2) Financial performance, 3) Financial inclusion, 4) Risk management, 5) Business innovation, 6) Access to markets and technology.

### III. THEORY OF THE INFLUENCE OF FINANCIAL LITERACY ON FINANCIAL INCLUSION

#### A. Human Capital Theory

Becker [23] stated that knowledge, skills, and competencies are forms of *human capital* that enhance a person's decision-making ability. Relevance to financial literacy and inclusion: 1) Financial literacy is *human capital* in the form of financial knowledge. 2) Individuals with high financial literacy have a better ability to understand financial products, assess risks, and make financial decisions. 3) This increases their opportunities to use formal financial services such as savings, credit, or insurance. Financial literacy as human capital can improve the ability to access and use financial services, strengthening financial inclusion.

#### B. Theory of Planned Behavior (TPB)

According to Ajzen [25] TPB explains that a person's behavior is determined by three aspects: 1) Attitude, 2) Subjective norm, 3) Perceived behavioral control. Relevance to financial inclusion: 1) Financial literacy increases *perceived behavioral control*, which is the actor's belief that they are capable of using financial services. 2) The better a person's financial literacy, the more positive their attitude toward financial products. 3) This increases their intention *and* actual behavior to access and use financial services (e.g., opening an account, borrowing from a bank, using an e-wallet). Financial literacy increases positive attitudes and behavioral control, which encourages the use of formal financial services, thereby increasing financial inclusion.

#### C. Financial Literacy Theory

Huston [15] explains that financial literacy consists of: 1) Financial knowledge regarding understanding financial concepts, 2) Financial application regarding the ability to apply them in decision-making. Impact on financial inclusion: 1) Knowledge about interest, risk, credit, and financial products makes individuals more confident in accessing financial services. 2) The higher the ability to apply financial skills, the more likely someone is to utilize formal financial products. Knowledge and ability to apply financial skills will increase access to and utilization of financial services, which will have an impact on increasing financial inclusion.

#### D. The Access to Finance Framework

World Bank (2022) explains that financial inclusion is influenced by: 1) *Demand-side factors* (knowledge, ability, attitude), 2) *Supply-side factors* (product, distance, regulation)

1) In relation to literacy: 1) Financial literacy is a demand-side factor that determines whether someone is willing and able to use financial services. 2) Even if financial services are available, people with low financial literacy will still not use them (the phenomenon of "voluntary financial exclusion"). Financial literacy addresses demand barriers by increasing the accessibility and use of financial services, leading to financial inclusion.

#### E. Behavioral Finance Theory

This theory explains that financial decisions are influenced by cognition, bias, and information. Individuals with low financial literacy tend to: 1) Avoid excessive risk, 2) Distrust financial institutions, 3) Fear making wrong decisions. Meanwhile, those with high financial literacy: 1) Able to manage financial bias, 2) More rational in choosing financial services, 3) More easily understand the benefits of credit, savings, insurance, and financing. Literacy increases rational decision-making, thereby increasing the use of financial services, which has an impact on increasing financial inclusion.

Based on these theories, financial literacy has a positive effect on financial inclusion: 1) Increasing knowledge and decision-making skills. 2) Increasing self-confidence and positive attitudes towards financial products. 3) Reducing cognitive barriers and behavioral biases. 4) Encouraging individuals and MSMEs to utilize formal financial services. Financial literacy improves the ability of business actors to understand financial facilities, assess loan risks, and make financial decisions, thereby increasing opportunities for access and use of formal financial services [24]. Business actors with high financial literacy are able to prepare budgets, manage cash flow, evaluate investments, and understand risks. This strengthens business resilience and business sustainability [2]. So, the hypothesis proposed is:

**H<sub>1</sub>: Financial Literacy has a significant effect on Financial Inclusion**

### IV. THEORY OF THE INFLUENCE OF FINANCIAL LITERACY ON BUSINESS SUSTAINABILITY

#### A. Human Capital Theory

Human Capital Theory states that an individual's knowledge, skills, and abilities are productive assets that

enhance business performance and sustainability. This relates to Financial Literacy and Business Sustainability. Financial literacy is part of human capital. Entrepreneurs with a good understanding of finance are able to: 1) Manage cash flow effectively, 2) Make rational investment decisions, 3) Control costs and financial risks, and 4) Develop long-term business plans. These skills increase business resilience and extend the life of the business [23], [26]

### **B. Resource-Based View (RBV) Theory**

RBV emphasizes that competitive advantage and business sustainability stem from internal resources that are valuable, rare, difficult to imitate, and irreplaceable. Linked to Financial Literacy and Business Sustainability. Financial literacy is an intangible resource that: 1) Supports efficient financial management, 2) Strengthens the competitive advantage of MSMEs, and 3) Assists in adapting to economic changes. With good financial literacy, entrepreneurs can sustain their businesses in the long term. [27], [28]

### **C. Theory of Planned Behavior**

This theory states that individual behavior is influenced by attitudes, subjective norms, and perceived behavioral control. The Relationship between Financial Literacy and Business Sustainability

Financial literacy influences: 1) Positive attitudes toward financial planning, 2) Confidence in managing business risks, 3) Self-control in financial decision-making. This encourages healthy financial behavior, which ultimately supports business sustainability. [25], [6]

### **D. Behavioral Finance Theory**

This theory explains that financial decisions are not always rational, but are instead influenced by psychological biases. The Relationship between Financial Literacy and Business Sustainability:

Financial literacy helps business actors: 1) Reduce decision bias; 2) Increase the rationality of financial management; 3) Avoid errors in financing and investment. More rational decisions support business stability and sustainability. [29], [2]

### **E. Business Sustainability Theory**

Business sustainability emphasizes the long-term balance between economic, social, and environmental aspects. This relates to financial literacy and business sustainability. Financial literacy strengthens the pillars of a sustainable economy by: 1) Maintaining business financial stability, 2) Supporting sustainable growth, and 3) Increasing crisis resilience. Financially literate businesses are better able to maintain business continuity. [21], [7]

**H<sub>2</sub>: Financial Literacy has a significant effect on Business Sustainability**

## **V. THEORY OF THE INFLUENCE OF FINANCIAL PERFORMANCE ON FINANCIAL INCLUSION**

### **A. Financial Intermediation Theory**

Financial intermediation theory explains that financial institutions function to channel funds from surplus to deficit parties efficiently. Good financial performance (high profitability, healthy liquidity, and strong solvency)

increases the trust of financial institutions to expand financing services, including to MSMEs and the unbanked. Thus, good financial performance encourages broader access to financing, which is the core of financial inclusion [30], [31].

### **B. Signaling Theory (Signaling Theory)**

In the context of MSMEs, good financial performance serves as a **positive signal** for financial institutions. Financial reports that demonstrate profitability and healthy cash flow reduce information asymmetries between businesses and financial service providers, thereby facilitating access to banking and non-banking products. [32], [33].

### **C. Resource-Based View (RBV) Theory**

The RBV states that a company's competitive advantage stems from the effective management of internal resources. Strong financial performance reflects efficient resource management, thereby increasing the company's capacity to utilize formal financial products such as credit, insurance, and digital financial services. [27], [34]

**H<sub>3</sub>: Financial Performance Has a Significant Influence on Financial Inclusion**

## **VI. THEORY OF THE INFLUENCE OF FINANCIAL PERFORMANCE ON BUSINESS SUSTAINABILITY**

### **A. Business Sustainability Theory**

Business sustainability encompasses economic, social, and environmental dimensions. Stable and positive financial performance enables companies to survive over the long term, invest in innovation, and manage business risks sustainably [21], [35].

### **B. Slack Resources Theory**

This theory states that companies with good financial performance have **slack resources** that can be used to face uncertainty, expand, and increase long-term business resilience [36], [37].

### **C. Pecking Order Theory**

The pecking order theory explains that companies prefer internal funding over external funding. Good financial performance improves internal financing capacity, thereby reducing reliance on debt and increasing business stability and sustainability [38].

**H<sub>4</sub>: Financial Performance has a significant effect on Business Sustainability**

## **VII. THEORY OF THE INFLUENCE OF FINANCIAL INCLUSION ON BUSINESS SUSTAINABILITY**

### **A. Access to Finance Theory**

This theory states that access to formal financial services (credit, savings, insurance, payment systems) enables entrepreneurs to overcome capital constraints, increase productive investment, and manage cash flow more stably. Inclusive financial access promotes long-term business sustainability. Impact on Business Sustainability: 1) Increasing business expansion capabilities, 2) Reducing

dependence on high-cost informal financing sources, 3) Maintaining business operational continuity [39], [5]

**B. Finance - Led Growth Theory**

This theory states that an inclusive financial system accelerates real sector growth through the provision of efficient financing. Financial inclusion promotes productivity and business sustainability by channeling funds to productive sectors. **Impact on Business Sustainability:** 1) Strengthening the business capital structure, 2) Supporting sustainable growth, 3) Increasing business competitiveness. [31], [40]

**C. Capability Theory ( Capability Approach )**

According to Amartya Sen, economic development occurs when individuals have the capability to exploit economic opportunities. Financial inclusion enhances entrepreneurs' capabilities in managing risk, making financial decisions, and maintaining business sustainability. Impact on Business Sustainability : 1) Increasing business resilience to economic shocks, 2) Improving business decision-making, 3) Supporting social and economic sustainability [41], [42].

**D. Financial Risk Management Theory**

Financial inclusion allows businesses to access risk management instruments such as insurance, emergency loans, and savings products. This reduces business vulnerability to operational and external risks. Impact on Business Sustainability: 1) Reducing the risk of bankruptcy, 2) Maintaining business financial stability, 3) Increasing long-term business resilience [43], [44].

**E. Business Sustainability Theory**

Business sustainability encompasses economic, social, and environmental aspects. Financial inclusion plays a crucial role in the economic dimension by ensuring businesses have sustainable access to capital and are able to create long-term value. Impact on Business Sustainability: 1) Ensuring operational continuity, 2) Supporting sustainable business practices, 3) Increasing business contributions to economic development [21], [45].

**H5: Financial Inclusion has an impact on Business Sustainability**

**VIII. CONCEPTUAL MODEL**

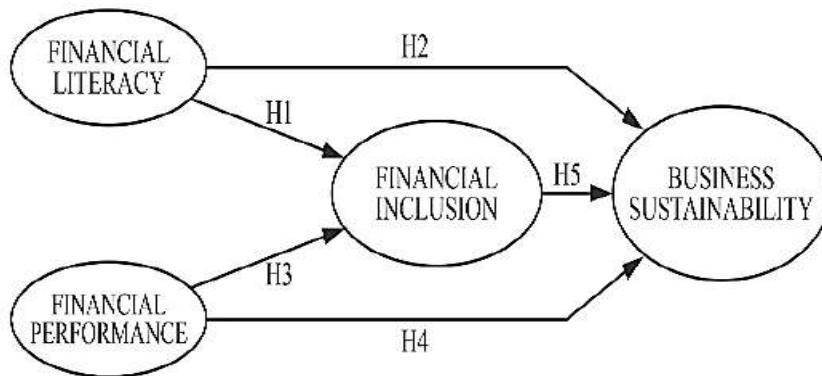


Figure 1: Research Framework Model

As illustrated in Figure 1, financial literacy is positioned as the first independent variable (X1), while financial performance serves as the second independent variable (X2). Financial inclusion serves as variables intervening (Y1), Which mediate influence between variables independent And Business sustainability variable dependent (Y2), Which reflect impact end financial literacy, financial performance, and financial inclusion in the research model.

**IX. METHODOLOGY**

Method study Which used nature explanatory, it means test hypothesis for explain how the variables study each other influence. There is correlation intervariable, which produce cause-and-effect relationship or causality. Study This use data quantitative for test theory with examines how these variables influence each other. The data collection method used in this study is the survey method. is method study Which use sample from population and utilize questionnaires as a primary data collection tool. Questionnaires are used to obtain data that is reliable, relevant, and objective, as well as can made into as base process analysis. The questionnaire will be distributed directly to respondents to obtain information related to financial literacy and financial performance, financial

inclusion, and the sustainability of MSME businesses. This will allow for analysis of the development of financial inclusion and MSME business sustainability models. The questionnaire instrument serves as a data collection tool, intended as a series statement that must be answered by perpetrator MSMEs as respondents and meet the criteria as a member of the population. The questionnaire as a research instrument must meet the requirements of validity and reliability. Validity in this study uses the loading factor formula, and reliability uses Cronbach's alpha. The instrument is declared valid if the loading factor value is >0.70 and AVE >0.5, and the instrument is declared reliable if the Cronbach's alpha value is greater than 0.6. Referring to data from the Central Statistics Agency (BPS) of East Java, based on the largest number of MSMEs, namely Malang, Jember, and Surabaya, and these are the research population. The sample in this study was 290 MSMEs. The sampling technique used was purposive sampling, with characteristics MSMEs Which active until end December 2025. MSMEs are defined as managers, owners, or managers and owners who have been active for at least one year. The MSME sector in this study includes food and beverage, handicraft, clothing, and other businesses (in addition to the three sectors already mentioned).

This study uses an interval scale. This measurement scale is used in research because it aims to determine the characteristics of a variable based on certain measurements. so that can rank based on characteristics each variable. This study used a Likert scale. The Likert scale helps determine the extent to which subjects agree or disagree with the statements presented in the questionnaire (5 = strongly agree; 4 = agree; 3 = somewhat agree; 2 = disagree; 1 = strongly disagree).

Data analysis in this study uses statistical methods with a variance-based approach. through Smart Partial Least Squares (PLS), Which designed for test structure models and relationships between latent variables. According to Yamin and Kurniawan [50], The SEM-PLS analysis procedure involves several key steps. First, an internal model (structural model) is designed to describe the relationships between latent variables or constructs. Second, an external model (measurement model) is developed to describe how the observed indicators represent variables latent. Third, collection and selection data done to ensure that the quantitative data used in SEM-PLS is complete and free from missing values and outliers that could affect the analysis.

Step fourth involving manufacturing diagram track, which in a way visual represent model internal and external and can be translated into equations that produce parameter estimates. These estimates include the weight values used to generate latent variable scores, path coefficients between latent variables, and loading values between latent variables and their indicators. parameter done in a way iterative until reach condition convergence. Finally, a fit evaluation is conducted, which is divided into two parts: outer model evaluation and inner model evaluation. The outer model evaluation focuses on assessing the validity and reliability of the constructs, while the inner model evaluation determines the model's ability to explain relationships between constructs and the extent to which it reflects real-world phenomena.

### X. OPERATIONAL DEFINITION OF VARIABLES

**Financial literacy** is the ability to understand and use a variety of financial skills effectively. effective, like management finance personal, budgeting, And investment. Literacy finance is the foundation of a person's relationship with money and is a lifelong skill. Indicators of financial literacy include (1) financial planning, (2) knowledge of investment, (3) knowledge of economic conditions, (4) spending based on needs, and (5) financial preparation for retirement.

**Financial performance** is based on the financial statements of the company/business entity concerned and is reflected in information obtained from the balance sheet, profit and loss statement, and cash flow statement, as well as other matters. strengthen performance finance (Kuchciak & Wiktorowicz, 2021). The indicators are (1) improvement profit, (2) improvement asset, (3) improvement capital, And (4) savings.

**Financial Inclusion** according to regulation Which issued by OJK No. 76/POJK.07/2016, is Availability of access to various formal financial institutions, products, and services according to community needs and capabilities in order to improve community welfare. This increased access is also

supported by increased public understanding of financial systems, products, and services, as well as the availability of formal financial services. Access to financial products, systems, and services according to community needs requires consideration of several factors: affordability, effectiveness and efficiency, and quality. Indicator Which submitted is (1) access to institution finance, (2) understanding towards financial institution products, (3) understanding of financial institution service barriers, and (4) understanding in choosing financial institution products that increase welfare.

**Business Sustainability** is a stable business condition, where sustainability is a business continuity system that includes: additions, continuation, and approaches to protect business continuity and business expansion [14]. The indicators are (1) business development, (2) income covering cost, (3) growth business, (4) serve request with fast, And (5) purchase return.

## XI. RESEARCH RESULTS

### A. Descriptive Analysis

Table 1: Descriptive Statistics

| Descriptive Statistics       |     |      |      |         |        |                |
|------------------------------|-----|------|------|---------|--------|----------------|
|                              | N   | Min  | Maxi | Sum     | Mean   | Std. Deviation |
| Financial Literacy (FL)      | 290 | 2.00 | 5.00 | 869.75  | 2.9991 | .70081         |
| Financial performance (FP)   | 290 | 2.00 | 5.00 | 1031.50 | 3.5569 | .59753         |
| Financial Inclusion (FI)     | 290 | 1.00 | 5.00 | 861.00  | 2.9690 | .73198         |
| Business Sustainability (BS) | 290 | 1.00 | 5.00 | 1103.00 | 3.8034 | .73863         |
| Valid N (listwise)           | 290 |      |      |         |        |                |

Table 1 shows the number of respondents who answered the distributed questionnaire and were declared valid, namely 290. The results of descriptive data processing can be explained as follows:

1. Financial literacy (FL), the average value is 2.9991 with a standard deviation value of 0.70081, because the average value is greater than the standard deviation value, this shows that there is no fluctuation between respondents as a sample regarding financial literacy between respondents who understand and do not understand with a minimum value of 2 and a maximum value of 5.
2. Financial performance (FP) obtained an average value of 3.5569 with a standard deviation of 0.59753, because the average value is greater than the standard deviation value, this indicates that there is no fluctuation between respondents as a sample regarding financial performance between respondents who understand and do not understand with a minimum value of 2 and a maximum value of 5.
3. Financial Inclusion (FI) the average value is 2.9690 with a standard deviation of 0.73198, because the average

value is greater than the standard deviation value, this indicates that there is no fluctuation between respondents as a sample related to financial inclusion between respondents who understand and do not understand with a minimum value of 1 and a maximum value of 5.

- Business Sustainability (BS) obtained an average value of 3.8034 with a standard deviation of 0.73863 . Because the average value is greater than the standard deviation value, this indicates that there is no fluctuation between respondents in the sample regarding business sustainability between respondents who understand and those who do not understand with a minimum value of 1 and a maximum value of 5.

Descriptive analysis explains that the respondents' conditions regarding financial literacy and financial performance towards financial inclusion and business sustainability did not fluctuate.

**B. Validity and Reliability**

Table 2: Results of Validity and Reliability Tests

| Variables                  | Outer loadings |       |                    |
|----------------------------|----------------|-------|--------------------|
| Cronbach Alpha Information |                |       |                    |
| Financial Literacy         | 0.748 - 0.876  | 0.804 | Valid and Reliable |
| Financial performance      | 0.756 - 0.821  | 0.777 | Valid and Reliable |
| Financial Inclusion        | 0.713 - 0.844  | 0.709 | Valid and Reliable |
| Business Sustainability    | 0.709 - 0.787  | 0.706 | Valid and Reliable |

Source: Print out data processing

Table 2 above shows that the outer loadings of the four variables range from 0.709 to 0.876 , with positive values greater than 0.70. Similarly, the Cronbach's Alpha values for the four variables range from 0.706 to 0.804 . Which greater than 0.70. The outer loadings and Cronbach Alpha values This shows that the research instrument used to collect data from respondents is valid and reliable .

**C. Path Analysis**

Linearity testing must refer to the concept of *parsimony*, namely if all models used as the basis for testing are significant, it means the model is said to be linear or the linear function is significant. The results of the Multicollinearity assumption test for each influence between variables can be presented in Table 3 as follows.

**D. Assumption**

Table 3: Test Results Multicollinearity

| Outer Model | VIF   |
|-------------|-------|
| FI 1        | 2,066 |
| FI 2        | 1,548 |
| FI 3        | 2,247 |
| FI 4        | 1,704 |
| FP1         | 1,661 |
| FP2         | 1,404 |

|              |              |
|--------------|--------------|
| FP3          | 1,561        |
| FP4          | 1,552        |
| BS1          | 1,127        |
| BS2          | 2,647        |
| BS4          | 2,335        |
| BS5          | 2,893        |
| FL 1         | 1,720        |
| FL 2         | 2,054        |
| FL 3         | 2,060        |
| FL 4         | 1,099        |
| <b>Inner</b> | <b>Model</b> |
| FI → BP      | 1,000        |
| BP → FL      | 1,409        |
| FL → FI      | 1,409        |

The collinearity statistical analysis using the Variance Inflation Factor (VIF) value, there were no significant multicollinearity problems in the model. In the *outer model* , all indicators had VIF values below the critical threshold of 5.0 [46], which shows that no indicator has a high correlation with other indicators in the same variable. The highest VIF values are found in BS 5 (2.893), BS 2 (2.647), and FI 3 (2.247), but are still within the acceptable range, so they do not require further elimination or modification. In the *inner model*, the VIF values for all relationships between latent variables are also within acceptable limits, with the highest value being 1.409 for the FP → FI and FL → FI relationships. This indicates that there is no multicollinearity problem between the independent variables in the structural model, so that the regression parameter estimates in the path analysis will not be distorted due to high correlations between predictor variables. Thus, this model can be said to meet the multicollinearity-free assumption and the analysis results can be interpreted more accurately.

Overall, this model has good multicollinearity performance, as all VIF values are within the recommended limits. However, if the model's efficiency is desired, further investigation of indicators with relatively high VIFs, particularly BS5, BS 2, and FIK , can be performed to ensure that these indicators contribute significantly to the measured latent variables.

**E. GOF (GOODNESS OF FIT)**

Table 4: Goodness of Fit

|            | Saturated model | Estimated model |
|------------|-----------------|-----------------|
| SRMR       | 0.061           | 0.077           |
| d_ULS      | 3,529           | 4,247           |
| d_G        | 0.694           | 0.769           |
| Chi-square | 1120,184        | 1126,438        |
| NFI        | 0,911           | 0,918           |

The Goodness of Fit (GOF) results , the tested models showed some indications of fit that still need to be improved. The Standardized Root Mean Square Residual

(SRMR) values for the saturated (0.061) and estimated (0.077) models were below the recommended threshold of 0.08 [47], indicating that there was no difference between the observed and predicted covariance matrices by the model. In addition, the d\_ULS and d\_G values, which measure the error in model estimation, also showed a relatively high difference between the saturated and estimated models, which may indicate a structural misfit in the tested models. Furthermore, the Chi-square values for the saturated (1120.184 ) and estimated (1126.438) models were relatively low, which usually indicates that the model fully fits the data. However, it should be noted that the Chi-square test is very sensitive to sample size, so in large samples, low values do not always indicate a direct model misfit [48]. Meanwhile, the Normed Fit Index (NFI) has a value of 0.911 for the saturated model and 0.918 for the estimated model , which is close to the ideal value of  $\geq 0.90$ . [49], shows that this model has a completely good level of fit.

Overall, this model demonstrates a good fit with the observed data. *The Goodness of Fit (GOF) results* indicate that this model is fully optimal, and the model can be used.

**F. Structural Model**

The use of Path analysis is carried out with standardized regression values whose data is processed using Statistical Product and Service Solutions (SPSS) software Version 22. The results of testing the coefficient of the direct influence path can be presented in Table 4 and the indirect path in Table 5 below.

Table 5: The Summary of Regression

| Independent Variable  | Dependent Variable      | Standardize | Coefficient |
|-----------------------|-------------------------|-------------|-------------|
|                       |                         |             | Sig. (0.05) |
| Financial Literacy    | Financial Inclusion     | 0.541       | 0.028       |
| Financial Literacy    | Business Sustainability | 0.263       | 0.041       |
| Financial performance | Financial Inclusion     | 0.284       | 0.043       |
| Financial performance | Business Sustainability | 0.138       | 0.037       |
| Financial Inclusion   | Business Sustainability | 0.486       | 0.039       |

Source: Print out data processing

Table 6: Indirect Effect Path Coefficient

| Independent Variable  | Intervening Variable | Dependent Variable      | Standardized Coefficient     |
|-----------------------|----------------------|-------------------------|------------------------------|
| Financial Literacy    | Financial Inclusion  | Business Sustainability | 0.263 (sig. $\alpha = .05$ ) |
| Financial performance | Financial Inclusion  | Business Sustainability | 0.138 (sig. $\alpha = .05$ ) |

Source: Print out data processing

**XII. DISCUSSION**

**A. The Influence of Financial Literacy on Financial Inclusion**

Financial literacy has a strong and significant direct influence on financial inclusion (coefficient 0.541, sig. 0.028). This indicates that financial institutions still need to be more optimal in managing integrated financial literacy programs as part of financial inclusion. Financial services and financial intelligence education efforts for the public, as the main content in financial literacy, should be directed to be available menus within financial inclusion, so that the public can access them easily and quickly. The public as actors in the MSME sector have become accustomed to social media life, where their daily activities have widely used digital facilities. This should be the focus of financial institutions that want to optimize financial literacy programs as an effort to support the strengthening of financial services for the public in a very flexible, easy and fast way. Therefore, financial inclusion as a fairly effective communication medium in the digital era must be able to optimize its literacy program in a complete and comprehensive manner and not separate from the financial inclusion that is being developed. A literacy program that is designed in a structured manner will certainly strengthen financial inclusion to be more adequate, so that financial services for the public become easier, faster and more accurate.

The findings of this study: (1) there is a positive and significant direct influence of financial literacy on financial inclusion; (2) there is a positive and significant indirect influence of financial literacy on business sustainability through financial inclusion .

**B. The Impact of Financial Literacy on Business Sustainability**

Financial literacy has a weak direct effect on business sustainability, but its influence is significant (coefficient 0.263, sig. 0.041). This indicates that financial literacy is still unable to optimally educate business actors. In the digital era, financial literacy should be able to play a strategic role in efforts to transform financial knowledge to the public, because various media are available that can be optimally utilized. The community, as actors in the MSME sector, has established a social media life, so it is appropriate that financial literacy is also integrated with the existence of social media. The public who uses financial services will gain financial intelligence when financial institutions are able to provide services in a way that is easy, complete, and accurate according to their needs. Ease of access to information on financial services will certainly strengthen the MSME sector in maintaining business sustainability. Therefore, literacy as a program to introduce and educate knowledge about financial intelligence for the community certainly helps accelerate business sustainability, thereby providing many options for the community to make financial decisions intelligently, effectively, and accurately. A literacy program with adequate financial content will certainly provide good knowledge reinforcement in the learning process for the MSME sector, thus improving access to capital.

The findings of this study: (1) there is a positive and significant direct influence of financial literacy on business sustainability; (2) there is a positive and significant indirect

influence of financial literacy on business sustainability through financial inclusion .

### ***C. The influence of financial performance on financial inclusion***

Financial performance has a weak direct influence on financial inclusion, but its influence is significant (coefficient 0.284, sig. 0.043). This indicates that financial performance is still unable to encourage the public to understand financial inclusion. A society with good financial performance should be able to utilize it to develop financial inclusion to be friendlier in providing better financial services. MSME sector players who are in the midst of a new civilization and are accustomed to social interaction certainly use it as a place to find and obtain information as needed. This should be the focus of financial institutions that want to optimize financial performance as a means of supporting the strengthening of financial inclusion for the community, so that various financial services can be accessed easily without being hindered by space, time and place. Therefore, financial performance must be optimized to develop financial inclusion adequately, so that financial performance can provide optimal benefits for the community. Financial performance can provide many options that are utilized wisely by financial institutions in order to build better financial inclusion, so that financial performance can be a driver for increasing financial inclusion for the MSME sector.

The findings of the research: (1) there is a direct influence on financial performance which is positive and significant on financial inclusion; (2) there is an indirect influence on financial performance towards business sustainability through financial inclusion which is positive and significant.

### ***D. The Influence of Financial Performance on Business Sustainability***

Financial performance has a weak direct influence on business continuity, but its influence is significant (coefficient 0.138, sig. 0.037). This indicates that financial performance has not been able to be optimally improved in maintaining the sustainability of community businesses. The MSME sector has still not improved its financial performance in maintaining business continuity. MSMEs as business actors with good financial performance will be demonstrated through healthy levels of profitability, liquidity, and solvency and tend to be able to maintain business operations, face uncertain business environments, and support business growth in the long term. Conversely, weak financial performance increases the risk of financial difficulties that can threaten business continuity. Therefore, effective financial performance management is a key factor in ensuring business continuity and sustainability.

The findings of the research: (1) There is a direct influence on financial performance which is positive and significant on business sustainability; (2) there is an indirect influence on financial performance towards business sustainability through positive and significant financial inclusion

### ***E. The Impact of Financial Inclusion on Business Sustainability***

Financial inclusion has a direct and significant impact on business sustainability (coefficient 0.486; sig. 0.039). This indicates that financial inclusion as a financial service

medium has begun to receive a positive response from the public, in line with the understanding of financial service instruments gained through literacy and information dissemination. Financial inclusion introduced by financial institutions is currently still very limited in its use, but among young entrepreneurs, it has accelerated the growth of financial inclusion. The literacy movement and the intensive flow of information dissemination have been able to change people's behavior in accessing financial services, so that financial inclusion is increasingly understood as fulfilling financial access. The MSME sector in the digital era should be able to optimize the existence of financial inclusion to support its business activities through various financial services. Therefore, available financial services also offer a wide selection of services that can be accessed by the public, but this is still not optimal, so a more patient maturation process is needed so that financial inclusion in the MSME sector can grow and develop better in supporting business sustainability.

The findings of this study: (1) there is a direct influence of financial inclusion on business sustainability , (2) the existence of financial inclusion is able to be a significant mediator between financial literacy and financial performance. towards business sustainability or in other words financial inclusion creates a positive and significant influence on financial literacy and financial performance towards improving business sustainability.

## **XIII. CONCLUSION**

Financial literacy has been shown to significantly impact financial inclusion and business sustainability. Businesses with high levels of financial literacy tend to be better able to understand and optimally utilize formal financial products and services, thereby driving increased financial inclusion. Furthermore, adequate financial literacy helps businesses make more informed financial decisions, manage cash flow effectively, and plan long-term finances, ultimately supporting business sustainability. Therefore, improving financial literacy is a strategic factor in strengthening financial access while maintaining long-term business sustainability.

Financial performance has been shown to significantly influence financial inclusion and business sustainability. Businesses with strong financial performance, reflected in their ability to generate profits, maintain liquidity, and manage a healthy financial structure, tend to have broader access to formal financial services, thus driving increased financial inclusion. Furthermore, strong financial performance enables businesses to maintain operational stability, increase competitiveness, and address business risks, ultimately supporting long-term business sustainability. Therefore, improving financial performance is a crucial factor in strengthening financial inclusion while ensuring business continuity.

Financial inclusion has been proven to significantly impact business sustainability. MSMEs, as business actors, that have access to and utilize formal financial services, such as banking, financing, savings, and other financial products, tend to be better able to maintain financial stability, increase business capacity, and manage business risks more effectively. Adequate financial access also supports more informed decision-making and long-term business

planning, thus encouraging sustainable business continuity and growth.

#### XIV. RECOMMENDATIONS

Based on the conclusions of the research results, the implications of the research results can be stated as follows: The finding that financial literacy significantly impacts financial inclusion and business sustainability has important implications for various stakeholders. For business owners, improving financial literacy fosters the ability to understand and optimally utilize formal financial products and services, thereby expanding financial access and supporting more rational financial decision-making. This has a direct impact on cash flow management, financial planning, and business risk mitigation, contributing to long-term business sustainability. For the government and financial institutions, these findings underscore the importance of designing and implementing structured and sustainable financial literacy education programs, particularly for MSMEs. Improving financial literacy not only expands financial inclusion but also strengthens business resilience and competitiveness, thereby supporting inclusive and sustainable economic growth.

The finding that financial performance significantly influences financial inclusion and business sustainability offers important implications for businesses, financial institutions, and policymakers. For businesses, healthy financial performance, reflected in strong profitability, liquidity, and solvency, enhances business credibility in the eyes of financial institutions, thereby expanding access to financing and formal financial services. This improved financial access enables businesses to expand their capacity, improve operational efficiency, and manage business risks more effectively. For financial institutions and the government, these findings demonstrate that strengthening the financial performance of businesses needs to be part of a strategy to increase financial inclusion. Mentoring programs, financial management coaching, and policy support that encourage transparency and accountability in business finances can contribute to the creation of more sustainable businesses. Therefore, improving financial performance not only expands financial inclusion but also serves as a crucial foundation for long-term business sustainability.

#### XV. LIMITATIONS AND FUTURE RESEARCH

This research was conducted only on MSMEs in East Java, so the results cannot necessarily be generalized to MSMEs in other provinces in Indonesia, which have different economic, cultural, and financial access characteristics. The data source was a questionnaire, which may introduce subjective bias from respondents, such as responses not fully reflecting actual conditions. This research used a quantitative approach with a cross-sectional design (a single time period), so it cannot describe long-term changes in MSME behavior. Not all types of MSMEs were proportionally represented, especially MSMEs in remote, hard-to-reach areas, which could affect the representativeness of the research results. This research did not thoroughly consider the influence of external conditions

such as inflation, government policies, or macroeconomic conditions that can affect MSME performance and sustainability. Future research using a larger sample size and more sectors, along with a longer-term study, would also help understand how alignment changes over time. Researchers could also compare public and private organizations and develop better ways to measure alignment with national strategies. The authors declare that they have no conflicts of interest.

#### CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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