

# A Holistic Approach to Enhancing MSME Performance

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**Abstract:** This study investigates the impact of financial literacy, financial inclusion, and digital payment adoption on the performance of Micro, Small, and Medium Enterprises (MSMEs). Using a quantitative approach with primary data collected through structured questionnaires, the analysis reveals that while not all individual variables show significant effects, together they contribute meaningfully to improving MSME performance. The findings suggest that financial literacy alone is not sufficient unless supported by access to finance, appropriate digital tools, and practical implementation strategies. This emphasizes the need for a more integrated approach in empowering MSMEs, involving training, simplified financial processes, and the use of financial technology.

**Keywords:** Financial Literacy, Financial Inclusion, Digital Payment, MSMEs Performance.

## 1. INTRODUCTION

The development of Indonesia's business sector is inseparable from the contribution of Micro, Small, and Medium Enterprises (MSMEs), which have consistently shown significant growth in recent years. MSMEs contribute over 61% to the national Gross Domestic Product (GDP)—equivalent to IDR 9,580 trillion—and absorb 97% of the total workforce (Kementerian Koordinator Bidang Perekonomian, 2023). Between 2016 and 2019, MSMEs recorded an average annual growth of 4.2% and contributed more than 50% to GDP (Mujiatun, Julita, Rahmayati, & Nainggolan, 2022). Their accessibility, simplicity in management, and relatively low capital requirements make MSMEs the preferred business model for many Indonesians (Dewi, R.Pandin, & GS, 2022).

Nevertheless, MSMEs face persistent challenges, including limited access to quality labor, low technological adoption, conventional management practices, and inadequate financial capacity (Dahrani, Saragih, & Ritonga, 2022). These issues threaten sustainability unless MSMEs are empowered through appropriate technology, information systems, and improved financial capability.

Financial literacy plays a crucial role in enabling MSMEs to make sound financial decisions. Studies show that MSMEs with good financial knowledge are less likely to make poor economic choices and are better positioned to manage risks (Setiawan & Saputra, 2021; (Dahrani, Saragih, & Ritonga, 2022)). Nationally, Indonesia's financial literacy score increased to 69.7 out of 100 in 2023, reflecting a growing awareness (Santika, 2023). However, there remains a need to enhance financial education, especially at the grassroots level.

Equally important is financial inclusion, which ensures that individuals and businesses have access to appropriate financial services. According to the World Bank, financial inclusion includes access to payment services, credit, and insurance, which support both individual welfare and economic growth (Saha & Qin, 2023). Yet, many MSMEs still struggle to access financing due to administrative and legal barriers (Hilmawati & Kusumaningtias, 2021).

The growing use of digital payment systems, especially in the form of mobile banking, QRIS, and e-wallets, further influences MSME efficiency and profitability ((Musthofa, Kurniati, & Hardati, 2020); (Nugrah & Poppy, 2022)). Digital payments offer real-time transaction tracking, secure storage of sales revenue, and reduce the risks of theft or counterfeit currency. They also promote financial transparency and formalization of business processes.

Despite the growing interest in these three factors—financial literacy, financial inclusion, and digital payment—existing research often explores them individually or in urban or national contexts.

Studies that integrate all three variables into one analytical model at a localized level remain limited. Micro, Small, and Medium Enterprises (MSMEs) play a crucial role in Indonesia's economy. In 2023, MSMEs accounted for over 60% of GDP and absorbed 97% of total employment. However, MSMEs still face many challenges such as limited access to capital, conventional management, and low digital adoption.

However, most previous studies have examined these factors in isolation, or focused only on large urban areas. There remains a research gap in understanding the simultaneous impact of financial literacy, financial inclusion, and digital payment usage on the performance of MSMEs at the subdistrict level, particularly in regional cities like Banda Aceh.

This study aims to fill that gap by exploring how these three financial dimensions influence MSME performance in Kuta Alam. The results are expected to offer context-specific insights for policymakers, financial institutions, and MSME stakeholders, especially in regions with similar socio-economic characteristics.

## **1. LITERATURE REVIEW**

### **Financial Literacy**

Financial literacy refers to an individual's ability to understand and effectively manage various aspects of finance, enabling sound decision-making for both short-term needs and long-term planning (Septiani & Wuryani, 2020). The Financial Service Authority (OJK) defines financial literacy as the knowledge, skills, and confidence that influence attitudes and behaviors in making informed and effective financial decisions (Otoritas Jasa Keuangan, 2023). According to Lusardi, Hasler, and Yakoboski (2021), low financial literacy is often found among women, low-income groups, youth, the unemployed, and those with lower educational backgrounds, rendering them more vulnerable in times of economic crisis.

Financial literacy encompasses not only an understanding of financial concepts, such as saving, budgeting, debt, insurance, and investing, but also the application of that knowledge in daily life and business (Bachtar, Raprayogha, & Mulya, 2021). A financially literate individual is better equipped to assess risks, understand financial products, and avoid misleading or harmful financial decisions. This knowledge plays a crucial role in supporting both economic development and the sustainability of small businesses, including MSMEs in the halal sector.

The main goal of financial literacy is to empower individuals to use their income not only for consumption but also for productive purposes such as investment and business development (Septiani & Wuryani, 2020). According to the Financial Service Authority (2023), financial literacy aims to: Improve individuals' ability to make informed financial decisions; and transform financial behavior to enable effective management and utilization of financial products and services that align with their needs and capacities. In business contexts, financial literacy helps entrepreneurs, especially MSMEs, to enhance budgeting skills, set financial goals, and maintain financial sustainability.

Financial literacy provides several important benefits. For individuals, it enhances decision-making, helps avoid fraudulent financial products, and improves long-term financial well-being (Otoritas Jasa Keuangan, 2023). For financial institutions, it encourages informed usage of financial services, reducing default risks and increasing customer engagement.

As stated by the Financial Service Authority (2023), literate consumers are more capable of choosing appropriate financial products, planning finances effectively, and avoiding scams. The increased use of formal financial services also positively impacts national development through increased tax revenues and improved financial system stability.

Financial literacy can be measured using three main indicator (Asmoro, Setiawan, Setianingsih, & Putranti, 2025) :

#### **1. Financial Knowledge**

This refers to an individual's understanding of financial principles, including concepts related to budgeting, interest rates, inflation, and investments.

## 2. Financial Behavior

This relates to how individuals manage their financial resources—such as budgeting, saving habits, and spending control.

## 3. Financial Attitude

This involves beliefs, evaluations, and attitudes toward financial management, which influence decision-making and behaviour.

### **Financial Inclusion**

According to the Financial Service Authority (Otoritas Jasa Keuangan, 2023), financial inclusion is the availability of accessible, high-quality, and sustainable financial products and services from Financial Services Providers that align with the needs and capacities of society to improve their financial well-being. The Center for Financial Inclusion further defines financial inclusion as access to relevant financial products such as credit, savings, insurance, and payment services.

Financial inclusion emphasizes the availability and accessibility of formal financial services tailored to the socio-economic conditions of individuals to improve their quality of life (Assanniyah & Setyorini, 2024). It represents a system that supports inclusive economic growth by facilitating access to affordable and efficient financial services. It aims to reduce economic inequality and expand financial opportunities for marginalized communities.

Financial inclusion refers to the secure, convenient, and reliable provision of financial services such as loans, insurance, and savings that are tailored to customer needs (Fadilah, Rahman, & Anwar, 2022). Thus, financial inclusion is a critical factor in enhancing MSMEs' financial performance.

According to Presidential Regulation of the Republic of Indonesia No. 82 of 2016 concerning the National Strategy for Financial Inclusion, its objectives include:

1. Expanding access to financial services for all layers of society, especially the poor and marginalized.
2. Offering financial products that are tailored to the diverse needs of the population in a comprehensive manner.
3. Enhancing financial literacy, enabling people to interact safely with financial institutions.
4. Overcoming geographic and administrative barriers to financial service access.
5. Strengthening collaboration between banks, non-bank financial institutions, and microfinance entities.
6. Maximizing the use of technology to expand financial outreach while maintaining risk mitigation through appropriate regulation.

Moreover, the key benefits of financial inclusion include (Bank Indonesia, 2020):

1. Improving overall economic efficiency.
2. Supporting financial system stability and resilience.
3. Deepening financial markets and encouraging broader participation.
4. Opening new market opportunities for the banking sector.
5. Contributing to human development through improved HDI indicators.
6. Supporting sustainable local and national economic growth.
7. Reducing social disparities and alleviating poverty.

Several factors influence financial inclusion (Hilmawati & Kusumaningtias, 2021):

1. Access to Capital: MSMEs often face barriers to financing due to high requirements, interest rates, or lack of collateral.
2. Financial Literacy: Limited understanding of financial products hinders decision-making.
3. Distribution Infrastructure: Inadequate financial service networks, especially in rural or remote areas.
4. Regulatory Environment: Government policy support and credit programs like KUR are essential to expand access.
5. Technology: Fintech and digital platforms can bridge access gaps and improve financial service delivery.

Financial inclusion can be measured through (Putri, Goso, Hamid, & Ukkas, 2022):

1. Access – Ability to open and use bank accounts or reach physical financial service points (e.g., branches, ATMs).
2. Usage – Frequency and regularity in using financial services.

3. Service Quality – Relevance and effectiveness of financial products based on customer needs.
4. Welfare Impact – Extent to which financial inclusion improves users' economic well-being.

#### **Digital Payment Usage**

Digital payment is a method of financial transaction using digital platforms such as e-wallets, mobile applications, and online banking systems. It enables fund transfers, balance checking, and direct payments without relying on physical cash or checks. This system offers efficiency, practicality, and speed in financial transactions. Digital payment represents a shift from traditional cash-based transactions to non-cash payments through digital platforms and connectivity software (Fahmi & Fauzan, 2024).

In the context of MSMEs, the adoption of digital payment systems—often referred to as e-payment—has become increasingly strategic. It supports marketing, sales, customer service, and operational effectiveness. MSMEs benefit from increased transaction accuracy and broader market access through digital ecosystems (Najib & Fahma, 2020); (Apasrawirotea & Yawised, 2021)).

Digital payment covers various instruments and applications that facilitate transactions between buyers and sellers. Some commonly used platforms in Indonesia include:

1. ShopeePay – A digital wallet integrated with the Shopee platform, used for online payments and refunds.
2. OVO – A smart application offering cashless transactions through OVO Cash, enabling seamless payments without physical money.
3. DANA – Developed by PT Epay Debit Indonesia, DANA supports digital transactions, including e-commerce purchases via Bukalapak.
4. LinkAja – Operated by PT Fintek Karya Nusantara, this BUMN-backed app offers integrated digital payment services across various sectors.
5. GoPay – A wallet under the Gojek ecosystem by PT Dompot Karya Anak Bangsa, supporting a wide range of digital services.
6. QRIS (Quick Response Code Indonesian Standard) – A national QR standard launched by Bank Indonesia to unify and simplify QR-based digital payments.

The effectiveness and user acceptance of digital payment can be measured by five key indicators (Naufalia, 2022):

1. Convenience – Ease of transaction without carrying physical cash and support for diverse payment types.
2. Accessibility – Ability to use the service anytime, anywhere, with user-friendly interfaces.
3. Benefits – Direct benefits such as time efficiency and transaction security, and indirect ones like improved financial management and digital ecosystem support.
4. Security – Protection of user data, encryption, and two-factor authentication to ensure trust.
5. Additional Features – Value-added services such as cashback, discounts, and cross-platform integration to enhance user satisfaction.

Digital payment systems have become an essential component of MSME digital transformation, facilitating not only business efficiency but also contributing to broader goals such as financial inclusion and the growth of the digital economy—payment refers to non-cash transaction systems that utilize electronic devices such as smartphones, e-wallet applications, mobile banking, and fintech platforms. This technology offers greater time efficiency, faster transactions, automatic financial recording, and improved financial security. For MSMEs, digital payment provides an effective solution for market expansion, enhanced customer transactions, and greater trust from business partners (Musthofa, Kurniati, & Hardati, 2020). Moreover, digital transaction adoption indirectly contributes to strengthening financial literacy and inclusion in Indonesia, particularly in Banda Aceh.

Several previous studies have shown a positive relationship between financial literacy, financial inclusion, and digital payment usage with MSME performance. However, there is limited research that simultaneously investigates all three variables in a local context like Kuta Alam Subdistrict, thus providing the rationale for this study.

### **Micro, Small, and Medium Enterprises (MSMEs)**

Based on Government Regulation No. 7 of 2021, MSMEs in Indonesia are categorized as follows:

1. Micro Enterprises: Productive businesses owned by individuals or individual business entities that meet micro criteria as regulated.
2. Small Enterprises: Independent economic activities, not subsidiaries or branches of medium or large enterprises, and fulfilling the criteria of small enterprises.
3. Medium Enterprises: Productive business entities owned independently, neither subsidiaries nor branches of large businesses, and meeting the criteria of medium enterprises.

According to Government Regulation No. 7 of 2021 Chapter III Article 35, MSMEs are classified based on capital and annual sales turnover as follows:

1. Micro Enterprises: Business capital  $\leq$  IDR 50 million (excluding land and buildings); Annual sales turnover  $\leq$  IDR 300 million.
2. Small Enterprises: Business capital between IDR 50 million – 500 million; Annual sales turnover between IDR 300 million – 2.5 billion.
3. Medium Enterprises: Business capital between IDR 500 million – 10 billion; Annual sales turnover between IDR 2.5 billion – 50 billion.

Performance refers to the achievements in implementing business activities over a certain period, typically evaluated based on predetermined targets or work standards (Septiani & Wuryani, 2020). Specifically, financial performance reflects how MSMEs manage and utilize resources efficiently to generate financial returns. Improving MSME financial performance can be achieved by enhancing financial literacy, allowing MSME owners to manage their businesses more efficiently and with accountability, akin to larger corporations (Alamsyah, 2020).

However, assessing MSME financial performance faces several challenges, including: Limited capital, which hinders objective evaluation (Winbaktianur & Siregar, 2021); Overemphasis on financial indicators, neglecting operational or strategic aspects. Performance evaluation models are often tailored to large businesses with formal structures, making them less suitable for MSMEs.

Financial performance indicators for MSMEs include (Winbaktianur & Siregar, 2021):

1. Liquidity – The ability to meet short-term obligations on time.
2. Solvency – The ability to meet long-term obligations, including in liquidation scenarios.
3. Profitability – The ability to generate profit over a given period.
4. Business Stability – The ability to consistently meet debt and dividend obligations, reflecting long-term financial resilience.

## **2. MATERIALS AND METHODS**

This study employs a quantitative associative approach, grounded in positivist philosophy and scientific principles such as objectivity, measurement, and rationality. This method focuses on numerical data analyzed statistically to test hypotheses, aiming to understand the relationships between two or more variables (Sugiyono, 2020). The research was conducted in Kuta Alam District, Banda Aceh, with respondents residing in that area. The research population consists of all MSME actors in Kuta Alam District, which totaled 6,438 MSMEs as of August 31, 2024.

The research sample is a subgroup selected from the population to accurately represent its characteristics, ensuring that findings can be generalized. The sample size was calculated using the Slovin formula, with a 10% (0.1) margin of error (e) due to the large population size (Sugiyono, 2020). Respondent criteria include: MSME actors (owners/managers) operating in Kuta Alam District for at least 1 year, having access to formal financial services (financial inclusion), using digital payment methods, possessing a basic understanding of business financial management (financial literacy), and willing to complete the questionnaire.

Primary data was collected directly from respondents through researcher-designed questionnaires. These questionnaires were distributed via Google Forms and restricted to ensure that only MSMEs in Kuta Alam District could complete them (Sugiyono, 2020).

Independent variables are factors manipulated or modified by the researcher to observe their effect on the dependent (Sugiyono, 2020). In this study, the independent variables are:

1. Financial Literacy ( $X_1$ )
2. Financial Inclusion ( $X_2$ )
3. Digital Payment Usage ( $X_3$ )

Dependent variables are the variables influenced by the independent variables [Chomatul, 2022]. In this study, the dependent variable is MSME Performance in Kuta Alam District ( $Y$ ).

**Table 1.** Operational Variables

| Variable Type                                 | Definition                                                                                                                                                                                                                                                                                                | Indicators                                                                                                                                   |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Financial Literacy (<math>X_1</math>)</b>  | A person's ability to efficiently utilize all financial resources, supported by knowledge and skills in financial literacy (Bachtiar, Raprayogha, & Mulya, 2021)                                                                                                                                          | 1) Financial knowledge<br>2) Financial behavior<br>3) Financial attitude<br>(Asmoro, Setiawan, Setianingsih, & Putranti, 2025)               |
| <b>Financial Inclusion (<math>X_2</math>)</b> | The right of every individual to access and obtain services from financial institutions in a timely manner with clear information, at reasonable costs, while maintaining their comfort and dignity (Hilmawati & Kusumaningtias, 2021)                                                                    | 1) Financial access<br>2) Use of financial services<br>3) Quality of financial services<br>4) Welfare<br>(Putri, Goso, Hamid, & Ukkas, 2022) |
| <b>Digital Payment (<math>X_3</math>)</b>     | Digital Payment is an online payment system that uses network software and virtual accounts. The shift from using cash as a payment tool moves to non-cash methods supported by various media and non-cash payment systems available for selection as needed (Musthofa, Kurniati, & Hardati, 2020)        | 1) Convenience<br>2) Ease of access<br>3) Benefits<br>4) Security<br>5) Availability of additional features<br>(Naufalia, 2022)              |
| <b>MSME Performance (<math>Y</math>)</b>      | MSME performance refers to the achievements obtained by an individual, which can be measured through the achievement of individual tasks within the company over a certain period. This performance will be related to the standards or values of the company where the individual works (Alamsyah, 2020) | 1) Liquidity<br>2) Solvency<br>3) Profitability<br>4) Business stability level<br>(Winbaktianur & Siregar, 2021)                             |

Source: Processed Data (2025).

Data analysis was performed using statistical analysis with the help of Statistical Package for Social Science (SPSS) software version 26. Analysis steps include data grouping, data presentation, and calculations to answer the established research questions. Before going into classical assumptions, the data is tested its validity and reliability since the data comes from questionnaires. Classical assumption tests are conducted to ensure that the regression model meets statistical requirements.

1. Normality Test: Aims to check whether the data for dependent and independent variables are normally distributed. Data is considered normal if the significance value  $> 0.05$ , tested using a p-plot.

2. Multicollinearity Test: Performed to test for a perfect linear relationship between independent variables. A good regression model should be free from multicollinearity. Detection is done using Tolerance and Variance Inflation Factor (VIF) values. Multicollinearity is detected if  $VIF > 10$  and  $Tolerance < 0.1$ .
3. Heteroscedasticity Test: Aims to check whether there is an unequal variance of residuals between observations. Identified by observing the residual scatter plot. The regression model is considered free from heteroscedasticity if the significance value  $> 0.05$ .

### Multiple Linear Regression Analysis

Used to determine the extent to which independent variables (Financial Literacy, Financial Inclusion, and Digital Payment Usage) affect the dependent variable (MSME Performance). The regression model is:

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + e$$

Where:

Y: MSME Performance (dependent variable)

$X_1$ : Financial Literacy (independent variable)

$X_2$ : Financial Inclusion (independent variable)

$X_3$ : Digital Payment Usage (independent variable)

a: Constant

$b_1, b_2, b_3$ : Regression coefficients

e: Error term

Then, The t-test is performed to determine if there is a significant influence between each independent variable and the dependent variable partially. The confidence level used is 95% or a significance level of 5%.

Partial hypotheses:

$H_{01}$ : Financial literacy does not positively affect MSME performance.

$H_{a1}$ : Financial literacy positively affects MSME performance.

$H_{02}$ : Financial inclusion does not significantly affect MSME performance.

$H_{a2}$ : Financial inclusion significantly affects MSME performance.

$H_{03}$ : Digital Payment does not positively affect MSME performance.

$H_{a3}$ : Digital Payment positively affects MSME performance.

Next, the F-test is used to determine whether the independent variables (financial literacy, financial inclusion, and digital payment usage) simultaneously have a significant effect on the dependent variable (MSME performance).

## 3. RESULTS

### Respondent Characteristics

This study involved 97 respondents, all of whom are active MSME (Micro, Small, and Medium Enterprise) operators in Kuta Alam Subdistrict. These respondents are spread across 11 villages, with the highest concentration found in Gampong Lamdingin, where there are 1,218 business units. The characteristics of the respondents are categorized based on: type of business, last level of education, age of business owner, business duration, number of employees, average monthly income, and initial capital source.

**Table 2.** Respondents by Type of Business

| No       | Business Type | Frequency | Percentage (%) |
|----------|---------------|-----------|----------------|
| <b>1</b> | Culinary      | 43        | 43.9%          |
| <b>2</b> | Fashion       | 24        | 25.0%          |
| <b>3</b> | Others        | 30        | 31.1%          |
| Total    |               | <b>97</b> | <b>100.0%</b>  |

Source: Processed Data (2025)

The data shows that the majority of businesses are in the culinary sector (43.9%), followed by fashion (25.0%), and other businesses such as services or crafts (31.1%).

**Table 3.** Respondents by Last Education Level

| No       | Education Level     | Frequency | Percentage (%) |
|----------|---------------------|-----------|----------------|
| <b>1</b> | Elementary or Below | 1         | 1.0%           |
| <b>2</b> | Junior High School  | 8         | 8.2%           |
| <b>3</b> | Senior High School  | 54        | 56.3%          |
| <b>4</b> | Diploma/Bachelor's  | 29        | 30.2%          |
| <b>5</b> | Postgraduate        | 5         | 5.2%           |
| Total    |                     | <b>97</b> | <b>100.0%</b>  |

Source: Processed Data (2025)

More than half of the respondents completed senior high school (56.3%), while 30.2% have a Diploma or Bachelor's degree. Only a small percentage attained postgraduate education (5.2%).

**Table 4.** Respondents by Age of Business Owner

| No       | Age Group     | Frequency | Percentage (%) |
|----------|---------------|-----------|----------------|
| <b>1</b> | 20 years      | 8         | 8.3%           |
| <b>2</b> | 20–30 years   | 65        | 67.7%          |
| <b>3</b> | 31–40 years   | 16        | 16.7%          |
| <b>4</b> | 41–50 years   | 6         | 6.1%           |
| <b>5</b> | Over 50 years | 2         | 2.1%           |
| Total    |               | <b>97</b> | <b>100.0%</b>  |

Source: Processed Data (2025)

Most respondents are young entrepreneurs aged 20–30 years (67.7%), showing a strong participation of youth in MSME development.

**Table 5.** Respondents by Duration of Business Operation

| No    | Duration          | Frequency | Percentage (%) |
|-------|-------------------|-----------|----------------|
| 1     | 1 year            | 28        | 29.2%          |
| 2     | 2–3 years         | 40        | 41.7%          |
| 3     | 4–7 years         | 15        | 15.3%          |
| 4     | More than 7 year: | 14        | 14.6%          |
| Total |                   | 97        | 100.0%         |

Source: Processed Data (2025)

The data indicates that 70.9% of the businesses have been operating for less than 3 years, classifying them as relatively new enterprises.

**Table 6.** Respondents by Number of Employees

| No    | Number of Employees | Frequency | Percentage (%) |
|-------|---------------------|-----------|----------------|
| 1     | 1–5 employees       | 79        | 80.6%          |
| 2     | 6–10 employees      | 13        | 13.5%          |
| 3     | More than 10        | 5         | 5.2%           |
| Total |                     | 97        | 100.0%         |

Source: Processed Data (2025)

A large majority of MSMEs (80.6%) operate with 1–5 employees, confirming their micro-scale nature.

**Table 7.** Respondents by Average Monthly Income

| No    | Monthly Income      | Frequency | Percentage (%) |
|-------|---------------------|-----------|----------------|
| 1     | Under IDR 5 million | 48        | 49.0%          |
| 2     | IDR 6–10 million    | 32        | 33.3%          |
| 3     | IDR 11–20 million   | 15        | 15.6%          |
| 4     | Over IDR 50 million | 2         | 2.1%           |
| Total |                     | 97        | 100.0%         |

Source: Processed Data (2025)

Almost half of the MSMEs report a monthly income of under IDR 5 million, followed by 33.3% earning IDR 6–10 million.

**Table 8.** Respondents by Source of Initial Capital

| No | Source of Capital   | Frequency | Percentage (%) |
|----|---------------------|-----------|----------------|
| 1  | Personal capital    | 68        | 70.8%          |
| 2  | Bank loan           | 13        | 13.5%          |
| 3  | Family/friends loan | 9         | 9.4%           |
| 4  | Investor funding    | 4         | 4.1%           |

|              |                      |           |               |
|--------------|----------------------|-----------|---------------|
| <b>5</b>     | <b>Other sources</b> | <b>3</b>  | <b>3.1%</b>   |
| <b>Total</b> |                      | <b>97</b> | <b>100.0%</b> |

Source: Processed Data (2025)

Most MSMEs (70.8%) relied on personal capital as their startup source, while only 13.5% accessed bank loans.

#### Respondents' Response to the Variables

The following are the results of the questionnaire distributed to MSMEs in Kuta Alam Subdistrict regarding the Financial Literacy variable. This variable consists of 6 questions, each with five answer choices. The descriptive data is shown below:

**Table 9.** Descriptive Statistics of Financial Literacy Variable

| No             | Statement Item                                                                                                    | SD<br>(1) | D<br>(2) | N<br>(3) | A<br>(4) | SA<br>(5) | Mean        |
|----------------|-------------------------------------------------------------------------------------------------------------------|-----------|----------|----------|----------|-----------|-------------|
| <b>1</b>       | I understand the basic concepts of personal financial management, such as budgeting, saving, and investing (X1.1) | 4         | 2        | 11       | 47       | 33        | 4.06        |
| <b>2</b>       | I know how to manage my income and expenses effectively (X1.2)                                                    | 1         | 3        | 14       | 43       | 36        | 4.13        |
| <b>3</b>       | I regularly record all my income and expenses (X1.3)                                                              | 1         | 5        | 11       | 29       | 51        | 4.27        |
| <b>4</b>       | I create a monthly budget to manage my expenses (X1.4)                                                            | 2         | 6        | 12       | 34       | 43        | 4.13        |
| <b>5</b>       | I feel it's important to have long-term financial goals, such as buying a home or preparing for retirement (X1.5) | 4         | 4        | 7        | 36       | 46        | 4.19        |
| <b>6</b>       | I believe that saving and investing are good ways to achieve financial stability (X1.6)                           | 5         | 7        | 6        | 35       | 44        | 4.10        |
| <b>Average</b> |                                                                                                                   |           |          |          |          |           | <b>4.15</b> |

Source: Processed Data (2025)

The average score of 4.15 indicates that overall, MSME actors in Kuta Alam possess a good level of financial literacy. However, several respondents still selected "Disagree" (D) or "Neutral" (N), particularly on items X1.1 and X1.6.

This suggests that while many respondents understand basic financial management, not all apply their knowledge consistently in daily business practices. This gap between knowledge and application may explain the lack of significant impact of financial literacy on MSME performance, as indicated by the regression analysis. Hence, financial understanding alone is insufficient; practical support such as continuous training and mentoring is essential to bridge the gap and improve performance outcomes.

The results of financial inclusion variable are as follows:

**Table 10.** Descriptive Statistics of Financial Inclusion Variable

| No       | Statement Item                                                                                | SD<br>(1) | D<br>(2) | N<br>(3) | A<br>(4) | SA<br>(5) | Mean |
|----------|-----------------------------------------------------------------------------------------------|-----------|----------|----------|----------|-----------|------|
| <b>1</b> | I have easy access to financial institutions such as banks and cooperatives in my area (X2.1) | 6         | 10       | 18       | 35       | 28        | 3.71 |
| <b>2</b> | I use a bank account or digital wallet to regularly save money (X2.2)                         | 3         | 4        | 10       | 45       | 35        | 4.08 |

|         |                                                                                                                |   |   |    |    |    |      |
|---------|----------------------------------------------------------------------------------------------------------------|---|---|----|----|----|------|
| 3       | I conduct financial transactions, such as bill payments or transfers, through formal financial services (X2.3) | 3 | 6 | 11 | 44 | 33 | 4.01 |
| 4       | I am satisfied with the ease of using the financial services I use (X2.4)                                      | 4 | 4 | 9  | 30 | 40 | 4.11 |
| 5       | Transaction processing times and financial services are fast and efficient (X2.5)                              | 5 | 4 | 7  | 48 | 33 | 4.03 |
| 6       | I feel my financial situation has become more stable after using cashless financial services (X2.6)            | 5 | 4 | 11 | 45 | 32 | 3.97 |
| Average |                                                                                                                |   |   |    |    |    | 3.99 |

Source: Processed Data (2025)

With an average of 3.99, the results show a relatively good level of financial inclusion among MSME respondents. However, answers to items like X2.1 and X2.5 reflect a noticeable portion of neutral or disagreeing responses, indicating some uncertainty or lack of clarity in accessing or utilizing financial services. This further supports the regression findings that financial inclusion may not significantly influence business performance unless better understanding and usage are ensured.

The digital payment variable comprises 5 questions. The responses are summarized below:

**Table 11.** Descriptive Statistics of Digital Payment Variable

| No      | Statement Item                                                                                     | SD<br>(1) | D<br>(2) | N<br>(3) | A<br>(4) | SA<br>(5) | Mean |
|---------|----------------------------------------------------------------------------------------------------|-----------|----------|----------|----------|-----------|------|
| 1       | I feel comfortable using digital payments for my business transactions (X3.1)                      | 4         | 8        | 7        | 40       | 38        | 4.03 |
| 2       | Digital payment services are available whenever and wherever I need them (X3.2)                    | 3         | 6        | 8        | 38       | 42        | 4.13 |
| 3       | I find digital payments speed up the transaction process (X3.3)                                    | 4         | 5        | 7        | 38       | 43        | 4.14 |
| 4       | I feel secure storing money or balances in digital payment apps (X3.4)                             | 4         | 8        | 14       | 33       | 38        | 3.95 |
| 5       | I find the additional features available in digital payment apps simplify my business needs (X3.5) | 4         | 4        | 14       | 43       | 32        | 3.97 |
| Average |                                                                                                    |           |          |          |          |           | 4.04 |

Source: Processed Data (2025)

The overall average of 4.04 indicates a positive perception of digital payment usage among MSMEs. Respondents generally show strong agreement and support for adopting digital payment methods in business operations.

Next table presents the responses to four statements related to MSME performance, using the same 5-point Likert scale:

**Table 12.** Descriptive Statistics of MSME Performance Variable

| No | Statement Item                                                                                     | SD<br>(1) | D<br>(2) | N<br>(3) | A<br>(4) | SA<br>(5) | Mean |
|----|----------------------------------------------------------------------------------------------------|-----------|----------|----------|----------|-----------|------|
| 1  | I always have sufficient cash or cash equivalents to meet the company's long-term obligations (Y1) | 3         | 8        | 10       | 45       | 31        | 3.95 |
| 2  | My business has a reasonable debt ratio and is well-managed (Y2)                                   | 6         | 8        | 14       | 45       | 24        | 3.75 |

|                |                                                                                                        |   |   |    |    |    |             |
|----------------|--------------------------------------------------------------------------------------------------------|---|---|----|----|----|-------------|
| <b>3</b>       | My business profits have shown a positive growth trend in recent years (Y3)                            | 5 | 5 | 8  | 52 | 27 | 3.93        |
| <b>4</b>       | My business has an effective strategy to maintain stability even in challenging market conditions (Y4) | 2 | 4 | 16 | 37 | 38 | 4.08        |
| <b>Average</b> |                                                                                                        |   |   |    |    |    | <b>3.88</b> |

Source: Processed Data (2025)

With an average score of 3.88, it can be concluded that the respondents' assessment of their MSME performance is positive, although not yet optimal. The mixed distribution of answers—especially in Y2—suggests that improvements in operational aspects or access to resources may still be needed.

#### Validity and Reliability Test Results

**Table 13.** Validity Test

| Variable                        | Question Item | r-Count | r-Table | Remark |
|---------------------------------|---------------|---------|---------|--------|
| <b>Financial Literacy (X1)</b>  | X1.1          | 623     | 201     | Valid  |
|                                 | X1.2          | 756     | 201     | Valid  |
|                                 | X1.3          | 820     | 201     | Valid  |
|                                 | X1.4          | 812     | 201     | Valid  |
|                                 | X1.5          | 704     | 201     | Valid  |
|                                 | X1.6          | 810     | 201     | Valid  |
| <b>Financial Inclusion (X2)</b> | X2.1          | 622     | 201     | Valid  |
|                                 | X2.2          | 778     | 201     | Valid  |
|                                 | X2.3          | 756     | 201     | Valid  |
|                                 | X2.4          | 735     | 201     | Valid  |
|                                 | X2.5          | 817     | 201     | Valid  |
|                                 | X2.6          | 783     | 201     | Valid  |
| <b>Digital Payment (X3)</b>     | X3.1          | 860     | 201     | Valid  |
|                                 | X3.2          | 829     | 201     | Valid  |
|                                 | X3.3          | 882     | 201     | Valid  |
|                                 | X3.4          | 886     | 201     | Valid  |
|                                 | X3.5          | 865     | 201     | Valid  |
| <b>MSME Performance (Y)</b>     | Y1            | 813     | 201     | Valid  |
|                                 | Y2            | 837     | 201     | Valid  |
|                                 | Y3            | 860     | 201     | Valid  |
|                                 | Y4            | 809     | 201     | Valid  |

Source: Processed Data (2025)

Based on Table 13, it can be seen that each question item has an r-count greater than r-table. Therefore, it can be concluded that all question items are valid, and the questionnaire is appropriate to be used for further research. After conducting the validity test on each variable, the next step is to perform a reliability test. The reliability test results are obtained through SPSS output by referring to the Cronbach's alpha ( $\alpha$ ) value. The decision rule used is that if Cronbach's alpha  $> 0.60$ , then the items are considered to have a good level of reliability. The reliability test results are shown in the following table:

**Table 14.** Reliability Test

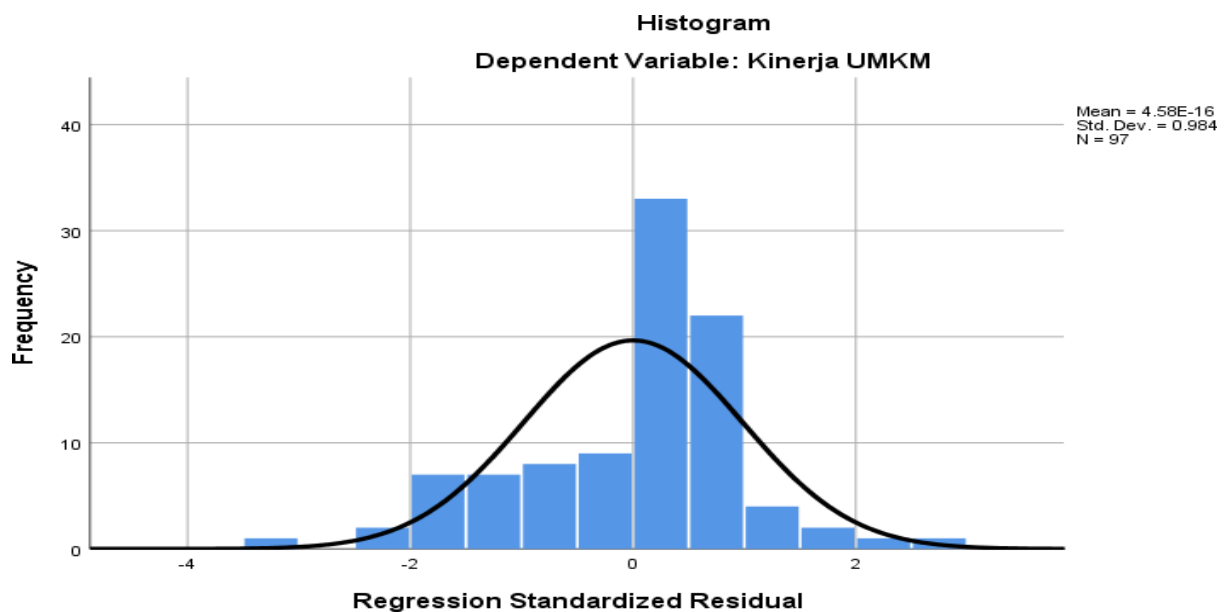
| No. | Research Variable             | Reliability Threshold | Cronbach's Alpha | Remark   |
|-----|-------------------------------|-----------------------|------------------|----------|
| 1   | Financial Literacy ( $X_1$ )  | 0.60                  | 847              | Reliable |
| 2   | Financial Inclusion ( $X_2$ ) | 0.60                  | 839              | Reliable |
| 3   | Digital Payment ( $X_3$ )     | 0.60                  | 915              | Reliable |
| 4   | MSME Performance (Y)          | 0.60                  | 848              | Reliable |

Source: Processed Data (2025)

Based on the Table 14, it can be seen that each variable has a Cronbach's alpha value above 0.60. Thus, the variables of financial literacy, financial inclusion, and the use of digital payment in relation to MSME performance can be declared reliable.

#### Classical Assumption Test Results

An ideal regression model requires data that meets the normality assumption. One method to detect normality is by visual analysis using the P-P Plot graph:



**Figure 1.** Normality Test

Source: Processed Data (2025)

The histogram above shows that the distribution of residuals from the regression model is symmetric and follows a normal distribution pattern. This indicates that the residuals are normally distributed, and thus, the normality assumption in the regression analysis is met. Therefore, the regression model is considered valid for analyzing the MSME Performance variable.

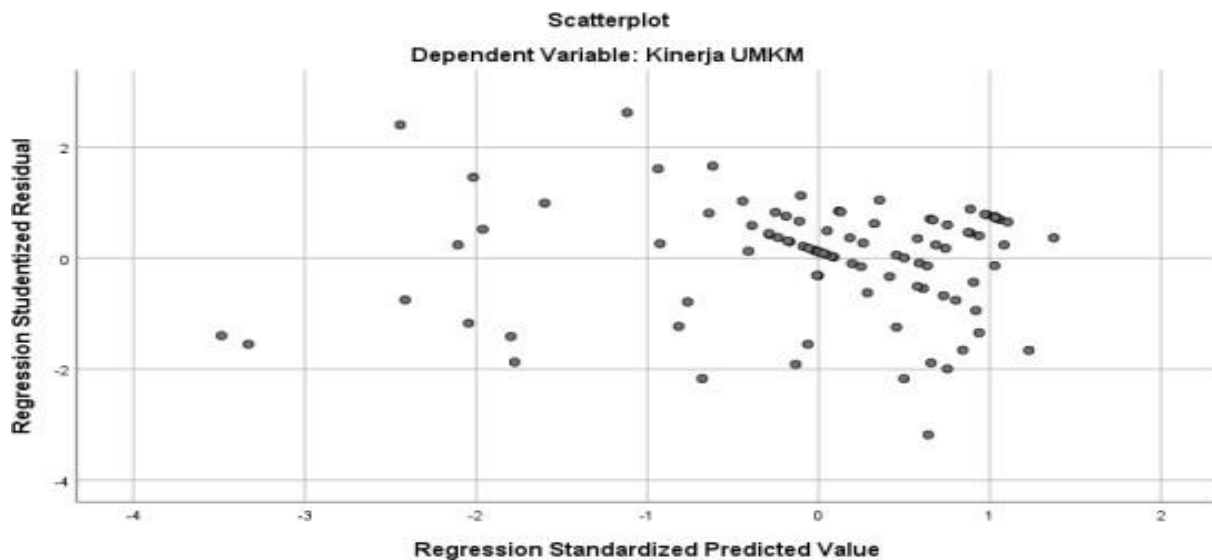
Ideally, independent variables should not experience multicollinearity.

**Table 15.** Multicollinearity Test Results

| No. | Research Variable             | Reliability Threshold | Cronbach's Alpha | Remark   |
|-----|-------------------------------|-----------------------|------------------|----------|
| 1   | Financial Literacy ( $X_1$ )  | 0.60                  | 847              | Reliable |
| 2   | Financial Inclusion ( $X_2$ ) | 0.60                  | 839              | Reliable |
| 3   | Digital Payment ( $X_3$ )     | 0.60                  | 915              | Reliable |
| 4   | MSME Performance (Y)          | 0.60                  | 848              | Reliable |

Source: Processed Data (2025)

Based on the table above, the financial literacy variable ( $X_1$ ) has a tolerance value of  $0.978 > 0.1$  and VIF of  $1.023 < 10$ ; financial inclusion ( $X_2$ ) has a tolerance of  $0.964$  and VIF of  $1.037 < 10$ ; and digital payment ( $X_3$ ) has a tolerance of  $0.961$  and VIF of  $1.041 < 10$ . Based on the decision criteria, it can be concluded that the variables financial literacy ( $X_1$ ), financial inclusion ( $X_2$ ), and digital payment ( $X_3$ ) are free from multicollinearity.



**Figure 2.** Heteroscedasticity Test Results

Source: Processed Data (2025)

The scatterplot shows the distribution of residuals against standardized predicted values. The points are randomly scattered without forming a particular pattern, indicating that the homoscedasticity assumption is fulfilled. This means that the regression model used is appropriate and does not suffer from non-constant residual variance issues.

### Multiple Linear Regression Analysis

**Table 16.** Multiple Linear Regression Test Results

| Model               | Unstandardized Coefficients |            | Sig.  |
|---------------------|-----------------------------|------------|-------|
|                     | B                           | Std. Error |       |
| (Constant)          | 6.098                       | 1.897      |       |
| Financial Literacy  | 84                          | 55         | 0,000 |
| Financial Inclusion | 26                          | 52         | 0,126 |
| Digital Payment     | 549                         | 54         | 0,601 |

Source: Processed Data (2025)

**Table 17.** F-Test Results

| Variables        | F_calculated | F_table | Sig. | Conclusion |
|------------------|--------------|---------|------|------------|
| All IVs combined | 36.591       | 03.09   | 0    | Valid      |

Source: Processed Data (2025)

**Table 18.** Coefficient of Determination ( $R^2$ )

| Model | R   | $R^2$ | Adjusted $R^2$ | Std. Error of Estimate |
|-------|-----|-------|----------------|------------------------|
| 1     | 736 | 541   | 527            | 2.343                  |

Source: Processed Data (2025)

### The Effect of Financial Literacy on MSME Performance

The partial test results show that financial literacy has no significant effect on MSME performance in Kuta Alam District. The significance value ( $p = 0.126$ ) is greater than 0.05, and the t-value ( $-1.542$ ) is less than the critical t-table (1.985). This indicates that while MSME actors may possess basic financial knowledge, such as record-keeping or budgeting, they have yet to fully implement this knowledge in their daily operations.

This finding is in line with Fitria, Soejono, and Tyra (2021), who found that financial literacy alone does not significantly affect MSME performance, particularly when not accompanied by managerial capabilities or operational support. Moreover, research by Desiana, Fitria, and Nada (2024) on students shows that while financial literacy is an important predictor of financial behavior, the application must be context-specific and supported by motivation and environment.

In practice, financial knowledge is not enough; MSMEs must be equipped with tools to apply this knowledge, such as digital accounting platforms, business planning skills, and access to advisory services. This is supported by Safrida et. al. (2024) who emphasized that MSMEs need sustainable business planning to improve their performance and product value.

### The Effect of Financial Inclusion on MSME Performance

The financial inclusion variable also shows no significant effect on MSME performance. The t-value is 0.525 and the significance level is 0.601, both of which indicate a lack of statistical relevance. This suggests that despite having access to banking or credit services, MSMEs are not leveraging financial access to enhance their operations.

This is supported by Hilmawati & Kusumaningtias (2021) and Jumady et al. (2022), who argue that financial access alone is insufficient without the capability to utilize it effectively. Factors such as low trust in financial institutions, lack of financial product literacy, or minimal assistance in accessing credit are barriers.

Khusna, Zulhlimi, and Fitria (2019) observed that when financing support like PNPM is aligned with local needs and religious-cultural contexts, it can positively influence income and business growth. However, without this contextual fit, inclusion efforts may not yield results.

### The Effect of Digital Payment on MSME Performance

Unlike the previous two variables, digital payment adoption has a significant positive effect on MSME performance. The t-value is 10.248 and the p-value is 0.000 ( $< 0.05$ ), indicating strong statistical significance. Digital payment systems such as QRIS, mobile banking, and e-wallets have proven to be efficient, secure, and scalable. According to Bank Indonesia (2020), these platforms improve business operations by reducing cash handling risks, improving transaction recording, and enabling broader market access.

Aulia, Asisa, Dalianti, and Handa (2022) highlighted the transformative potential of digital payments in improving MSME performance. Salja, Fitria, and Tarigan (2025) also found that perceived ease of use and security strongly influence MSME interest in adopting digital payments.

### Simultaneous Effects of Financial Literacy, Financial Inclusion, and Digital Payment

The F-test results show a calculated F-value of 36.591, which is significantly greater than the F-table value of 3.09, and a significance level of 0.000 ( $< 0.05$ ). This confirms that financial literacy ( $X_1$ ), financial inclusion ( $X_2$ ), and digital payment ( $X_3$ ) simultaneously have a significant effect on MSME performance.

Furthermore, the R Square ( $R^2$ ) value of 0.867 suggests that 86.7% of the variation in MSME performance can be explained by these three variables. The remaining 13.3% is influenced by other factors such as business planning, human resources, market conditions, and product quality.

This result aligns with the findings of Desiana, Fitria, and Nada (2024), who found that when financial knowledge is combined with other demographic and economic factors, the explanatory power of the model

increases significantly. Similarly, Machfirah, Ahmadsyah, and Fitria (2024) demonstrated that the integration of knowledge, motivation, and religiosity affects financial decision-making.

While not all variables are effective individually, collectively they contribute significantly to MSME performance. This highlights the need for a holistic empowerment strategy involving training, infrastructure, and financial technology—an approach advocated by Azra et. al. (2023) in their community empowerment model via BUMDes.

#### 4. CONCLUSION

Financial literacy is important for the success of MSMEs; however, it is not sufficient on its own. Without effective implementation strategies, its impact on business performance tends to be limited. Similarly, access to financial services must be complemented by capacity-building efforts, streamlined procedures, and financial products that are tailored to the specific needs of MSMEs. On the other hand, the use of digital payment systems offers practical benefits, particularly in improving business operations, enhancing cash flow management, and facilitating customer transactions. Although each factor may not show a strong influence individually, together they play a significant role in shaping MSME performance. These findings underline the importance of a comprehensive support strategy that integrates training, infrastructure development, and the use of appropriate financial technologies.

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