



The Role of Financial Literacy and Entrepreneurial Orientation on MSME Sustainability: the Mediating Effect of E-Commerce

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ABSTRACT

MSMEs play an important role, but there are still many problems to improve their performance. The effect of financial literacy and entrepreneurial orientation on general performance is the purpose of this study. This research was conducted at MSMEs in Pontianak City and Singkawang City. The research method used is descriptive quantitative. Quantitative research is an attempt by a researcher to gain knowledge by providing data in the form of numbers which will then be used to analyze information. The data used in this research is primary data. The soil test results show that the significance value of the two-tailed test is $0.00 < 0.05$, so e-commerce can mediate the effect of financial literacy on MSME performance. The Sobel test results also show that the significance value of the two-tailed test is $0.00 < 0.05$, so e-commerce can mediate the effect of Entrepreneurial Orientation on MSME performance. Understanding financial literacy and the use of e-commerce will help MSMEs manage their finances and leverage business opportunities more effectively, as well as make it easier to access financial resources needed for business sustainability.

1. INTRODUCTION

1.1. Research Background

Micro, Small, and Medium Enterprises (MSMEs) play an important role in the national economy, especially in Indonesia. MSMEs contribute significantly to Gross Domestic Product (GDP), job creation, and poverty alleviation. According to data from the Ministry of Cooperatives and Small and Medium Enterprises (KUKM) of the Republic of Indonesia in 2023, MSMEs in Indonesia reached 64.2 million business units, equivalent to 99.7% of the total business units in Indonesia. MSMEs also absorb 133.05 million workers, equivalent to 74.21% of the total workforce in Indonesia. MSEs (Micro, Small and Medium Enterprises) are one of the opportunities that exist in every region [1]. MSMEs (Micro, Small and Medium Enterprises) have a very important role in regional development, especially to support the economy of a region. The growth of MSMEs in Indonesia is currently very rapid, including in West Kalimantan. The following is data on the growth of MSMEs in West Kalimantan in 2023:



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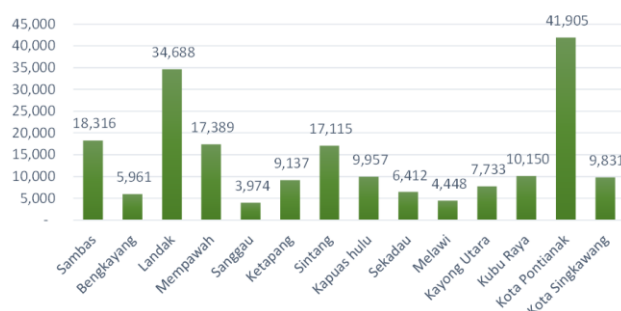


Figure 1: Number of MSMEs in West Kalimantan (*Dinas Koperasi UKM Provinsi Kalimantan Barat, 2023*)

Based on Figure 1, it can be seen that the distribution of MSMEs in West Kalimantan is very diverse. The largest number of MSMEs is in Pontianak City with 43,247 MSMEs, this is because Pontianak City is the center of government and economic center in West Kalimantan. Micro, Small, and Medium Enterprises (MSMEs) play an important role in a country's economy with significant contributions to economic growth, job creation, and innovation [2]. However, MSMEs often face challenges in maintaining and improving their performance. In

the growing digital era, e-commerce adoption is becoming one of the important strategies for MSMEs to achieve growth and sustainability [2].

Although MSMEs play an important role, there are still many problems faced to improve their performance. Looking at the development of the number of existing MSMEs, there is no doubt that many are established, but also many have problems that make them have to be closed. [3]. MSMEs often find it difficult to access capital from banks or other financial institutions. This is due to complicated requirements, inadequate collateral and a lack of information on sources of financing. Many MSME owners do not have a background in business management education or training. This makes it difficult for them to effectively manage their finances, marketing and business operations. MSMEs must compete with large companies that have more capital and resources. This makes it difficult for MSMEs to gain customers and increase market share. MSMEs are often left behind in the utilization of information and communication technology (ICT). This makes it difficult for them to reach new customers, market their products online, and improve operational efficiency. MSMEs are often faced with complex and confusing rules and regulations. This makes it difficult for them to run their businesses smoothly.

MSMEs that cannot overcome the problems faced can experience a decline in performance, such as a decrease in sales, profits, and market share. In some cases, MSMEs that cannot survive may be forced to close their businesses. [4]. This can lead to job losses and negatively impact the local economy. The problems of MSMEs can exacerbate economic inequality, with large companies getting richer while MSMEs get left behind. Given the important role of MSMEs and the problems they face, in-depth research is needed to understand the root causes of MSME problems and find effective solutions [5].

One important factor affecting the sustainability of MSMEs is financial literacy. Financial literacy refers to a person's understanding and knowledge in managing their personal and business finances. Good financial literacy can help MSME owners make smart financial decisions, manage risks and optimize the use of limited resources. In addition to financial literacy, entrepreneurial orientation also plays an important role in the sustainability of MSMEs [6].

Entrepreneurial orientation refers to the attitudes, values and behaviors that support initiative, innovation and risk-taking in a business context. MSMEs with a strong entrepreneurial orientation are better able to adapt to market changes, identify new opportunities, and improve their competitiveness. However, in this digital era, e-commerce has become a crucial element in the sustainability of MSMEs [7]. E-commerce provides new opportunities for MSMEs to expand their market reach, improve their operational efficiency and enhance their competitiveness. Therefore, the mediating role of e-commerce in the relationship between financial literacy, entrepreneurial orientation and MSME sustainability needs to be studied further. This research can help the government, MSME development institutions, and MSME players in formulating appropriate policies and programs to improve the sustainability of MSMEs.

Financial literacy includes understanding and knowledge of financial matters, such as financial management, investment, and smart financial decision-making. Meanwhile, entrepreneurial orientation encompasses the attitudes, behaviors and skills that aid business growth and development. Entrepreneurial

orientation can be expressed as an ability that exists in an entrepreneur that can be fundamental in getting opportunities for success [2].

Among MSMEs, the adoption of e-commerce technology has become a significant trend in recent years. E-commerce provides MSMEs with new opportunities to increase competitiveness, improve operating efficiency, and expand market reach. Therefore, e-commerce is considered a mediating factor that can influence the relationship between financial literacy, entrepreneurial orientation, and sustainability of small and medium-sized enterprises (MSMEs). This study aims to fill this knowledge gap and investigate the role of financial literacy and entrepreneurial orientation on MSME sustainability, with e-commerce as a mediating variable. This is the case even though we know that these variables are interconnected and important. This research is expected to provide new insights to academics, MSME practitioners, and policymakers by providing a better understanding of the relationship between financial literacy, entrepreneurial orientation, and MSME sustainability, as well as the mediating role of e-commerce.

1.2. Literature Review

1.2.1. The Resource-Based View Theory (RBV)

Resource View Theory is a theory that describes how a company can achieve a competitive advantage by relying on resources to direct the company to be sustainable continuously [8]. The main approach of Resources Theory is to understand the relationship between resources, capabilities, competitive advantage, and profitability, especially to understand the mechanism of maintaining competitive advantage over time. This theory was first proposed by [9] in his work entitled "A Resource-based View of the Firm" and subsequently [8] in "Firm Resource and Sustained Competitive Advantage" explained that company resources help companies improve the efficiency and effectiveness of company operations.

1.2.2. The ecological modernization theory (EMT)

The ecological modernization theory (EMT) states that environmental problems triggered by economic growth can be overcome by increasing resource efficiency through technological advances such as Fintech innovations [10]. Ecological modernization theory also emphasizes the importance of technological progress in creating new technologies that are cleaner and more environmentally friendly. According to in the research results, they expand the scope of Ecological Modernization Theory (EMT) by establishing fintech adoption, financial literacy, and financial access as valuable resources for companies to improve corporate sustainability performance.

1.3. Research Objective

This study aims to analyze the role of financial literacy and entrepreneurial orientation on the sustainability of MSMEs with the mediating effect of e-commerce. Thus, this study aims to identify the relationship between these variables and understand how e-commerce can mediate the relationship.

2. METHODS

2.1. Analytical methods

This research was conducted at MSMEs in Pontianak City and Singkawang City. The research method used is descriptive quantitative. Quantitative research is an attempt by a researcher to gain knowledge by providing data in the form of numbers which will then be used to analyze information [11]. The data used in this study are primary. The questionnaire was distributed in 2 (two) ways, namely by distributing links and distributing questionnaires manually. The data processing and analysis technique used is the analysis of the moderate regression model with the help of the SPSS Statistical test tool and the Sobel test. The data collection techniques used in this study were

documentation, literature study and questionnaires. The questionnaire is a data collection technique that is done by giving a set of questions or written statements to respondents to answer [12]. Questionnaires are in the form of closed or open-ended questions, which can be given to respondents directly. Questionnaires on explaining and questioning skills, to determine the owner's financial literacy regarding the performance of MSMEs.

2.2. Operationalization and Measurement Variable

How to operationalize and measure the variables in this study can be seen in Table 1. The table shows how each variable is conceptually defined and operationally measured in this study.

Table 1. Operationalization and Measurement Variable

Variable	Definition	Measurement Scale
Financial literacy (X1)	Financial literacy is knowledge, skills, and beliefs that influence attitudes and behaviours to improve the quality of decision-making and financial management to achieve prosperity. (Peraturan OJK No.76/PJOK.07/2016)	Likert Scale 1 s/d 7
Entrepreneurial orientation (X2)	Entrepreneurial orientation refers to the attitudes, values, and behaviors of an individual or organization that support and encourage initiative, innovation, and risk-taking in a business context. It involves the ability to see opportunities, take proactive action and overcome challenges to achieve business goals.	Likert Scale 1 s/d 7
E-Commerce (Y)	E-commerce, or electronic commerce, refers to the process of buying, selling, and exchanging products or services via the Internet or other digital platforms. In e-commerce, business transactions are conducted electronically, including product sales, payment, delivery, and after-sales service.	Likert Scale 1 s/d 7
MSME sustainability (Z)	MSME sustainability refers to the ability of MSMEs to survive and thrive in the long term. It involves efforts to maintain a balance between economic, social, and environmental aspects of their business operations.	Likert Scale 1 s/d 7

2.3. Conceptual Framework

Based on the literature review above, a conceptual framework can be made in Figure 2.

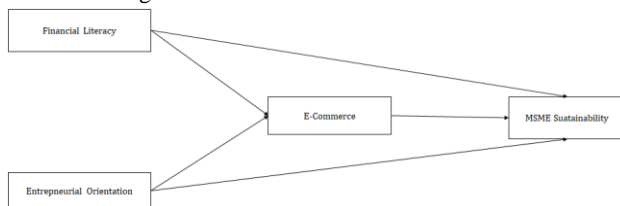


Figure 2. Conceptual Framework

2.4. Hypotheses

2.4.1. The Effect of Financial Literacy on MSME Sustainability through E-Commerce

Financial literacy supports this hypothesis by showing that a high level of financial literacy can improve entrepreneurs' ability to manage their business finances. Financial literacy is knowledge about understanding finance which is then applied in management both individually and collectively or company [13]. Previous research shows that high financial literacy contributes positively to the growth and performance of MSMEs [14]. Entrepreneurs who have a good understanding of financial concepts, including cash flow management, investment, and financing, tend to make better decisions and manage risks more

effectively [15]. The use of e-commerce also supports this hypothesis by showing that the use of e-commerce can improve operational efficiency and create new opportunities for MSMEs to increase sales and profits [16].

The use of e-commerce by MSMEs significantly affects their business sustainability, including increased revenue and market share [17]. Through e-commerce, MSMEs can reach a wider market, reduce operational costs, and improve efficiency in business processes such as logistics and payments. Entrepreneurs who have a good understanding of business finance tend to make better decisions in terms of business strategy, investment, and risk management [18]. In addition to these studies, there are also other studies that support the relationship between financial literacy, e-commerce usage, and MSME sustainability. High financial literacy can increase entrepreneurs' confidence in using e-commerce, which in turn contributes to improving their business performance.

H1: There is a positive influence of financial literacy on MSME sustainability through e-commerce usage as a mediating variable.

2.4.2. Effect of Entrepreneurial Orientation on MSME Sustainability through E-Commerce

Entrepreneurial orientation refers to the attitudes, behaviors, and abilities of individuals or organizations in identifying, creating, and taking business opportunities. In the context of MSMEs,

entrepreneurial orientation can play an important role in improving their business performance. On the other hand, the use of e-commerce has become an effective tool in expanding markets, improving operational efficiency, and creating new opportunities for MSMEs [19]. High entrepreneurial orientation can improve the sustainability of MSMEs [20].

Previous research, such as that conducted by Ref. [21] emphasizes the importance of entrepreneurial orientation in identifying business opportunities, taking risks, and developing innovative strategies. MSMEs with a high entrepreneurial orientation tend to have a higher level of adaptability to market changes and can create added value for customers. The use of e-commerce can improve the business performance of MSMEs. E-commerce provides greater access to markets, reduces operational costs, and accelerates business processes such as marketing, sales, and logistics [22]. Previous research, such as that conducted by Ref. [23] shows that the use of e-commerce can increase sales, market share, and profits of MSMEs. Therefore, this study aims to examine the effect of entrepreneurial orientation on the sustainability of MSMEs through the use of e-commerce.

H2: There is a positive influence of entrepreneurial orientation on the sustainability of MSMEs through the use of e-commerce as a mediating variable.

3. RESULT AND DISCUSSION

3.1. Data Quality Test

3.1.1. Data Validity and Reliability Test

This validity test is used to determine the validity level of a questionnaire used in data collection. The significant test is carried out by comparing the calculated r value with the r table value for the degree of freedom (df) = n-2, in this case the number of samples. The number of samples (n) in this study was 122, so the amount of df was 122-2 = 120, with a significance level of 5%. In this case, the r table is 0.178. The validity test results are presented in Table 2.

Table 2. Validity Test Results

Variable	No Item	R Count	R table	Description
Financial Literacy	1	0.810	0.178	Valid
	2	0.749		
	3	0.860		
	4	0.768		
	5	0.862		
Entrepreneurial Orientation	1	0.803	0.178	Valid
	2	0.744		
	3	0.794		
	4	0.806		
MSME Sustainability	1	0.807	0.178	Valid
	2	0.782		
	3	0.808		
	4	0.826		
	5	0.757		
E-Commerce	1	0.818	0.178	Valid
	2	0.745		
	3	0.802		
	4	0.776		
	5	0.759		

Source: Data processed, 2024

The reliability test is used to determine the consistency of the measuring instrument in its use or in other words, the measuring instrument has consistent results when used many times at different times. A variable is said to be reliable if it provides a Cronbach Alpha (a) value > 0.60 [11]. The following are the results of the reliability test can be seen in table 3 below:

Table 3. Reliability Test Results

No	Variable	Nilai Cronbach Alpha	Keterangan
1	Financial Literacy	0.868	Reliable
2	Entrepreneurial Orientation	0.795	Reliable
3	MSME Sustainability	0.855	Reliable
4	E-Commerce	0.839	Reliable

Source: Data processed, 2024

Based on Table 3, it is known that all variables have a Cronbach Alpha (a) value > 0.60, which means that all variables are reliable with an acceptable decision. Based on the data and statements above, it can be concluded that each item in this research variable is reliable.

3.1.2. Hypothesis Testing

R Square Test Results

The R Square test results are used to see how much the independent variable affects the dependent variable. The results of the initial and second R Square tests are presented in the following table:

Table 4. R Square Result

Early Stage		Second Stage	
R	R Square	R	R Square
0.851	0.724	0.865	0.862

Source: Data processed, 2024

Based on Table 3, it can be seen that the r square value at the initial test stage is 0.724 or 72.4% of the financial literacy and entrepreneurial orientation variables can explain the variation in their influence on e-commerce. At the second test stage, the r square value is 0.862 or 86.2% of the financial literacy, entrepreneurial orientation and e-commerce variables can explain the variation in their influence on MSME sustainability.

Direct Effect Regression Test Results

The results of the first stage of regression testing to see the direct effect between financial literacy variables and entrepreneurial orientation on E-Commerce. The test results are presented in the following table:

Table 5. Preliminary Regression Test Results

No	Hypothesis	Beta	Significance
1	The Effect of Financial Literacy on E-Commerce	0.316	0.000
2	The Effect of Entrepreneurial Orientation on E-Commerce	0.607	0.00

Source: Data processed, 2024

Based on the test results above, it can be seen that the variables of financial literacy and entrepreneurial orientation have a positive effect on e-commerce.

Table 6. Second-stage Regression Test Results

No	Hypothesis	Beta	Significance
1	The Effect of Financial Literacy on MSME Sustainability	0.397	0.000
2	The Effect of Entrepreneurial Orientation on MSME Sustainability	0.336	0.000
3	The Effect of E-Commerce on MSME Sustainability	0.290	0.000

Source: Data processed, 2024

Based on the test results above, it can be seen that the variables of financial literacy, entrepreneurial orientation and e-commerce have a positive and significant effect on the Sustainability of MSMEs.

Path Analysis Test Results

The results of path analysis testing are used to see the indirect effect between the independent variable and the dependent variable. The test results are presented in the following table:

Table 7. Path Analysis Testing

Hypothesis	Direct Effect	Indirect Effect	Total Effect
The effect of financial literacy on e-commerce	0.316		
The effect of entrepreneurial orientation on e-commerce	0.607		
The effect of financial literacy on the MSME Sustainability	0.397		
The effect of entrepreneurial orientation on MSME Sustainability	0.336		
The effect of e-commerce on the MSME Sustainability	0.290		
The effect of financial literacy on MSME Sustainability through E-Commerce	0.316 x 0.290 = 0.091		0.397 + 0.091 = 0.488
The effect of entrepreneurial orientation on the Sustainability of MSMEs through E-Commerce	0.607 x 0.290 = 0.176		0.336 + 0.176 = 0.512

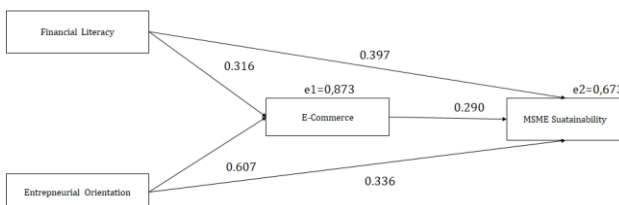


Figure 3. Path Analysis Results

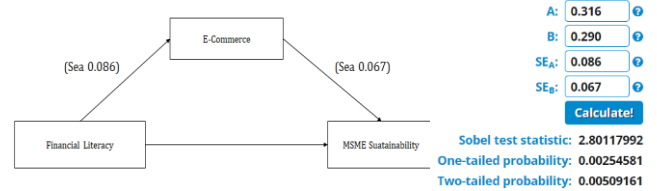
Sobel Test Results

The Effect of Financial Literacy on MSME Sustainability Through E-Commerce

The results of the Sobel test show that the significance value of the two-tailed probability test is 0.00 < 0.05 so it can be said that e-commerce can mediate the effect of financial literacy on MSME sustainability. In the direct regression test, financial literacy does affect the sustainability of MSMEs, this indicates that the mediation that occurs is partial [24].

Table 8. Sobel test of financial literacy test

Financial Literacy	Sobel Test Statistics	P-Value	Result
A	0.316	2.801	Significant Effect <u>H1</u> <u>Accepted</u>
B	0.290		
Sa	0.086		
Sb	0.067		

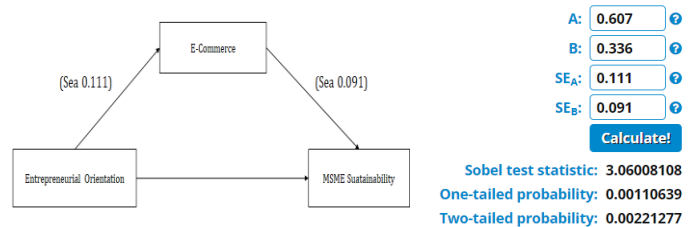


The Effect of Entrepreneurial Orientation on MSME Sustainability Through E-Commerce

The results of the sobel test show that the significance value of the two-tailed probability test is 0.00 < 0.05 so it can be said that e-commerce can mediate the effect of entrepreneurial orientation on MSME sustainability. In the direct regression test, entrepreneurial orientation does affect the sustainability of MSMEs, this indicates that the mediation that occurs is partial [24].

Table 10. Sobel test of financial literacy test

Entrepreneurial Orientation	Sobel Test Statistics	P-Value	Result
A	0.607	3.060	Significant Effect <u>H2 Accepted</u>
B	0.336		
Sa	0.111		
Sb	0.091		



4. CONCLUSION

The Effect of Financial Literacy on MSME Sustainability Through E-Commerce

Financial literacy refers to an individual's knowledge, understanding and skills in managing personal and business finances. In the context of MSMEs, a high level of financial literacy can have a positive influence on business performance through the use of e-commerce. High financial literacy can help MSME owners understand and manage the financial aspects of their business better. They will have a deeper understanding of cash flow management, financial planning and financial analysis. Thus, they can make more informed decisions in allocating resources and managing financial risks [23]. Good financial literacy also enables MSME owners to understand the financing options available and choose the most suitable one for their business needs. They will be able to evaluate the advantages and risks of different sources of financing, such as bank loans, venture capital, or crowdfunding [25]. By managing financing well, MSMEs can avoid liquidity issues and expand their business

operations through e-commerce. High financial literacy also enables MSME owners to better analyze financial data. They can use financial analysis tools to evaluate business performance, identify trends, and create better strategies. In the context of e-commerce, high financial literacy can help MSME owners understand metrics such as conversion rates, average transaction value, and customer acquisition costs. With this understanding, they can optimize the use of e-commerce to improve their business performance [26]. Better Risk Management can assist MSMEs in managing the risks associated with using e-commerce. They will understand the security, privacy and fraud risks associated with online transactions. With this knowledge, they can adopt the necessary security measures to protect their business and customers [27]. In addition, good financial literacy can also help MSMEs in managing financial risks associated with market fluctuations, price changes, or regulatory changes.

The effect of entrepreneurial orientation on MSME sustainability through E-Commerce

Entrepreneurial orientation refers to the attitudes, behaviors, and abilities of individuals or organizations in identifying, creating, and taking business opportunities. In the context of MSMEs, entrepreneurial orientation can play an important role in improving their business performance through the use of e-commerce [28]. A high entrepreneurial orientation can help MSME owners identify business opportunities that exist in the market. They have a high sensitivity to changing trends and customer needs. With the use of e-commerce, MSMEs can utilize online platforms to reach a wider market, increase the visibility of their products or services, and find new opportunities for business growth [29]. Entrepreneurial orientation also encourages MSMEs to be creative and innovative in using e-commerce. They look for new ways to differentiate themselves from competitors, develop unique business models and offer better customer experience through online features. By adopting an innovative entrepreneurial approach, MSMEs can increase their competitiveness in the e-commerce market. Entrepreneurial orientation also involves the level of readiness to take risks in developing a business. MSMEs that have a high entrepreneurial orientation tend to be bolder in trying new things in e-commerce [30]. They take risks to invest in technology, upgrade digital capabilities and adopt innovative online marketing strategies. In some cases, these risks can bring huge returns in the form of increased sales and business growth. Adaptation to Change: Entrepreneurial orientation also enables MSMEs to be more adaptive to changes in the business environment, especially in the digital age. They are ready to change their strategies, business models and operational processes according to changing market needs. In the context of e-commerce, MSMEs with a high entrepreneurial orientation can quickly adjust to changes in technology, consumer trends, and online competition [31]. Overall, entrepreneurial orientation can provide important advantages for MSMEs in harnessing the potential of e-commerce and improving their business performance. By having a proactive, creative and adaptive attitude, MSMEs can take advantage of business opportunities that exist in the online marketplace, develop innovations that differentiate them from competitors, take measured risks and adapt themselves to changes in the business environment [32]. In combination with the smart use of e-commerce, entrepreneurial orientation can be a key factor in the success of MSMEs in the digital world.

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