

## Linking the role of e-commerce and financial literacy on MSME's sustainability performance during the digital era

Sri Dewi Wahyundaru<sup>a\*</sup>, Windhu Putra<sup>b</sup>, Mukti Wibowo<sup>c</sup>, Elvia Ivada<sup>d</sup>, Preatmi Nurastuti<sup>e</sup>, Cornelius Damar Sasongko<sup>f</sup>, Moh. Miftachul Choiri<sup>g</sup> and Dwi Yuzaria<sup>h</sup>

<sup>a</sup>Universitas Islam Indonesia & Universitas Islam Sultan Agung, Indonesia

<sup>b</sup>Universitas Tanjungpura, Pontianak, Indonesia

<sup>c</sup>University of Indonesia, Depok, Indonesia

<sup>d</sup>Universitas Sebelas Maret, Indonesia

<sup>e</sup>Pelita Bangsa University, Bekasi, Indonesia

<sup>f</sup>Diponegoro University, Semarang, Indonesia

<sup>g</sup>IAIN Ponorogo, Indonesia

<sup>h</sup>Department of Social Economics, Faculty of Animal Science, Andalas University, Indonesia

### CHRONICLE

### ABSTRACT

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In recent years, E-Commerce has experienced a very significant increase. E-commerce provides a broad overview of technology, processes and practices that can be carried out without using paper as a means of transactions. E-commerce can be a solution to the paper waste problem which is an environmental issue that can lead to social problems. Thus, e-commerce has a vital role in achieving business sustainability performance. E-commerce has had a big influence on the social and economic growth of today's society. Business management's ability to manage financial information is an important indicator in influencing Micro, Small and Medium Enterprises' (MSME's) business performance. Good managements' financial literacy equips MSMEs with knowledge and skill empowering MSMEs to make informed financial decisions, manage resources effectively and promote sustainable development. This research aims to analyze the relationship between E-Commerce and the sustainability performance of MSMEs and analyze the relationship between financial literacy and its positive and significant relationship with the sustainability performance of MSMEs. The research method uses a descriptive method with a quantitative approach. The population in this research are MSMEs managers in Indonesia who have comprehensive knowledge regarding the operations and performance of MSMEs. In this study, researchers used a simple random sampling technique with a sample size of 478 MSME managers. Data analysis in this research uses the Partial Least Square (PLS) technique which is an alternative method based on the variance of the variables used. The stages of data analysis are validity testing, reliability testing and hypothesis testing. The independent variables in this research are e-commerce and financial literacy, while the dependent variable is MSME sustainability performance. The results of this research show that e-commerce has a positive and significant relationship with MSME sustainability performance and financial literacy has a positive and significant relationship to MSME sustainability performance. In addition, e-commerce has a significant influence on the sustainability performance of MSMEs because the presence of e-commerce is one of the marketing alternatives used to reach more vendors and customers which can change the supply chain leads to social problem solution such as food distribution. Further, e-commerce may minimize traveling long distances for shopping resulting to the carbon footprint reduction. MSMEs have the same opportunity to use e-commerce as an alternative to maximize performance. However, not all MSMEs have the capability to use and utilize e-commerce optimally. After all, knowing good financial management will make it easier to make sustainable decisions since the higher the level of financial literacy, the MSME players can optimize their sustainability performance.

\* Corresponding author.

E-mail address [sridewi@unissula.ac.id](mailto:sridewi@unissula.ac.id) (S. D. Wahyundaru)

## 1. Introduction

Globalization and technology are the two most significant drivers of business performance. Companies benefit from economies of scale and scope by leveraging globalization, but they also need technology to operate globally (Ali & Li, 2021). The increasing need for technology causes technological developments to grow rapidly and affect trading systems, transactions and money circulation. Previously, transactions were traditionally carried out hand in hand directly with the buyer and seller meeting face to face, then agreeing and finally an agreement was reached. But now, with the sophistication of computer technology, all limitations in facilities, distance and transaction time can be overcome easily. With just a click, customers can get the goods they want, can find out what they want and can make transactions with anyone without being limited by time and distance (Angreyani et al., 2023). Micro, Small and Medium Enterprises (MSMEs) in general are a new model in business or trading activities, there are which also means that MSMEs are commercial businesses whose management is carried out by individuals or private individuals as well as business entities with a small scope, better known as micro. In this case, MSMEs have a very important role in accelerating economic development and making a large contribution to the economy in Indonesia. However, many MSME players do not possess good financial literacy, where financial literacy covers how to manage finances well so that it can help in making business decisions. Many MSMEs still do not have adequate competence in working in their respective fields, so this will have an impact on the amount of time spent, waste of materials and time, as well as more energy spent doing the work (Oscarius et al., 2021; Lubis & Irawati, 2022). As a consequence, this shortcoming impacting sustainable performance of MSMEs achievement.

One form of information technology that can be applied by MSMEs to develop their business is by adopting e-commerce (Albeerd & Gharlegghi, 2015). Cost, speed, and data handling capacity determine the profitability of the internet and its value for e-commerce. Internet technology allows companies to conduct business in geographic areas with high speed, flexibility, and economy. In addition, sophisticated systems of data processing allow companies to undertake far more complex businesses than was possible before. The rapid development of information and communication technology, especially in the form of e-commerce, has significantly changed the business world. E-commerce provides opportunities for MSMEs to expand markets, increase operational efficiency and gain greater economic benefits. Recently, attention to the role of e-commerce in the economic growth of MSMEs has increased (Saeed et al., 2005). Several previous studies have investigated the relationship between the use of e-commerce and the economic growth of MSMEs (Coulter & Vogel, 2004). The adoption of e-commerce has a positive impact on sales growth and profits for MSMEs. e-commerce can increase market access, reduce transaction costs, and increase the competitiveness of MSMEs. However, the growing interest in e-commerce adoption raised concerns regarding the environmental and social impact provoked debates about its actual contribution to sustainable development (Spicka et al., 2019). In this regard, not only e-commerce provides economic benefit for MSMEs, but also brings environmental and social advantages. Some studies showed that e-commerce plays crucial role in sustainable business practice in the area of logistic namely delivery and packaging (Kawa, 2023; Revinova, 2021). Further, Revinova (2021) suggested that e-commerce can foster the achievement of several goals of the Sustainable Development.

However, not all research is consistent in showing the positive impact of e-commerce on the growth of MSMEs. There are some MSMEs that use e-commerce experience a decline in growth (Saritha & Srinivas, 2019). Limited technological expertise, access to capital, and lack of adequate infrastructure can be obstacles to the growth of MSMEs (Purwanto et al., 2023). In recent years, e-commerce has experienced a very significant increase. E-commerce provides a broad overview of technology, processes and practices that can be carried out without using paper as a means of transactions. E-commerce has had a big influence on the social and economic growth of today's society. E-commerce's rapid expansion highlights their potential to contribute to corporate sustainability efforts (Ardakani et al, 2024).

To be able to compete and maintain their existence in the highly competitive business world, MSMEs should be able to utilize Accounting Information Systems and E-Commerce as a means and capital to be able to compete with large companies. The occurrence of competition in the business world cannot be avoided, seeing the large number of business actors. The competition is getting tougher day by day. It could be said that no product/service is marketed without going through the competitive arena in the digital economy era (Purwanto et al., 2024). The digital economy is changing the global economy, enabling small industries to become micro-multinational industries with the elasticity and dynamics they have. This gives startups a higher chance of being born globally, digitalization drives competition as it enables innovative business models and allows companies to scale up quickly. Tens of millions of small and medium-sized companies around the world have turned into exporters and joined the e-commerce market and can compete with the largest multinational companies (Saeed et al., 2005). With their potential role in contributing to sustainability efforts, the MSMEs have an obligation of preserving the environment, preventing degradation, and ensuring worldwide preservation (Ardakani et al, 2024). For instance, some research has been conducted on the environmental impact of the final stage of delivery to the buyer which found that click and collect – an e-commerce feature - is a much more sustainable way of shopping (Revinova, 2021).

The role of financial literacy will help developing countries focus more on improving financial access and financial services. In point of fact, the ability to manage financial issue and expand financial access is needed highly in achieving the goal of sustainability in MSME (Prasetya et al, 2021). However, there are a number of obstacles that frequently prevent MSMEs from developing sustainably, such as restricted access to financial sources (Lambert et al, 2023). Likewise, several problems arise

in the MSMEs in Indonesia, one of which is limitations in managing finances to financial management and pay less attention to the long term, such as investment, savings and insuring their business premises (Engström & McKelvie, 2017). Most MSMEs in Indonesia often combine business money with personal money, so if it is implemented like that, their business will not develop well. Such shortcomings are probably the reason of the low level of Indonesian MSMEs sustainability compared to other ASEAN countries (Prasetya et al, 2021). A survey conducted by the Financial Services Authority showed that only 22% of the Indonesian population understood financial literacy (Munari & Susanti, 2021). Similar results were also expressed by Bank Indonesia (2012), that MSMEs in Indonesia have low knowledge regarding business management capabilities, especially in financial aspects. This is partly due to the uniqueness of MSMEs, which generally do not have organized information regarding financial conditions, market share, competition dynamics and management track record.

The level of knowledge of MSME owners regarding financial aspects will increase the profitability of the MSME and be useful in helping MSME owners access credit (Haudi et al., 2022; Fahmi et al., 2022). The low level of financial literacy of MSME players in Nigeria, especially in debt management, has an impact on their low opportunities to access financial resources. The ability of business owners and management to manage financial information is an important indicator in influencing MSME business performance (Ilham & Ratnamiasih, 2021). Good financial management behavior will result in good fund management effectiveness as well (Piyani & Chandrarin, 2023). This means that financial literacy helps MSME players distribute existing funds for needs that are oriented towards company goals. Strengthening the regulatory sector also needs to have implications for the welfare of coastal communities. Through MSMEs, it is hoped that they can be used as a forum for sustainable development. However, the fact is that in the field, there are still many coastal communities or micro, small and medium business actors in this field who still have difficulty competing with large entrepreneurs, one of the classic reasons is difficulties in accessing capital (Piyani & Chandrarin, 2023). Financially literate MSMEs are more probable to attract prospective investors, receive loans, and negotiate advantageous terms, therefore aiding their expansion and making contribution to sustainable development (Lambert et al., 2023). As a consequence, MSMEs demonstrate great sustainability performance.

## **2. Literature Review and Hypotheses Development**

### *2.1 Theoretical Background*

#### *E-Commerce*

E-Commerce describes the process of buying, selling, transferring, or exchanging products, services or information via computer networks, including the Internet (Hussain et al., 2022). Meanwhile, the definition of E-Commerce is the use of digital technology and the internet to carry out main business processes within the company. E-commerce is the process of buying and selling goods/services electronically which involves transactions using the internet, networks, and other digital technology. The use of e-commerce is one form of implementing technological developments to market products (goods or services) to all places and segments, both in physical and digital form, on a national and international scale. The presence of E-commerce technology means that various micro, small and medium businesses can enter the global market easily and even in real-time. Business people can easily build business partners and build good relationships with customers. E-commerce as a form of information technology progress provides many changes, reduces costs, makes promotion easier, opportunities to expand market share without having to have a large capital. By using e-Commerce on can expand market share so that it will have an impact on improving business performance.

#### *Financial Literacy*

Financial literacy is the ability to make effective decisions regarding the use of current finances and future financial management (Juwaini et al., 2022). Financial literacy is a life skill that everyone needs to have to be able to improve their standard of living and survive in today's complex economic environment. Financial literacy is knowledge about how to manage and design finances well which can help in making business decisions. Financial Literacy is knowledge, skills and beliefs that influence attitudes and behavior to improve the quality of decision-making and financial management to achieve community financial prosperity. Financial literacy is the ability to manage finances so that life can be more prosperous in the future. It is not just knowledge to manage finances, it can also be done in the behavior of each individual to increase financial literacy (Kulathunga et al., 2020; Desiyanti & Kassim, 2020). Financial literacy is the ability to understand financial conditions and financial concepts and to convert that knowledge appropriately into behavior. Financial literacy is important for every individual to have from an early age because it has long-term effects that are useful for the future. Financial literacy can be seen as a human capital investment that can help each individual make decisions about savings, credit and retirement in the future.

#### *Sustainability performance*

The term 'sustainability' can be rooted from the Sustainable Development introduction in 1987 by Brundtland commission of the United Nation emphasizing the development that not jeopardizing the ability for future generations to fulfill their needs. Sustainability had spread worldwide become a concept of development in all sector including corporation ever since. In the business area, the strategic value of corporate sustainability (Dyllick & Hockerts, 2002; Marrewijk, 2003) has grown over the last decades (e.g. Elkington, 1994; Issa & Hanaysha, 2023; Rezaee, 2016). The sustainability practice is proven to bring benefits to the company, namely increasing profits (Kiron et al., 2013), also it can improve the company's image and value

(Jaimes-Valdez & Jacobo-Hernandez, 2016). Sustainability performance means how well a company is conducting business operations in terms of taking care of the environment, being socially responsible, and economically sound (Schaltegger & Wagner, 2006). Therefore, one type of performance that has become very important lately is dealing with sustainability since corporations faced a high-pressure form stakeholder for being sustainable (Shrivastava & Addas, 2014). Performance is a formal effort carried out by a company to evaluate the efficiency and effectiveness of company activities that have been carried out in a certain period (Li et al., 2020; Li & Qian, 2020). Performance measurements are used to make improvements in operational activities so that they can compete with other companies, apart from that, measurements are also carried out to show investors, customers or the public in general that the company has good credibility. Each stage of business performance growth, including SMEs, is the result of two environments in which the company runs its business, namely the internal environment and the external environment (Mabula & Han, 2018). Successful business performance not only relies on economic performance but also social and environmental performance (Ngu & Amran, 2019). The continued growth of small businesses is very important because of their significant role in a nation (Assifuah-Nunoo, 2023).

Sustainability performance is important for sustainable business since it can ensure providing meaningful information to monitor and compare company's procedures of sustainability indicators to ensure the sustainability goals achievement (Sun et al, 2020). Sustainability-related policies which can enhance sustainability performance is vital for all organizations to survive and compete (Naradda Gamage et al., 2020). Business performance is the result of business activities achieved by business actors during a certain period. The business performance used in this research is measured comprehensively, using both financial and non-financial perspectives by adapting measures from three aspects, namely economy, social and environment. Environmental dimension in this study refers to sustainable productivity. We implement sustainable productivity indicator based on Owen et al, (2020) which consist of clean energy use, energy efficiency, renewable generation, waste management and recycling. Further, to measure the social dimension, this study follow (Searcy, 2012) who proposed social initiatives that the organizations engage in.

Some previous works consider corporate sustainability referring to a single dimension. In this regard, de Burgos Jiménez & Céspedes Lorente, (2001) examines the role of corporate operations in sustainability based only on environmental dimensions. Similarly, Zuo et al., (2012) focuses on the social impact of corporate activities and the measurement of corporate social performance. Such a practice shows an imbalance in achieving sustainability goals (Alhaddi, 2015) which places equal importance on each of the three dimensions - social, environmental and economic - in the construction of sustainability (Elkington, 1998). The sustainability performance can be measured using questionnaire surveys which is completed by managers or directors of the company (Sebhatu et al., 2009).

#### *The Relationship of E-Commerce to MSME Sustainability Performance*

E-Commerce is the process of buying, selling, transferring, or exchanging products, services or information via computer networks, including the Internet (Mawad et al., 2022). E-commerce allows companies to expand their business reach. As mentioned, e-commerce can be a great opportunity for MSMEs to market and develop their business. Utilization of E-Commerce for MSMEs can be done to expand market access, open employment opportunities and have a positive impact on various other supporting sectors for E-Commerce businesses which can contribute to accelerating Indonesia's economic growth. E-commerce provides an alternative trading system that is increasingly in demand along with the development of information and communication technology. E-commerce is one of the methods used by business people to carry out their business activities, both sales, purchases and others. MSME business actors have very minimal interest in using e-commerce. Research on interest in e-commerce has been carried out by the variable interest in using e-commerce which has a positive and significant influence on the financial performance of MSMEs. Interest in using e-commerce has a positive effect on the development of SMEs in Indonesia.

The exponential expansion of e-commerce highlights their capacity to support enterprises' efforts towards sustainability. As such, businesses are accountable for protecting the environment, stopping its deterioration, and guaranteeing its preservation worldwide (Ardakani et al, 2024). According to Carvalho et al. (2011), it is difficult for MSMEs of all sizes to implement a sustainable and environmentally friendly strategy in the current economic climate unless they use technology to promote their products to consumers. E-commerce helps retailers reduce their carbon footprint by making products and services more accessible to customers so they don't have to travel long distances to make purchases (Kawa, 2023). Chaudhary (2017) found a positive effect of e-commerce on company's sustainability performance in three dimensions namely economic, social and environment. In MSME context, the result of the study of Ardakani et al (2024) showed that there is a direct relationship between e-commerce adoption and sustainability performance of the SMEs. Adoption of e-commerce encourages corporate sustainability since it can save energy and waste expenses for businesses, improving environmental performance (Gao et al, 2023). Further, from the social dimension, Kwilinski (2023) proposed that in certain areas, e-commerce offers the ability to improve food distribution networks and increase access to wholesome food. As suggested by Callaway (2006), e-commerce can be regarded as a resource flow to and from a company. So, one resource that can be utilized by MSMEs to improve their sustainability performance is the use of E-Commerce. Based on the above study, the following hypothesis is formulated:

**H<sub>1</sub>:** *E-commerce has a positive and significant relationship with MSME sustainability performance.*

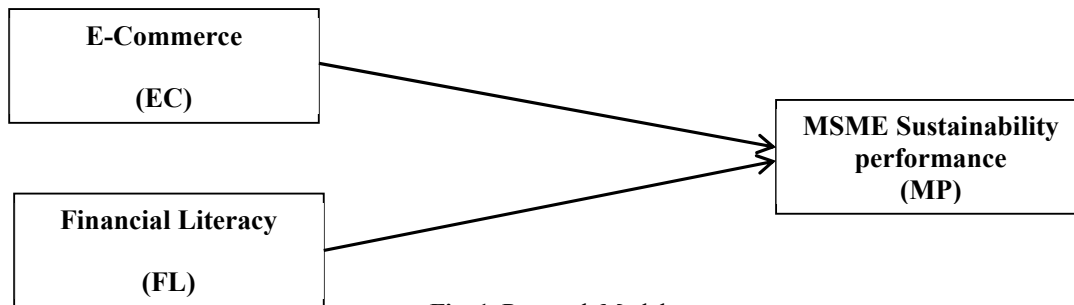
## The Relationship between Financial Literacy and MSMEs Sustainability Performance

Financial literacy is a significant driver of company' sustainability performance (Siddik et al, 2023). Singhal & Goel (2023) also reported a significant correlation between financial literacy and company's sustainable initiatives in the form of sustainable investment. A high level of financial literacy in MSMEs means that a business actor will further optimize his business performance including better financial performance and be more careful in carrying out his operations so that when a business actor has good financial knowledge, it will be easier to manage his business. According to Mulyadi et al. (2023), there is an influence of financial literacy on the performance of SMEs, especially on their financial performance. Further, financial literacy in the form of financial skill, financial knowledge, and financial behavior has a strong relationship with SMEs sustainable performance (Haleem, 2022). Similarly, Ye & Kulathunga, (2019) revealed a direct positive effect of financial literacy on SMEs' sustainability. It can be argued as the findings of Christopher & Nithya (2024) that advanced financial literacy increases the likelihood of investing in sustainable funds, choosing environmentally friendly products, and practicing responsible saving. Since SMEs owner usually engage directly in managing the business, the direct impact of owner or managers financial literacy on organization's sustainability is well documented in SME literatures (Meressa, 2023). Additionally, entrepreneurs with a high level of financial literacy can implement best practices in finance and economics, thereby advancing more sustainable development. (Siddik et al, 2023). To sum up, small business with high level of financial literacy will engage more in a sustainable finance and in return will have a sustainable performance. Based on the above study, the following hypothesis is formulated:

**H<sub>2</sub>:** *Financial Literacy has a positive and significant relationship with MSMEs Sustainability Performance.*

### 3. Method

This research method uses a descriptive method with a quantitative approach. The population in this research are MSME managers. In this study, researchers used a simple random sampling technique with a sample size of 478 MSME managers who have comprehensive knowledge regarding the operations and performance of MSMEs. The data collection technique is by observing and distributing online questionnaires via social media which is then measured using a 1-7 Likert scale. The data analysis technique uses Structural Equation Modeling (SEM) with the SmartPLS application version 3.0. Data analysis in this research uses the Partial Least Square (PLS) technique which is an alternative method based on the variance of the variables used. The stages of data analysis are validity testing, reliability testing and hypothesis testing. The independent variables in this research are e-commerce and financial literacy, while the dependent variable is the sustainability performance of MSMEs.



**Fig. 1.** Research Model

### 4. Result and Discussion

#### 4.1 Validity test

In Table 1, the outer loading value for each statement item for all variables shows that some are more than 0.5, and statement items that have a loading value > 0.5 meet convergent validity so they can be used for further analysis processes.

**Table 1**  
Loading Factors, Cronbach Alpha, CR and AVE

Variables	Items	Factor Loadings	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted
E-Commerce (EC)	EC1	0.903	0.876	0.817	0.865	0.754
	EC2	0.907				
	EC3	0.913				
Financial Literacy (FL)	FL1	0.939	0.891	0.852	0.818	0.718
	FL2	0.926				
	FL3	0.925				
MSME Sustainability Per- formance (MP)	MP1	0.920	0.846	0.817	0.819	0.713
	MP2	0.906				
	MP3	0.862				

Based on Table 1, it is known that all constructs show an AVE value of more than 0.50. This value meets the requirements by the specified minimum AVE value limit, namely 0.50. Therefore, it is concluded that all constructs meet the validity requirements. After knowing the square root value of AVE for each construct, the next stage is to compare the square root of AVE with the correlation between constructs in the model. Based on the data presented in Table 1 above, all composite reliability values of the research variables are  $> 0.7$ . These results indicate that all variables have met composite reliability, so it can be concluded that all variables do not have a high level of reliability.

#### 4.2 Discriminant validity

The discriminant validity test is used to check the discriminant between measurement scales in research. The Heterotrait-Monotrait (HTMT) discriminant validity limit value cannot be greater than 0.90.

**Table 2**  
Discriminant Validity

	E-Commerce (EC)	Financial Literacy (FL)	MSME performance (MP)
E-Commerce			
Financial Literacy	0.823		
MSMEs Sustainability performance	0.819	0.709	

**Table 3**  
Fornell–Larcker Criteria

	e-commerce	Financial literacy	MSMEs Performance
e-commerce	0.713		
Financial literacy	0.519	0.716	
MSMEs Sustainability Performance	0.519	0.467	0.817

**Table 4**  
HTMT Criteria

	e-commerce	Financial literacy	MSMEs Performance
e-commerce			
Financial literacy	0.564		
MSMEs Performance	0.546	0.675	

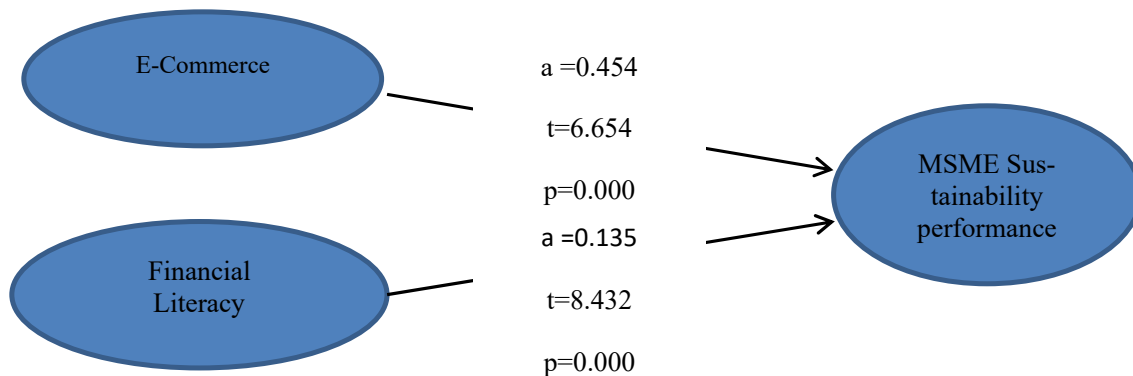
## 5. Hypothesis testing

Based on the analysis of the data that has been processed, the results can be used to answer the hypothesis in this research. Hypothesis testing in this research was carried out by looking at the t-statistic values and probability values. The research hypothesis can be declared accepted if the t statistic is  $> 1.96$  and the probability value is  $< 0.05$ . The following are the output results from SmartPLS which are shown in Table 5 and Fig. 2.

**Table 5**  
Hypothesis Testing

Correlation	Original Sample	t Statistics	P-Values	Result
E-Commerce $\rightarrow$ MSME performance	0.454	6.654	0.000	Significant
Financial Literacy $\rightarrow$ MSME performance	0.135	8.432	0.000	Significant

Hypothesis testing can be seen from the t-statistic value and probability value. To test the hypothesis, namely by using statistical values, for  $\alpha$  (5%) the t-statistic value used is 1.96. So the criteria for accepting/rejecting the hypothesis are  $H_a$  accepted and  $H_o$  rejected when the t-statistic  $> 1.96$ . To reject/accept a hypothesis using probability,  $H_a$  is accepted if the p-value  $< 0.05$ .



**Fig. 2.** Hypothesis Testing Model

### 5.1 The Relationship of E-Commerce to MSMEs Sustainability Performance

The test results show that interest in using e-commerce has a positive effect on the sustainability performance of MSMEs. The existence of e-commerce will be able to help MSMEs in carrying out transaction processes, including sales, purchases, and marketing, which are carried out using Internet media. Therefore, with technology utilized by business actors, it will be easier to promote productivity growth and improving innovation which provide structural and technological changes generate the creation of better jobs (Fedirko et al., 2021). Such a role refers to social performance. Similarly, the technology utilization will be able to improve performance of MSMEs (Purwanto et al., 2024). E-commerce is a technology that can be used by business people to make it easier to carry out business-related transactions. E-commerce is a tool that can be used by business people to exchange goods, information and others, besides that it can also improve performance just by utilizing e-commerce. Based on the explanation above, it can be concluded that e-commerce is a transaction process, including sales, purchases and marketing, which is carried out using the internet to carry out transactions to make it easier for business actors, especially MSME business actors (Oscarius et al., 2021).

Apart from that, the use of e-commerce has benefits other than making it easier for business actors, it also helps in developing the business and market share of the business actor which will later have an impact on increasing the income of the business actor (Prayuda et al., 2024) and also has an impact on the ecology and community (Kawa, 2023). The E-Commerce system deals with digital transactions for various organizations and individuals and can reach consumers and the wider community so that it has the opportunity to increase the growth of its target market. This transaction model allows commercial transactions to cross national and cultural boundaries much more conveniently and cost-effectively than in traditional trade frameworks. This technological mechanism can be operated anywhere in all countries in the world because it has universal standards. The presence of the E-Commerce system allows various micro, small and medium companies to enter the global market easily and even in real-time (Praditya, 2024). Which delivery, packaging, and fitting option customers select for their purchases will determine the amount of carbon footprint they leave behind after making the purchase (Revinova, 2021). E-commerce offers a solution to these issues by removing the need for the round trip to the store, which logistics firms can accomplish more quickly (Kawa, 2023). Therefore, collaboration among business actors is needed. All business people easily establish business relationships with other businesses and have direct relationships with consumers. The E-Commerce system as a form of information technology progress has brought several changes, including reducing interaction costs between buyers and sellers, interaction easier without time and place limitations, more alternatives and making promotion easier, opportunities to expand market share without having to have capital and large investment, business transparency and ease of providing services to consumers or customers. By using E-Commerce MSMEs can expand market share (Saeed et al., 2005), providing fair prices and contributing to sustainable development especially in supporting to food security (Kwilinski, 2023).

E-commerce has a significant influence on the sustainability performance of MSMEs. E-commerce has a significant impact on organizational sustainability performance since the adoption of e-commerce promotes organizational sustainability (Gao et al, 2023). This is due to the optimal use of E-commerce in business activities. Research suggests that MSMEs can achieve sustainability by moving to an online environment, developing digital strategies, and leveraging IT for evaluation and digital value chain models (Su et al, 2022). MSMEs have the same opportunity to use e-commerce as an alternative to maximize performance (Piyani & Chandrarin, 2023). However, not all MSMEs have the capability to use and utilize e-commerce optimally. Adoption of e-commerce can lower energy and waste expenses for businesses, improving environmental performance and guaranteeing corporate sustainability (Gao et al, 2023). Similarly, Oláh et al, (2018) suggested companies in utilizing e-commerce must prioritize environmental sustainability by putting pressure on logistic service providers to reduce their cost-driven charges and offer alternate transportation options when feasible. User knowledge and expertise can be one of the causes of differences in the ability to operate e-commerce. So, this affects the performance of MSMEs.

Further, many advantages and benefits are provided by E-commerce utilization. For MSMEs, implementing E-commerce can improve the quality of customer service. Customers no longer need to visit business outlets and queue just to get the product they want. They can make transactions wherever and whenever they want. Support for providing access to more detailed information for customers or potential customers is also provided by E-commerce. They can easily obtain information both about prices and product details through one of the E-commerce sites used by MSMEs players. MSMEs can also reduce promotional costs through marketplace applications to present various sales promotion programs to a wide range of potential consumers efficiently (Purwanto et al., 2023). MSMEs can carry out promotions 24 hours non-stop. This transaction model allows transactions to cross regional boundaries much more easily and cost-effectively than traditional trading. so that E-commerce is present as an effective marketing strategy for marketing local products. Intensive use of E-Commerce technology can increase competitiveness and increase value chain efficiency for companies. E-commerce offers various opportunities for MSMEs without having to spend more to increase work efficiency, both labor efficiency and time efficiency (Oscarius et al., 2021).

The positive impact of e-commerce on the sustainable growth of MSMEs is numerous. The following is what has been concluded from the results of the literature analysis. Firstly, is from the economic dimension view point. This is due to the large number of e-commerce users in Indonesia and will continue to grow. If MSMEs can fulfil the factors for using e-commerce, then income will increase. Wide marketing reach. The market reaches that e-commerce can achieve can be greater than that

of traditional markets. This is because e-commerce is very universal and can be accessed anywhere and by anyone. E-commerce itself does not have a physical place that can be seen. E-commerce has been based online. Because of this, people who want to buy goods don't need to bother visiting the place to buy the desired goods. Further, e-commerce can bring the ease of transactions (Saeed et al., 2005) since it is flexible and relevant due to rapid technological developments. Secondly, from the social perspective, e-commerce encourages the food supply chain to change, enhancing food security and achieving zero hunger (Kwilinski, 2023). Further, e-commerce social performance can be achieved by providing equal access for all labor markets since the market of e-commerce is a fast-growing one, and the demand for new employees is very high (Revinova, 2021). Thirdly, from the environmental dimension, e-commerce helps retailers reduce their carbon footprint by giving customers easier access to products and services, reducing the need for customers to travel long distances to make purchases (Kawa, 2023). Additionally, e-commerce can address the direct relationship between economic expansion and environmental deterioration by increasing resource efficiency and enhancing more sustainable lifestyles (Revinova, 2021).

### *5.2 The Relationship of Financial Literacy to MSME Sustainability Performance*

The test results show that financial literacy has a positive effect on the sustainability performance of MSMEs. This is because financial literacy is knowledge, skill, attitude and behavior in dealing with financial issues well. After all, knowing good financial management will make it easier to make strategic decisions. Because with a higher level of financial literacy, MSMEs can optimize their sustainability performance. As suggested by Lambert et al. (2023) that financial literacy plays a key role in enabling MSMEs to make informed financial decisions, effectively manage resources, and promote sustainable development. It is necessary to understand the level of financial literacy for business actors. Business owners need to understand financial knowledge to have better company performance (Setiawan et al., 2023). This allows MSMEs to experience business growth. Financial literacy influences a person's way of thinking about financial conditions and influences strategic decision-making in financial matters and better management for business owners. The ability to manage a business owner's finances is very necessary for business performance and business continuity (Su et al., 2021). This research found that entrepreneurs who more possess higher financial literacy can effectively manage resources and determine appropriate financial decisions, as a result the sustainability performance is greater. A high level of financial literacy means that a business actor will better optimize his business performance and be more careful in his operations. So that if a business actor has good financial knowledge, it will be easier to manage his business. This is also supported by several previous studies providing evidence that when business actors in the MSMEs sector have good financial literacy skills, they will making proper business decisions and financial management which will lead to development of MSMEs that will improve over time. There is mixed evidence about the influence of financial literacy on MSME's performance (Tanko, et al., 2021). Therefore, business actors need to understand how financial literacy affects SME performance in terms of loan repayment. With good financial literacy, business performance management will also be good, seen in terms of loan payments, the higher the level of financial knowledge, the loan payments will also be managed appropriately and efficiently, so that financial management for production will also be managed well. The research results show that financial literacy is at the highest level if business sustainability is also at the highest level. The higher the level of financial literacy of the business owner or manager, the more likely the business owner will have the ability to manage his business well with business and financial decisions towards increasing the sustainability of his business. Higher financial knowledge for business managers will increase the business's ability to survive amid a crisis and will ultimately make the business have long-term sustainability (Usama & Yusoff, 2019). This is also supported by previous research from several experts, that there is an influence of financial literacy on business sustainability. The better the level of financial literacy, the ability to improve business continuity will also improve. that there is an influence of financial literacy on business sustainability. Yakob et al. (2021) found that the survival of MSMEs is in the hands of the business owner. Research clearly shows that MSME owners are advised to master financial literacy, including financial ratios that enable understanding of their financial statements. Financial literacy has a positive effect on company growth. From the economic dimension, increased financial literacy causes business actors to make financial reports more frequently. Tuffour et al. (2022) found that entrepreneurs who produce financial reports more often will have a higher probability value and be less likely to close their business and be more likely to have long-term business continuity. Consequently, such an economic performance leads to social performance, financial literacy can reduce or even end poverty. Financial literacy influences the financial behavior of MSMEs players, furthermore, understanding a low level of financial literacy influences the ability to manage finances. There is a low level of financial literacy among new micro-business owners. This study empirically shows that most small businesses show signs of growth. However, the signs of growth are more dominant along the financial and strategic growth dimensions rather than the structural dimensions. Financial literacy is knowledge, skills and beliefs that influence people's attitudes and behavior to improve the quality of decision-making and financial management to achieve prosperity and in this study, sustainability. There are three main points emphasized in financial literacy, namely knowledge, skills and intuition in financial matters. When people have good financial literacy, their knowledge of finance, their skills in managing finances based on their financial knowledge, and their confidence in financial service institutions can be said to be good. The result is consistent with Ye & Kulathunga (2019), that it helps entrepreneurs make their case to bankers during a client assessment, and it allows them to handle the challenges of fluctuations in the business and financial markets.

MSME players who have a good level of financial literacy also tend to have a concept of sustainable business activities. To improve performance, companies still need capital to finance their company operations and need good financial literacy to be able to access existing financial sources (Tanko, et al., 2021) and to embrace sustainable long-term growth strategies for the



firm (Burchi et al., 2021). The influence of financial literacy on the performance of MSMEs shows that the greater the level of financial literacy in MSMEs, the more their performance will increase. The same thing for understanding beginner MSMEs must also start from the first establishment of their business. Novice entrepreneurs need to understand financial literacy. By utilizing or optimizing knowledge and implementation of financial literacy, the level of financial literacy among micro, small and medium enterprises will increase and as a result business performance can improve. Financial literacy must also be possessed by both MSMEs owners and management, even though they also hire experts to manage their organization finances, it will be difficult for companies to grow if they only rely on experts without good financial literacy (Tuffour et al., 2022). In carrying out these management activities, business actors carry out financial management such as making savings, loans and investments, which can provide business benefits and improve their business performance. Financially literate people must be able to analyze, evaluate, and explain personal financial situations impacting their material well-being, making sound financial decisions, and convey money and financial difficulties without dissatisfaction (Orton, 2007). Additionally, they may implement financial and economic best practices, enhancing greater sustainable development (Siddik et al, 2023).

## 6. Theoretical Implications

The findings of this research have important implications for academics, MSMEs managers and marketing practitioners, namely through the promotion of e-commerce and financial literacy to improve the Sustainability Performance of MSMEs. The findings of this research support the previous theory that promotion through e-commerce will improve the performance and sustainability of MSMEs. Financial literacy theory will also encourage increased performance and sustainability of MSMEs. The adoption of e-commerce will encourage increased competitiveness of MSMEs.

## 7. Managerial Implications

The following are several solutions that are quite crucial to overcome the impacts and problems arising from the emergence of e-commerce on MSMEs: The government and policymakers should organize training on the use of e-commerce for MSMEs so that they can use and exploit it wisely and optimally. In this sense, e-commerce adoption could provide MSMEs with a sustained competitive advantage, if they can properly leverage the technology (Chen & Zhang, 2015). In addition, special attention is needed to increase internet network coverage in remote areas. For MSMEs, it is hoped that they will be more active and open in adopting e-commerce. They are also advised to pay attention to product quality so that it remains well-known to buyers. Although MSMEs have the same opportunity to use E-commerce as an alternative to maximize performance. However, not all MSMEs have the capability to use and utilize E-commerce optimally. User knowledge and expertise can be one of the causes of differences in the ability to operate E-commerce. So this affects the performance of MSMEs. e-commerce has a significant influence on the performance of MSMEs because the presence of e-commerce is one of the marketing alternatives used to reach more customers. MSMEs can carry out promotions anywhere and at any time 24 hours non-stop. This transaction model allows transactions to cross regional boundaries much more easily and cost-effectively than traditional trading. To be sustainable, MSMEs which adopt e-commerce must take an environmentally friendly approach to the sort of packaging used and the quantity, giving emphasis to reusable and recycle packaging. Based on the results of the research and observations that have been carried out, researchers can provide some general input for MSME players to further improve their financial understanding. So, we can manage our business finances better and can have a growing business in the long term. For further research, larger samples can be utilized. The government and banks need to pay more attention to the MSME sector as the MSME sector is very important. For example, the provision of capital has been increased further. To improve performance, companies need capital to finance their company operations and need good financial literacy to be able to access existing financial sources. The positive and significant influence of financial literacy on the sustainability performance of MSMEs means that the greater the level of financial literacy in MSMEs, the more their sustainability performance will increase. The same thing for MSMEs beginners' possession of financial literacy must also start from the first establishment of their business. The level of financial literacy in micro, small and medium business actors show that by utilizing or optimizing knowledge and implementation of financial literacy information, business sustainability performance can improve. Financial management is useful for maximizing profits or gains and minimizing costs for decision making. This understanding of financial literacy must also be possessed by both the owner and management, even though they also call-in experts to manage finances, it will be difficult for MSMEs to develop if they only rely on experts without sufficient education by the MSMEs owners. In carrying out these management activities, business actors carry out financial management such as making savings, loans and investments using their risk management understanding and abilities resulting MSMEs to achieve sustainability. Further, financial literacy can help MSMEs to develop and apply effective financial strategies and plans (Lambert et al., 2023) which can provide business benefits and improve the sustainability business performance.

## 8. Limitations and future research directions

This empirical study provides a further understanding of the adoption of e-commerce and financial literacy on the sustainability performance of MSMEs. This research has limitations in providing further research opportunities, namely that this study is exploratory, and the conclusions cannot necessarily be applied to other industrial sectors and geographical areas. This

research focuses on the MSMEs retail sector so next research should expand to the services and manufacturing sectors. Research respondents can be added, and further research can be applied in other areas.

## 9. Conclusion

The use of e-commerce can have a positive impact on MSMEs, such as increasing income, expanding marketing reach, saving costs because it does not require a physical store, and can also make it easier for MSMEs and buyers to carry out transactions. Not only does it have a positive impact, but the use of e-commerce by MSMEs can also have negative impacts such as tightening competition because of the wide reach of e-commerce, the emergence of perpetrators of theft of ideas and goods because they can be easily accessed freely by the wider community, and the emergence of fraud that can occur because of technological developments. The solution that the government can take to deal with the impacts and problems that arise due to the use of e-commerce is by creating a training forum on the use of e-commerce for MSMEs so that MSMEs can use e-commerce well and optimally. Apart from that, the solution that can be taken by MSME players is to be more open to technological developments, especially the use of e-commerce, so that they can continue to follow developments. Financial literacy has a positive and significant influence on MSMEs' sustainability performance since it can foster MSMEs to make effective plans and strategies regarding financial matters. The role of financial literacy in the sustainability performance of MSMEs shows that the greater the level of financial literacy in MSMEs, the more their sustainability performance will increase. The same thing goes for financial literacy of MSME beginners must also start from the first establishment of their business, the level of financial literacy in micro, small and medium business actors. shows that by utilizing or optimizing knowledge and implementation of financial literacy information, business sustainable performance can improve. Financial management is useful for maximizing profits or gains and minimizing costs for decision making. This understanding of financial literacy must also be possessed by both the owner and management, even though they also call-in experts to manage finances, it will be difficult for SMEs to develop if they only rely on experts without sufficient education by the SME owner. In carrying out these management activities, business actors carry out financial management such as making savings, loans and investments, which can provide business benefits and improve their business sustainability performance.

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