



## Financial Literacy, Technology, Competitive Advantages and Implications to MSMEs Performance

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### Abstract

**Purpose** – This study aims to analyze the effect of the application of financial literacy and technology on the competitive advantage and performance of MSMEs in the Riau Region.

**Methodology** – The population consists of 341,695 MSMEs, and the sample size of 400 MSMEs is determined using Slovin Formula. The data used is primary data, in which respondents will be given questionnaires and interviews will be conducted with several MSMEs actors.

**Results** – In light of the analysis conducted using SEM-PLS, it was determined that financial literacy, technology, and competitive advantage affect the performance of MSMEs in the Riau Region. Financial literacy and technology influence the competitive advantage of MSMEs in the Riau Region. The connection between technology and financial literacy to performance is mediated by competitive advantage.

**Originality** – The study model was developed by adding Financial Literacy as an exogenous variable and competitive advantage as a mediating variable influencing company performance.

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## 1. Introduction

The COVID-19 pandemic has had a significant impact on the sustainability of Micro, Small, and Medium Enterprises (MSMEs) in Indonesia. The economic crisis experienced by MSMEs poses a major threat to the national economy, considering that MSMEs are the driver of the domestic economy and the largest absorber of labor in recent decades. The Rapid Study of the Impact of the COVID-19 Pandemic on the Performance of Indonesian MSMEs conducted by LIPI in 2020 on 679 MSMEs Actors in Indonesia, showed that 94.69% of businesses experienced a decline in sales during the pandemic. The COVID-19 pandemic caused operating profits to decrease significantly due to fixed or even increased production costs while sales decreased. To accelerate economic recovery after the COVID-19 pandemic, the development of the digital economy has been prioritized as the main objective of Indonesia's economic transformation process. The development of the digital economy is no longer inevitable a shift in people's behavior, conventional shopping patterns, and incusing digital platforms (Alsedrah, 2023; Haq & Huo, 2023; Kawira et al., 2019). People are no longer unfamiliar with various advancement occuring in the financial technology and electronic commerce (e-commerce) sectors (Rahadjeng et al., 2023; Rofiqoh, 2023).

According to Temasek & Bain, the valuation of Indonesia's digital economy grew by 49% in 2021 to USD \$70 billion and is predicted to be USD \$146 billion by 2025. The value of Indonesia's digital economy, at USD \$70 billion, contributes 6% to Indonesia's GDP, and it is believed that this value will continue to increase alongside with the development of digital technology in Indonesia. Technology is the overall means to provide goods necessary for the survival and comfort of human life (KBBI, 2016). In the past, the meaning of technology was only limited to objects form, such as machinery and equipment. However, the meaning of technology has expanded to include not only limited to tangible objects but also intangible objects, such as methods, science, software, and others (Mabula & Han, 2018; Radicic & Djalilov, 2019; Rahmajati & Kusuma, 2023). In the era of digital economy, it is crucial for traditional MSMEs to transform into digital MSMEs. By utilizing digital technology, MSME operators can have the same opportunities as large businesses to sell their products. The application of technology is expected to enhance competitive advantage and the performance of these MSMEs (Teng et al., 2022; Yaskun et al., 2023).

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Technology plays an important role in creating competitive advantage according to Resource-Based View (RBV) theory. In RBV theory, it is crucial for MSMEs to manage technology as a valuable and unique resource. The application of technology must align with the business strategy and characteristics of the MSMEs themselves. By using technology wisely, MSMEs can improve business performance, increase competitiveness, and achieve competitive advantage in an increasingly digital and competitive business environment (Hariadi et al., 2022; Kulathunga et al., 2020). Several studies have examined the influence of technology on the performance of MSMEs, but the results remain inconsistent. Research by Kawira et al. (2019), Shettima & Sharma (2020), Susilatri et al. (2022), and Turais (2020) demonstrates that technology affects performance. Research by Astuti & Sembiiring (2024) recommends improving marketing performance by keeping up with technological developments. Research by Augustinah, et al. (2022) shows that technological innovation has a significant impact on the performance of SMEs. In contrast, the findings of Abebaw et al. (2018) and Ifeoma & Chikwado (2019) indicate that technology has no effect on the performance of MSMEs.

Another factor to consider in improving performance is the presence of financial literacy. Financial literacy is the ability to understand how money works, which requires proficiency in the knowledge and application of financial concepts and principles, such as financial planning, compound interest, debt management, profitable savings strategies, and the value of money generally (Buchdadi et al., 2020; Irikefe & Opusunju, 2021; Saskia et al., 2023). To better manage

their finances and allocate their income toward more profitable investments rather than consumption, individuals must become financially literate (Hussain et al., 2018; Rofiqoh, 2023). When it comes to applying the fundamentals of sound accounting and financial management, microbusiness players frequently overlook the issue of financial management (Anwar et al., 2020; Risnaningsih, 2017). Financial literacy encompasses the knowledge, skill, and belief that shapes individuals' attitudes and behaviors, improving decision-making and financial management to achieve prosperity (Segura & Zamar, 2019).

Resource-Based View (RBV) theory, improving the performance of an MSME derives from the unique resources and capabilities owned by the business. In the context of financial literacy, the ability to understand, analyze, and manage financial information becomes a relevant and valuable resource for achieving competitive advantage and improving the performance of these MSMEs. Research by Rosliyati & Iskandar (2022) and Romain et al. (2021) shows that financial literacy affects the performance of MSMEs. In contrast, research by Naufal & Purwanto (2022) and Prisca (2016) indicates that financial literacy has no effect on performance.

Given these mixed results, the connection between financial literacy and performance needs further examination in order to gain additional insight. Moreover, prior studies have employed overly simplistic models that only investigate direct relationships, while potential mediating mechanisms have been overlooked. The gap in the current research highlights that many factors potentially affecting MSMEs performance have not been considered. Additionally, previous research has not accounted for other factors that might facilitate the connection between technology and financial literacy on performance. Therefore, more comprehensive research is needed to examine the influence of both technology and financial literacy on performance.

This study aims to examine the influence of technology and financial literacy on performance, with competitive advantage serving as a mediating factor. Competitive advantage is the ability of a company to create superior value and innovate in terms of price and quality, as both price and quality are crucial considerations for the purchase of a product or service (Ahmatang & Sari, 2022; Dahlan et al., 2023). Competitive finance needs to be considered by a company so that performance can increase. Competitive advantage is at the heart of performance to face competition and is the ability to formulate strategies that put in an advantageous position with regard to competitors (Le et al., 2023; Swastuti, 2020). According to Resource-Based View (RBV) theory, a business' competitive advantage is based on the unique resources and capabilities. These resources and capabilities form a foundation for advantage that is difficult for competitors to replicate, enabling businesses to achieve better and more sustainable performance. Research by Potjanajaruwit (2018) found that competitive advantage positively affects the performance of start-up companies in Thailand. In addition, several studies demonstrate that technology influences competitive advantage (Dewi, 2022; Fitriana et al., 2019). Furthermore, Romain et al. (2021), as well as Rosliyati & Iskandar (2022) demonstrate that financial literacy also affects competitive advantage.

Building regarding the outcomes of these studies, this research aims to develop a model to analyze the impact of technology and financial literacy on the performance of MSMEs, with competitive advantages serving as mediating factors. This research will test and analyze the direct influence of technology, financial literacy, and competitive advantage on performance. In addition, we will test whether technology and financial literacy affect performance through competitive advantages.

Financial literacy is a fundamental factor for economic growth and financial stability. MSME actors need financial knowledge to benefit from the business field they are engaged in. According to Prakoso (2020), financial literacy encompasses knowledge, skill, and belief that

shapes individuals' attitudes and behaviors, improving decision-making and financial management to achieve prosperity. A lack of understanding of finance (financial literacy) can lead to inappropriate decisions and negatively impact a person's financial well-being (Chen & Volpe, 1998; Fitriana et al., 2019; Putri, 2022; Sianipar et al., 2024; Turais, 2020; Yang et al., 2018).

### **H<sub>1</sub>: Financial literacy affects competitive advantage**

An individual's ability to make effective decisions to improve company performance depends on their level of financial literacy. Company performance is the level of achievement of results to realize the company's goals and overall activities undertaken to improve the performance of the company or organization (Islami, et al., 2020). Higher financial literacy typically leads to better financial decisions, and vice versa. Financial decisions significantly impact the sustainability of a company. According to RBV theory, resources are crucial and should be utilized and adjusted according to the internal and external conditions of the company (Putri, 2022; Rosliyati & Iskandar, 2022; Romain et al., 2021; Septiani & Wuryani, 2020).

### **H<sub>2</sub>: Financial literacy affects the performance**

Competitive advantage is the company's ability to achieve significantly higher performance and excel over competitors in similar industries by maximizing the management of its unique characteristics and resources. The more companies integrate technology in their business, the greater the potential to enhance its competitive advantage (Asri, 2021; Desmiyawati et al., 2022; Dewi, 2022; Fitriana et al., 2019; Shettima & Sharma, 2020).

### **H<sub>3</sub>: Technology affects competitive advantage**

In the era of the digital economy, it is essential for traditional MSMEs to transform into digital MSMEs. By utilizing digital technology, MSME actors can gain the same opportunities as larger businesses to sell their products. Digital technology enables them to promote products more widely at a lower cost, thereby reaching a broader market and improving the company's performance (Dewi, 2022; Kawira et al., 2019; Shettima & Sharma, 2020; Turais, 2020; Mahliza, 2019).

### **H<sub>4</sub>: Technology affects the performance**

Competitive advantage is the ability to outperform competitors by offering unique value to consumers through more competitive prices or superior benefits (Kotler & Armstrong, 2005). Companies with a competitive advantage create greater value, thereby contributing to improved performance. (Hapsari, 2018; Irawan & Sudarmiatin, 2024; Kasasbeh et al., 2017; Potjanajaruwit, 2018; Putri, 2022).

### **H<sub>5</sub>: Competitive advantage affects the performance of MSMEs**

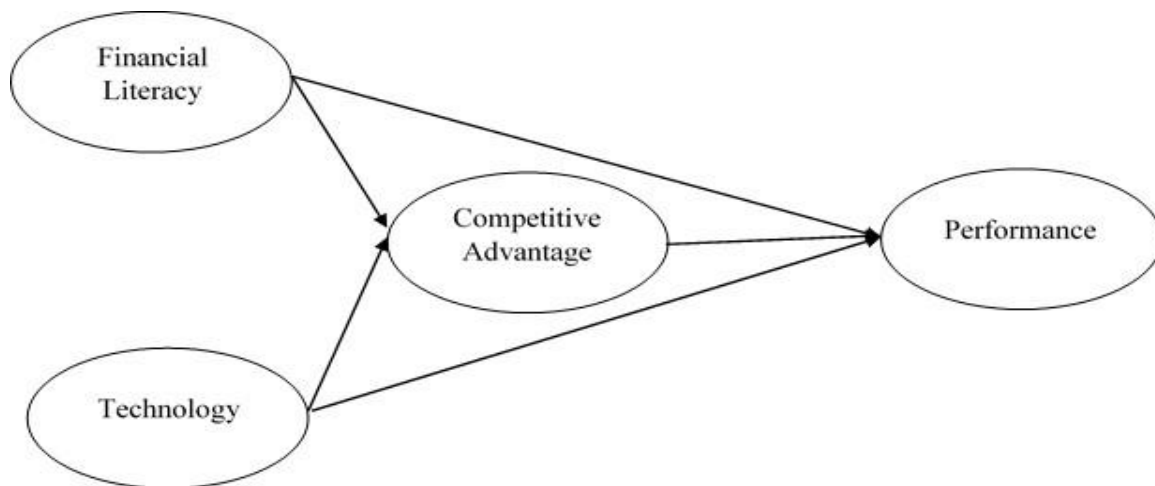
Companies need to build and develop strategies to gain advantages in various aspects. A company can be considered superior if it possesses unique characteristics, such as special competencies. Additionally, companies should focus on the resources they have, such as human resources with sufficient financial understanding. Good financial literacy can lead to improved company performance. This aligns with the findings of Resmi et al. (2021), which shows that competitive advantage can mediate the influence of financial literacy on the performance of MSMEs.

### **H<sub>6</sub>: Competitive advantage mediates the impact of financial literacy on the performance**

In the face of increasingly fierce business competition, having the right strategy is crucial for a business to survive. In the era of digitalization, one effective way for companies to stay competitive is by using technology. Technology can be used as a tool to reach a wider market, and implementing this strategy can significantly improve business performance (Muis et al., 2024; Yuliantari & Pramuki, 2022).

**H7: Competitive advantage mediates the impact technology on performance**

The model framework is presented as follows:



**Figures 1.** Model Framework

Based on the phenomenon and the framework of thinking described above, we build a model which describes the direct influences of technology, financial literacy, and competitive advantage on performance. The model also describes the indirect influences of technology and financial literacy on performance through competitive advantage.

## 2. Research Methods

The populace for this research consists of MSMEs actors in the Riau region, totaling 341,695 MSMEs. MSMEs in Riau have shown consistent growth of 5-10 percent annually, indicating a significant expansion. The distribution of Riau MSMEs includes 77,156 in the trade sector, 19,656 in the services sector, 12,760 in the production sector, 11,320 in the industrial sector, and the rest in other sectors (Badan Pusat Statistik, 2021). The sample size this study is 400 MSMEs determined using the Slovin Formula. Sampling was conducted by purposive sampling, with criteria including MSMEs registered with Riau Region Cooperative and MSMEs Office, and those using technology in marketing their products. The type of data uses primary data obtained directly from the field through questionnaires.

Data analysis uses Structural Equation Modeling (SEM) based on Partial Least Squares (PLS) with SmartPLS 4.0 software. The study's application of PLS-SEM seek in order to evaluate the predictive connection in between constructs by examining at the relationship or influence among these constructions (Hamid & Anwar, 2019). Additionally, PLS is used to explore theoretical extensions of existing theories.

**Table 1.** Operational Definitions and Measurement of Variables

Variable	Definiton	Measure
<b>Performance</b>	The result of optimal work performance carried out by an individual, group, or business entity.	The indicators used are adopted from Cho & Lee (2018) and include 8 indicators: ROA, ROE, revenue growth and return on sales, loyalty, competitiveness, stability, and customer satisfaction.
<b>Competitive Advantage</b>	Intense business competition compels business actors to develop advantages and competitive strategies to survive and succeed. Competitive advantage includes several elements, one of which is the products' uniqueness reflecting the entrepreneurs' ability to adapt to customers' preferences (Jyoti & Sharma, 2012).	The competitive advantage variable is measured using three indicators: (1) Differentiation, which is a business strategy employed by companies to produce products with unique characteristics that distinguish the company from other competitors; (2) Cost leadership, which refers to company's ability to produce at a lower cost than other competitors; (3) Focus (Haris, 2018).
<b>Technology</b>	Digital technology refers to a technology whose that operates automatically system (computer/laptop/smartphone and others).	Indicators consist of (1) Hardware Technology such as computer/laptop, smartphone, internet; (2) Software used in technology, including e-commerce, Whatsapp, Facebook, Google, and Instagram.
<b>Literacy of Financial</b>	Refers to the knowledge and abilities that individuals have for managing and planning finances effectively, whether for personal or business purposes, which aids in making decision.	Indicators consist of: (1) Knowledge; (2) Behavior; (3) Attitude (Wulandari, 2019).

Source: processed data

The tests be carried out using SEM PLS, according to Hair et al., (2021), include the evaluation of the measurement model (Outer Model Analysis) and the evaluation of the structural model (Inner Model Analysis). The evaluation of the Measurement Model (Outer Model Analysis) consists of assessing convergent validity, composite reliability, and discriminant validity. The evaluation of Structural Model (Inner Model Analysis) involves examining collinearity, R-Square ( $R^2$ ) and testing the significance of path coefficient (hypothesis testing).

### 3. Results and Discussions

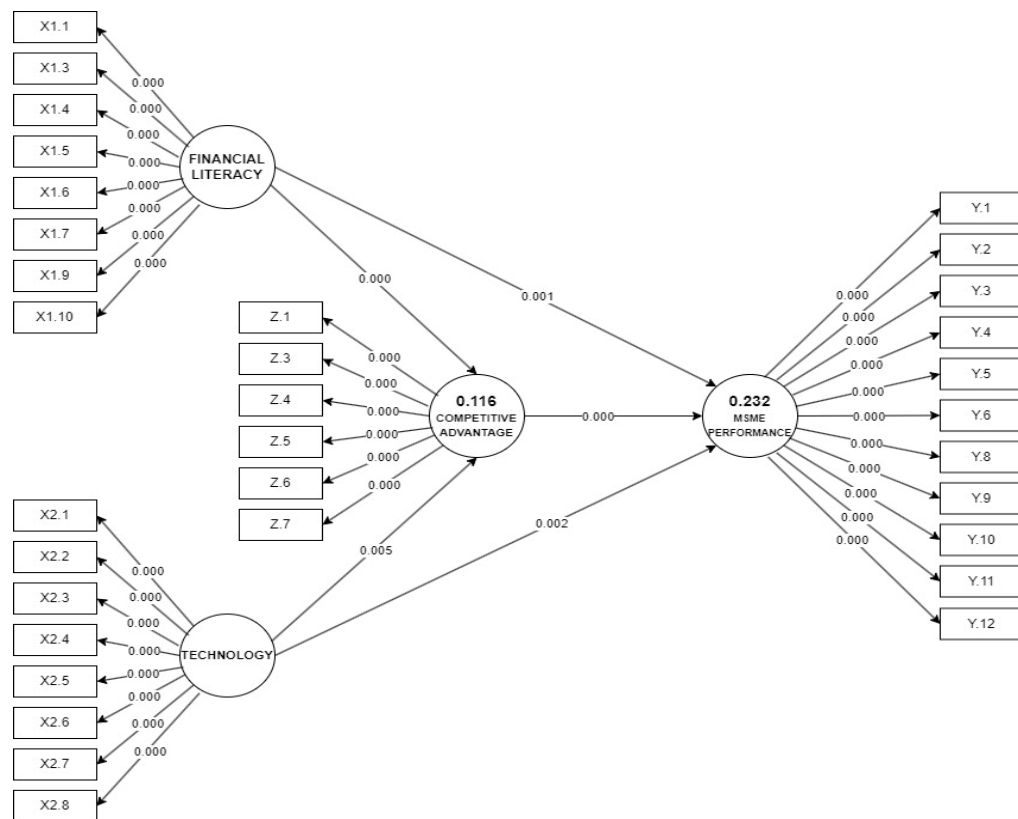
#### 3.1 Attributes of Participants

The participants in this research are MSMEs in the Riau region those who have signed up with the cooperative and MSME Office and have used technology to market their products. Among the 400 business actors surveyed, 36% were male, 64% were of the female gender. Most of age the respondent 20-40 years (76%) with 24% aged 40-60 years old. In terms of educational background, 81 % of business actors have a high school or equivalent education, while 19% hold a bachelor's degree. Regarding MSME types, 55% are medium enterprises and 45% are small businesses.

#### 3.2 Descriptive Statistics

Partial Least Square (PLS) is used for Multivarial Analysis in the second generation, employing structural equation model (SEM). There are two main stages in analyzing SEM-PLS:

the measurement model analysis (Outer Model) and the structural model analysis (Inner Model) (Juliandi, 2018). Figure 2 illustrates the research design, depicting the influence of the variables to be tested and the indicators associated with each variable.



**Figure 2.** Research Model

From the Figure above, it can be seen that the direct or indirect influence of technology and financial literacy on competitive advantage and performance is significant. This can be seen from the significance value of  $< 0.05$ . Competitive advantage also affects performance, this means that it can be used as a mediating variable in the relationship between independent and dependent variables.

### 3.3 Outer Model Analysis

Composite reliability is a measure used to assess the consistency cross-item results on the same test. It determines if items are measuring the same construct consistently, based on the correlation between items. A structure variable is considered reliable if the composite reliability value is greater than 0.6 (Hair et al., 2017). As shown in Table 2, the composite reliability of all variables is above 0.6, indicating that every variable is trustworthy for testing.

**Table 2.** Composite Reliability

	Alpha of Cronbach	Rho_A	Composite Reliability	A V E
Competitive Advantage	0.653	0.655	0.776	0.367
Performance	0.696	0.701	0.781	0.248
Financial Literacy	0.599	0.602	0.737	0.262
Technology	0.779	0.787	0.836	0.391

Source: processed data

The rule of thumb used for the Composite Reliability value is greater than 0.7 (Ghozali, 2016). From the test results, it can be seen that the Composite Reliability value competitive advantage, performance, financial literacy and technology are greater than 0.7. Thus, it can be concluded that all constructs have good reliability.

Convergent validity is the degree to which a measurement is positively correlated with alternative measurements of the same construct. To assess whether an indicator of a construct variable is valid, we look at the outer loading value. An indicator is considered valid if the outer loading value is greater than 0.7 (Hair et al., 2021). Outer loading values greater than 0.7 are ideal, but values 0.4 and 0.7 can also be considered acceptable, especially in new or exploratory research. However, if the outer loading value is very low ( $<0.4$ ), the indicator should be removed from the variable (Hair et al., 2017). The test outcomes show that the outer loading value are as follows: of Financial Literacy ranges from 0.419 to 0.587, Technology from 0.519 to 0.668, Competitive Advantage from 0.525 to 0.664, and Performance from 0.414 to 0.592 or  $> 0.4$ . Since all values are exceeding 0.4, the indicators for these variables are considered valid.

**Table 3.** Discriminant Validity

	<b>Competitive Advantage</b>	<b>Performance</b>	<b>Financial Literacy</b>	<b>Technology</b>
Competitive Advantage				
Performance	0.570			
Financial Literacy	0.486	0.529		
Technology	0.342	0.402	0.526	

Source: processed data

To assess whether an indicator of a construct or latent variable has good discriminant validity, the Heterotrait-Monotrait Ratio of Corelation (HTMT) criterion is used. According to this criterion, if the HTMT value is less than 0.9 then the variable is considered to have good discriminant validity (valid) (Hair et al., 2021). The test results in Table 3 show HTMT values below 0.90 for variable pairs, indicating the discriminant validity is achieved. Discriminant validity shows that different latent variables are not highly correlated with each other.

### 3.4 Inner Model Analysis

To determine the presence or absence of collinearity problems, the VIF is used. Considering Hair et al. (2021), a VIF value of less than 5 indicates that there is no significant multicollinearity between variables. Table 4 shows that the VIF for every variable is below 5, indicating that there is no collinearity problem.

**Table 4.** Colinearity (VIF)

	<b>Competitive Advantage</b>	<b>Performance</b>	<b>Financial Literacy</b>	<b>Technology</b>
Competitive Advantage		1.132		
Performance				
Financial Literacy	1.150	1.221		
Technology	1.150	1.179		

Source: processed data

Multicollinearity is a situation in which there is a strong correlation between two or more independent variables. This can lead to inaccurate estimation of regression coefficients and reduce statistical power. From the results of the test on multicollinearity in Table 4, it can be seen that the VIF value of each variable is below 5, so that there is no multicollinearity between the research variables.



If the value of the path coefficient is positive, it indicates that an increase in one variable is associated with an increase in another variable. Conversely, if the path coefficient is negative, an increase in one variable is associated with a decrease in another variable. If the P-Value is less than 0.05, then  $H_0$  is rejected, meaning that the influence of one variable on another variable is significant and vice versa (Juliandi, 2018).

**Table 5.** Path Coefficient

	Original Sample	Mean	SD	T-Statistic	Values of P
X1-Y	0.188	0.197	0.056	3.359	0.001
X1-Z	0.250	0.261	0.054	4.626	0.000
X2-Y	0.178	0.182	0.057	3.116	0.002
X2-Z	0.159	0.164	0.056	2.812	0.005
Y-Z	0.287	0.291	0.052	5.521	0.000

Source: processed data

The direct effect can be identified through the testing results. The relationship between financial literacy and performance is 0.188 with a p-value of 0.01 ( $<0.05$ ), indicating significance. The relationship between financial literacy and competitive advantage is 0.250 and with a p-value 0.000 ( $<0.05$ ), also demonstrating significance. The connection between technology and performance is 0.178 with a p-value 0.02 ( $<0.05$ ), indicating a significant effect. The relationship between technology and a competitive benefit is 0.159 along with a p-value 0.005 ( $<0.05$ ), also indicating a significant impact. Competitive advantage and performance have a 0.287 correlation with value 0.000 ( $<0.05$ ), also indicating a significant impact.

Indirect effects are the indirect influence of a construct or an exogen latent variable on an endogenous latent variable through an endogenous intermediate variable. If the value of the indirect effects coefficient produces a probability with a significance of P-Values  $< 0.05$ , it indicates that the influence is significant and indirect. Conversely, if the p-value is  $\geq 0.05$ , the influence is not considered significant (Juliandi, 2018).

**Table 6.** Coefficient of Undirect Impact

	Original Sample	Mean	SD	T-Statistic	Values of P
X1 => Z => Y	0.072	0.076	0.021	3.413	0.001
X2 => Z => Y	0.046	0.048	0.018	20465	0.014

Source: processed data

From Table 6, it is evident that the coefficient's value of indirect financial literacy's impact on performance is 0.072, with Value of 0.001. This suggests that the actual impact is indirect, meaning that competitive advantage mediates financial literacy on performance ( $H_6$  is accepted). This shows that when MSMEs face high competitive advantage conditions, the higher the financial literacy, resulting in increased performance.

The coefficient of the indirect effect of technology on Performance is 0.046, with Value 0.014. This suggests that the actual influence is indirect, meaning that competitive advantage mediates technology on performance ( $H_7$  is accepted). This shows that when MSMEs face high competitive advantage conditions, the higher the use of technology, resulting in increased performance.

R-Square is a measure of the proportion of variation in the value of the dependent variable (endogenous) that is comprehensible given the independent variable that affects it (exogenous). It is useful for assessing whether a model is good or bad (Hair et al., 2021). The statistical size of the R square indicates the the extent to which endogenous variables are explained by other exogenous

variables in the model. According to Hair et al. (2021), R square values of 0.75, 0.50 and 0.25 represent substantial (high), moderate (medium) and weak influence respectively.

**Table 7.** Coefficient of Determination

	<b>R – Squared</b>	<b>R - Squared Adj</b>
Competitiveness	0.116	0.112
Performance	0.232	0.227

Source: processed data

From Table 7 regarding the coefficient of determination, evidently, the model with Adj R<sup>2</sup> Line I = 0.112 indicates that the financial literacy and technology clarify 11.2% of the variance in the competitive advantage. As a result, the model is deemed weak. The Adjusted R-Square for Line II = 0.227 indicates that financial literacy, technology, and competitive advantage variables explains 22.7% of the variance in the performance variable, thus classifying the moderate model.

### 3.5 Financial Literacy's Effect on Competitiveness

This study found that the impact of financial literacy on competitiveness is positively significant, meaning that as financial literacy increases, so does competitive advantage. This finding is supported by the study conducted by Fitriana et al. (2019), which stated that financial knowledge significantly impacts competitive advantage. This aligns with the RBV theory, which posits that the competitiveness of a business is rooted in its unique resources and capabilities. These resources and capabilities serve as a base of advantage that is difficult for competitors to replicate, enabling businesses to achieve better and more sustainable performance. One key resource for achieving competitive advantage is financial literacy, or the capacity to comprehend and apply financial information. Enhancing financial literacy among MSME owners enables them to make more informed decisions, manage finances effectively, identify financial opportunities and challenges, access financing, and build transparency and trust with stakeholders. These factors collectively help MSMEs to remain competitive, sustainable, and successful in a competitive market.

### 3.6 Financial Literacy's Effect on Performance

This study found that has a positively significant impact on the performance. An increase in financial literacy leads to improved performance, a finding supported by, Rosliyati & Iskandar (2022), Romain et al. (2021), and Septiani & Wuryani (2020) all of whom highlight the significant impact of financial literacy on performance. This aligns with the theory of RBV, which suggests that the enhancement of an MSME performance stems from the unique resources and capabilities owned by the business. In the context of financial literacy, the ability to comprehend, analyze, and manage financial information becomes a critical and valuable resource for achieving a competitive advantage, which in turn improves MSME performance. MSMEs that effectively leverage financial literacy as a unique resource can create a competitive advantage, leading to better performance in complex and competitive business environments.

### 3.7 The Impact of Technology on Competitive Advantage

This research found that the influence of technology on competitive advantage is positively significant, meaning that as technology increases, competitive advantage also increases. This discovery is supported by study carried out by Asri (2021) and Dewi (2022), which also reported a substantial impact of technology on competitive advantage. Technology plays a crucial role in

creating competitive advantage, as highlighted by Resource-Based View (RBV) theory. By wisely adopting and managing technology, MSME players can achieve operational efficiency, product innovation, gain better access to information, and maintain flexibility to adapt to market changes. The right technology can serve as a unique resource that differentiates businesses from competitors, ultimately creating a sustainable competitive advantage.

### **3.8 Technology's impact on Performance**

This research discovered that the impact of technology on Performance is significantly positive, indicating that as technology adoption increases, the performance of MSMEs also improves. This finding aligns with research conducted by Desmiyawati et al. (2023), Dewi (2022), Shettima & Sharma (2020), and Turais (2020) all of whom reported that technology significantly impacts MSME performance. According to RBV theory, it is crucial for MSMEs to manage technology as a valuable and unique resource to enhance their performance and sustain their competitive advantage. The application of technology must align with the business strategy and characteristics of the MSMEs themselves. By leveraging technology wisely, MSMEs can enhance business performance, increase competitiveness, and achieve competitive advantage in a progressively digital & competitive business surroundings.

Technology provides MSMEs with access to resources that were previously difficult to reach. For instance, through the adoption of software, digital platforms, and the internet, MSMEs can improve operational efficiency, boost online visibility, and interact with customers and suppliers more effectively. The implementation of the right technology can significantly enhance the efficiency and productivity of MSMEs. By utilizing technology, MSMEs become more responsive to changing trends and market needs. Access to real-time data and information allows them to quickly identify new opportunities, adjust marketing strategies, and make informed decisions in response to market changes. Digital technology also enables MSMEs to reach a broader market online. Through social media, websites, or e-commerce platforms, MSMEs can expand their reach to consumers in various geographical areas, thereby increasing business growth and expansion.

### **3.9 The Impact of Competitive Advantage on Performance**

From this research, it was found that Competitive advantage's impact on performance is positively significant, meaning that an increase in competitive advantage leads to improved performance. This finding aligns with research conducted by Wibowo & Setiawan (2022), which indicates that competitive advantage significantly effects the performance of MSMEs. According to RBV theory, businesses that effectively identify and manage scarce and unique resources will achieve a competitive advantage and enhance performance. Therefore, MSMEs should focus on developing and utilizing distinctive resources that are not easily imitated by competitors to sustain competitive advantages and improve long-term business performance. The competitive advantages held by MSMEs, such as product innovation, service quality, or competitive pricing enhance the company's market appeal. This advantage help MSMEs attract more customers and outperform competitors, leading to sales growth and market share. Moreover, the competitive edge that MSMEs gain contributes to building a strong reputation among customers and stakeholders. A good reputation increases customer trust and loyalty, which positively affects the business's long-term performance.

### **3.10 The Impact of Financial Literacy on Performance: Competitive Advantage as Mediating Variable**

From this study, it was found that the actual influence is indirect, as indicated as indicated by path coefficient in the indirect effect. This means that competitive advantage mediates the partnership between financial literacy and Performance. In the context of RBV theory, financial literacy impacts the competitive advantage of MSMEs, which in turn affects overall business performance. Therefore, financial literacy is crucial in shaping the competitive advantage of MSMEs. When MSME owners have a solid understanding of finance, they can conduct a more careful analysis of the financial performance of the business, identify profitable investment opportunities, and manage financial risk more effectively. With this understanding, MSMEs can develop better business strategies and achieve a competitive advantage through smart financial management. Therefore, financial literacy indirectly influences the performance of MSMEs with competitive advantage as a mediating variable.

### **3.11 Technology's Impact on Performance: Competitive Advantage as Mediating**

This study found that the real influence is indirect, as indicated by the original sample value (path coefficient) at the indirect effect. This suggests that competitive advantage mediates the relationship between technology and Performance. In this research, technology acts as a driver for creating competitive advantages, which further enhances the performance of MSMEs. Guided by RBV theory, this study underscores the importance of managing technology as a valuable resource and integrating it wisely with business strategies to achieve competitive advantage and improve overall performance. This aligns with research conducted by Dewi (2022) which indicates that technology affects the performance of MSMEs through competitive advantages. This also indicates that the better the technology used by MSME players, the better the business performance and increase competitive advantage in a competitive market.

## **4. Conclusions**

Based on the results of the analysis using SEM PLS, it can be concluded that financial literacy, technology, and competitive advantage have a positive impact on performance. This means that if financial literacy, technology, and competitive advantage increase, then performance also increases. Financial and technological literacy also has a positive impact on competitive advantage, meaning that if financial and technological literacy increases, then competitive advantage also increases. A limitation of this study is that, data collection only uses questionnaires. There are several questions in the study that may be difficult for respondents to understand and those who fill out questionnaires are not respondents who should be aimed at in this study, causing the answers to be biased. It is recommended that future research also conduct in-depth interviews with several respondents. This research has implications including: for MSME players, to achieve better performance and enhance competitive advantage, it is crucial to utilize technology, particularly in marketing their products. The adoption of digital technology enables innovations that can improve competitive advantage and expand the reach of product marketing, thereby positively impacting company performance. Financial literacy is also an important thing to understand by MSME actors so that MSME financial management can be carried out properly for MSME business development and to increase competitive advantage. With good financial

management, the company's performance can be improved. This research can serve as a source for future study, especially given the importance of MSMEs as key components of the national economy. Future studies might explore similar themes to deepen the understanding of MSME dynamics.

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