



E-Commerce and Environmental Uncertainty Adoption in Strengthening Financial Literacy on the Performance of MSMEs in the Culinary Sector in Solo

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ABSTRACT: This study has purpose (1) to analyse the effect of financial literacy on the performance of MSMEs. (2) to analyse the effect of financial literacy on the performance of MSMEs moderated by e-commerce adoption. (3) to analyse the effect of financial literacy on the performance of MSMEs moderated by environmental uncertainty. The quantitative descriptive approach was used in this study, which included 175 SMEs in the culinary sector in Solo. Data sources were acquired from primary sources utilizing a closed questionnaire technique, and the measurement scale was a 5-point Likert scale. The Pearson Correlation and Cronbach Alpha tests are used to assess the data's quality. The data analysis technique used regression analysis with the Absolute Difference test approach, after first performing the traditional assumption test. The results of the study show (1) Financial literacy has a significant effect on the performance of MSMEs in the culinary sector in Solo City. (2) E-commerce can moderate the influence of financial literacy on the performance of MSMEs in the culinary sector in Solo City. (3) Environmental uncertainty cannot moderate the influence of financial literacy on the performance of MSMEs in the culinary sector in Solo City.

KEYWORDS: e-commerce, environmental uncertainty, financial literacy, MSMEs, performance.

INTRODUCTION

MSMEs (micro, small, and medium-sized enterprises) play a crucial and vital role in the economic development of nations, both developing and developed. SMEs account for the majority of businesses worldwide and are important contributors to job creation and global economic development. They represent about 90% of businesses and more than 50% of employment worldwide. Formal SMEs contribute up to 40% of national income (GDP) in emerging economies. These numbers are significantly higher when informal SMEs are included. By attempting to lessen the challenges faced by MSMEs, the capacity of MSMEs needs to be strengthened and continuously expanded so that they can contribute as much as possible to enhancing community welfare (Sarastyarini & Yadnyana, 2018).

Micro, Small and Medium Enterprises (MSMEs) are integral to the economic development and growth of ASEAN Member States. Allowing for different definitions, there are 70 million MSMEs in ASEAN, accounting for between 97.2% – 99.9% of total establishments in ASEAN Member States. Where data is available, the micro enterprises often constitute the largest share of enterprises. Regionally, the MSMEs contribute 85% to employment, 44.8% to GDP and 18% to national exports. When compared to other ASEAN nations, Indonesia's MSMEs continue to perform poorly, particularly in terms of their added value, productivity, exports, and participation in global and regional production (Silalahi & Sahara, 2021).

Many MSME players haven't paid attention to their business's financial management so far by fusing their personal and corporate funds. This is one among the things that prevent MSMEs from growing (Idawati & Pratama, 2020). Financial literacy is one of the reasons contributing to MSMEs' poor performance in terms of financial management. Strategic efforts are required to increase the financial management expertise of MSME actors in order to improve the performance of MSMEs. This is necessary so that MSMEs may manage their finances more effectively and consistently, much like major corporations (Utomo & Kaujan, 2019).

Utilizing financial literacy is one technique to improve knowledge about managing finances. Financial literacy is the ability to use knowledge about money and financial products to one's financial decisions in order to make wise choices about how to manage one's finances (Amisi, 2012). Financial literacy skills reduce the likelihood of being duped when it comes to money and allow people to make wise decisions about their finances (Garg & Singh, 2018).



Menike (2021) did an empirical study on the influence of financial literacy on the performance of SMEs and found that the financial knowledge, financial impact, and financial behavior components of financial literacy significantly improve the financial performance of SMEs in Sri Lanka. The findings of this study are consistent with previous studies by Utomo and Kaujan (2019), Sanistasya et al., (2019), Kasendah and Wijayaangka (2019), Ilarrahmah and Susanti (2021), and Hilmawati and Kusumaningias (2021), which found that financial literacy significantly improved MSMEs' financial performance. These results suggest that financial literacy can improve a person's perspective on financial matters, strategic financial decision-making, and better management for business owners. The management of the firm held will also improve with more financial knowledge, which will help MSME performance.

According to the Creative Economy Agency (Bekraf), the city of Solo currently has three creative economy sub-sectors; culinary, craft, and fashion that significantly contribute to the growth of the local creative economy (tribunsolo.com). The cities of Solo and Bandung were recognized as the top-ranked cities for potential culinary tourism destinations in Indonesia in 2018 based on the findings of a survey by the Ministry of Tourism's Culinary Tourism Destination Development Acceleration team (Solopos.com).

According to the data above, Solo's small and medium-sized enterprises in the food industry provide a significant financial contribution to Indonesia's creative sector. Strategic efforts are required to maintain this performance in order to ensure the viability of the culinary sector SMEs in Solo.

Adoption of e-commerce, which can reduce costs and speed up access to the information provided, is one strategy to boost MSMEs' performance (Silalahi & Sahara, 2021). According to research done by Farida et al. (2019), SMEs' performance improves as their interest in using e-commerce grows. Using e-commerce to its full potential can help with the processes of purchasing, selling, and marketing. Sarastyarini & Yadnyana (2018), Nurlinda & Fatimah (2019), and Silalahi & Sahara (2021) have conducted empirical studies on the impact of e-commerce adoption on MSME performance, and the results demonstrate that e-commerce adoption has a favorable and significant impact on MSMEs' performance.

Environmental uncertainty is another element that influences how well MSME performance is strengthened (environmental uncertainty). According to Duncan (Bae, 2017), environmental uncertainty is a condition of the external environment that might have an impact on a company's operations. The planning and control process encounters few issues when the environment is stable, but when things are uncertain, it becomes more challenging and encounters several issues because it is difficult to forecast what will happen in the future.

In order for MSME performance to be successful, managers must have high management skills. Managers must be able to make decisions in order to achieve organizational goals, specifically by taking unpredictable conditions into consideration. Managers must be proactive and positive in gathering information, anticipating, and controlling all risks that may befall the company in light of changes in the business environment, particularly the external environment, which is full of uncertainty (Atmoko & Hapsoro, 2017; Bae, 2017; Sumkaew & Intanon, 2020). An empirical study related to the effect of environmental uncertainty on the performance of MSMEs was carried out by Fahmia (2017); Kristanti (2018); and Iriani et al., (2021) stated that there is a positive and significant effect of environmental uncertainty on the performance of MSMEs.

The adoption of e-commerce and environmental uncertainty as modifiers on the effect of financial literacy on the performance of MSMEs in the culinary sector in Solo are examined in this study, which is innovative in the field of entrepreneurship research, to explore (deepen) the earlier findings.

The goal of this research is to assist Solo's SMEs in the food and beverage industry in their efforts to increase financial literacy. It also aims to clarify the value of enhancing business performance through the use of e-commerce adoption and environmental uncertainty.

Based on the foregoing context, the study's challenge is formulated as follows: (1) Does financial literacy affect the performance of MSMEs in the culinary sector in Solo?, (2) Can e-commerce adoption moderate the influence of financial literacy on the performance of MSMEs in the culinary sector in Solo?, (3) Can environmental uncertainty moderate the influence of financial literacy on the performance of MSMEs in the culinary sector in Solo?

This research resulted in the publication of an article in a reputable international journal. The development of entrepreneurship materials and the development of financial management modules are the desired achievement metrics.



LITERATURE REVIEW

Business Performance

Making the most money possible for the organization is one of the objectives of business. Business performance, according to Mwita (2003), is a comparison of input, process, output, and result (value). Corporate performance, according to Chakravarthy (1986), is the effect or outcome of a business plan.

Several measures, including sales growth, capital growth, market growth, profit growth, and customer satisfaction, can be used to gauge corporate performance (Kristanti, 2018). Neely (1999) advises using existing measurements or performance measures that are pertinent to the company's context as two methods for gauging business performance.

Financial Literacy

Entrepreneurs must make difficult financial decisions in order to boost the success of their companies. For instance, business owners make financial choices about retirement planning, investments, and savings. Financial literacy thus plays a crucial role in the funding decisions made by entrepreneurs and in the performance that follows (Adomako & Dans, 2014).

Financial literacy is the comprehension and knowledge of the financial concepts required to make decisions and purchase financial items that affect one's well-being. Financial literacy is essential for managing one's personal finances and includes having an adequate understanding of personal finance information (Utomo & Kaujan, 2021).

Several factors can be used to gauge an entrepreneur's level of financial literacy awareness and knowledge. Aribawa (2016) uses a number of factors to evaluate the degree of financial literacy, including 1) account ownership in the business's name, 2) firm identification when creating an account, 3) minimum deposit of funds when opening an account, and 4) awareness of savings guarantees. 5) knowledge of the potential return on savings in a year, 6) knowledge of the potential return on savings over a longer period of time, 7) knowledge of how to calculate loan interest annually, 8) knowledge of the difference between two product options, 9) knowledge of the impact of inflation on the value of money, 10) knowledge of the time value of money, and 11) knowledge of the impact of inflation on company growth.

Four indicators; basic understanding of financial management, credit management, savings and investment management, and risk management were used by Chen & Volpe (1998) to evaluate the degree of financial literacy.

E-commerce adoption

It's just that the e-commerce system uses a network of internet electronic systems to process business transactions between sellers and buyers. E-commerce is a business that sells and buys products, services, and others by using and utilizing transactions from the internet as well as activities that are frequently carried out in daily life (Wijaya, 2021). Nelson and Shaw (2003) state that there are three indicators that can be used to evaluate the adoption of e-commerce: (1) general marketing activities; (2) market research; and (3) reaching a larger market.

Environmental Uncertainty

Business enterprises always operate in a changing environment. Because of this, it takes considerable adaptation to deal with environmental instability. Environmental uncertainty is a condition of the outside world that may have an impact on a company's operations (Bae, 2017). From a managerial perspective, environmental uncertainty means that managers lack the knowledge necessary to comprehend and foresee the demands and changes in the environment. Uncertainty in the environment is a crucial contextual factor because it will make planning and controlling operations more challenging (Bastian & Muchlish, 2021). A person feels uncertain because he/ she believes he/ she lacks the knowledge to reliably anticipate the future. Information is an extremely valuable resource for planning and controlling activities in an organization when there is a lot of environmental unpredictability.

Environmental uncertainty is a representation of the external environment, which includes external competitors, suppliers, external regulators, external technology, external market demand, that influences organizational behavior in carrying out tasks (Irwandi et al., 2020). Managers require information to use as a foundation for decision-making when environmental uncertainty is significant. According to the theory, the manager's decisions must be followed through on. However, the choice is really implemented, albeit more simply. Managers will therefore require information with broad enough features when environmental uncertainty increases so that decisions may be made effectively (Iriani et al., 2021).



Hypothesis Development

1. The effect of financial literacy on MSME performance

Financial literacy can have an impact on how someone perceives their financial situation, how they make financial decisions strategically, and how well they run their businesses. The management of the company held will also improve as financial literacy increases, which will help boost corporate performance (Menike, 2021).

Menike (2021) did an empirical study on the influence of financial literacy on the performance of SMEs and found that the financial knowledge, financial impact, and financial behavior components of financial literacy significantly improve the financial performance of SMEs in Sri Lanka. Financial literacy has a considerable favorable impact on the financial performance of MSMEs, according to study by Utomo & Kaujan (2019), Sanistasya et al. (2019), Kasendah & Wijayaangka (2019), Harrahmah & Susanti (2021), Hilmawati & Kusumaningias (2021), and Menike (2021).

Based on the description above, the hypothesis proposed in this study is as follows:

H1 : Financial literacy has a significant effect on the performance of MSMEs in the culinary sector in Solo.

2. The effect of financial literacy on MSME performance moderated by e-commerce adoption

The fact that MSME actors pay less attention to their company's financial management is one of their disadvantages, which hinders MSMEs' growth and performance. By enhancing MSME actors' financial literacy, strategic efforts must be made to improve MSMEs' performance (Idawati & Pratama, 2020).

According to Silalahi & Sahara (2021), implementing e-commerce can help MSMEs perform better faster because it can reduce expenses and speed up access to available information. According to research done by Farida et al., (2019), the more interested SMEs are in embracing e-commerce, the better these SMEs perform.

Sarastyarini & Yadyana (2018), Nurlinda & Fatimah (2019), and Silalahi & Sahara (2021) have conducted empirical studies on the impact of e-commerce adoption on MSME performance, and the results demonstrate that e-commerce adoption has a favorable and significant impact on MSMEs' performance.

The connection between financial literacy and e-commerce adoption is anticipated to help the enhancement of MSME performance in the culinary sector in Solo in accordance with the theoretical and empirical findings.

Based on the description above, the hypothesis proposed in this study is as follows:

H2 : The adoption of e-commerce can moderate the effect of financial literacy on the performance of MSMEs in the culinary sector in Solo.

3. The effect of financial literacy on MSME performance moderated by environmental uncertainty

Financial literacy skills assist people to make wise financial decisions and reduce the likelihood of being deceived in the financial world (Garg & Singh, 2018).

Environmental uncertainty refers to the perceived lack of information about key dimensions of the environment determining a company's performance, such as the unpredictability of the environment, the inability to predict the impacts of environmental change, and the consequences of a response choice. The company's operations may be impacted by environmental uncertainty, which is a state of the external environment. The planning and control process encounters few issues when the environment is stable, but when things are uncertain, it becomes more challenging and encounters several issues because it is difficult to forecast what will happen in the future (Duncan, 1972).

Environmental uncertainty is recognized as a fundamental element of strategic management and entrepreneurship. It is a key concept in various theories such as contingency theory, information process theory, theories of decision making, and theories of entrepreneurship. Environmental uncertainty is a predictor of decision-makers' behaviours and organizational behaviours and structures and also a moderator of the relationship between organizational behaviours and structures and organizational performance. A widely accepted view contends that environmental uncertainty is the key ingredient influencing organizational structure; the more uncertainty resulting from technological and environmental factors, the more the organization will compensate by departing from bureaucratic structure toward a decentralized mode of operation.

According to studies by Fahmia (2017), Kristanti (2018), and Iriani et al., (2021), environmental unpredictability has a positive and significant impact on MSMEs' performance.

The interplay between financial literacy and environmental uncertainty is anticipated to enhance the improvement of MSME performance in the culinary sector in Solo, in accordance with theory and empirical findings.



Based on the description above, the hypothesis proposed in this study is as follows:

H3 : Environmental uncertainty can moderate the effect of financial literacy on the performance of MSMEs in the culinary sector in Solo.

The framework of thinking can be depicted in a thinking scheme as can be seen in the figure below.

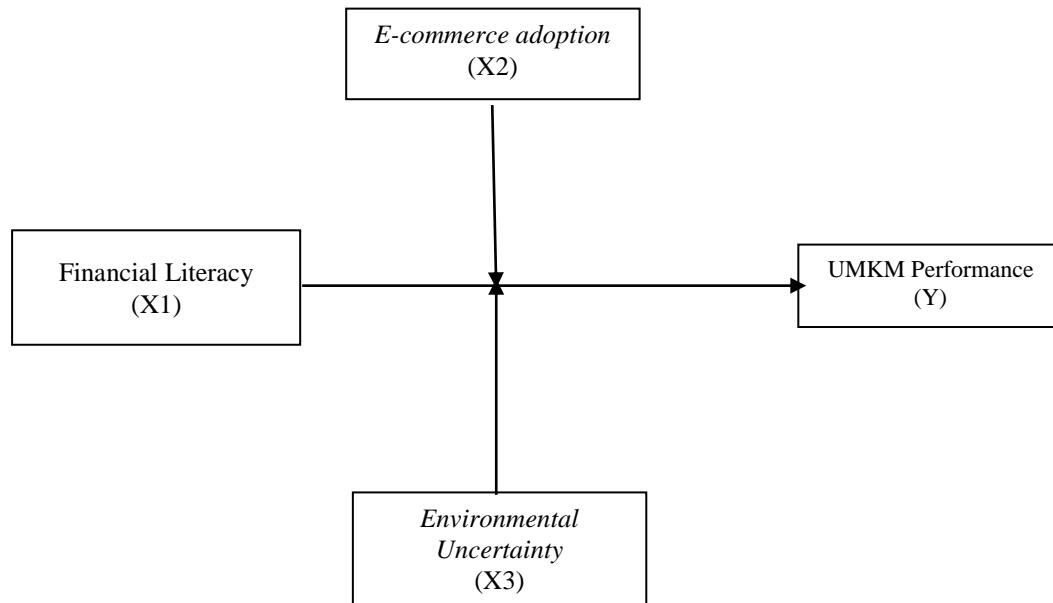


Figure 1: Thinking Framework

Information :

Independent variable : Financial literacy

Moderating Variables: Adoption of e-commerce and Environmental Uncertainty

Dependent variable: MSME performance

RESEARCH METHODS

A sort of quantitative research is one in which data analysis is done using statistical testing; qualitative research, on the other hand, does not utilize statistical testing and merely presents data in the form of words, sentences, schemes, and drawings (Sugiyono, 2010: 13). Because statistical testing is used during data analysis to determine whether the given hypothesis is true, this form of research is considered quantitative.

All MSMEs in the city of Solo made up the study's population. The individual is the analytical unit in this investigation, employing the side-purposive sampling method. (1) MSMEs operating in the food service industry in Solo are the established criterion. (2) MSMEs have used e-commerce to conduct business. The minimum sample size should be at least 5–10 times the number of parameters to be evaluated, according to Hair et al. (1998). The minimal sample size for this study is 35 x 5, or 175 participants. The parameters to be estimated in this study are 35 items, and the researcher utilizes 5 observations for each calculated parameter. A five-point Likert scale with a range of 1 (strongly disagree) to 5 (strongly agree) was used to evaluate each item (strongly agree).

The operational definition and measurement of variables in this study are as follows :

1. Entrepreneurs that are financially literate are able to make judgments about products and finances that have an impact on their company's performance. The four variables that Chen & Volpe (Sanistasya et al., 2019) devised to measure financial literacy are basic understanding of financial management, credit management, savings and investment management, and risk



management. A 5-point Likert scale with the options Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree was used to measure this trait.

- Adoption of e-commerce is the process of using a computer network or the internet to carry out company operations, such as marketing, payment, or delivery, as well as buying and selling transactions for goods or services. Adoption of e-commerce consists of 8 things. Nelson & Shaw (2003) created three indicators to measure the extent of e-commerce adoption: (1) general marketing efforts; (2) market research; and (3) reaching a larger market. A 5-point Likert scale with the options Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree was used to measure this trait.
- Because it is difficult to forecast events or occasions that may occur in the future, environmental uncertainty restricts people (SME actors) from determining the likelihood that decisions will succeed or fail. Duncan (1972) created an instrument with ten statement items to gauge people's perceptions of environmental unpredictability. A 5-point Likert scale with the options Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree was used to measure this trait.
- A business strategy's effect or outcome on Solo's MSMEs in the food industry is known as MSME performance. Five variables are used to measure UMM performance: sales growth, capital growth, market growth, profit growth, and customer satisfaction (Kristanti, 2018). This characteristic was evaluated using a Likert scale with five possible responses: Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree.

Respondents were only given the option to answer questions in accordance with the alternative answers offered in the closed questionnaire used for data collection. The questionnaire's statement items allow respondents to express their opinions on financial literacy, the adoption of e-commerce in an uncertain climate, and MSME performance.

The following equation (Ghozali, 2010) expresses the goal of data analysis using absolute difference regression test to ascertain the impact of financial literacy on the performance of MSMEs tempered by e-commerce adoption and environmental uncertainty:

$$Y = \alpha + \beta_1 X_1 + e$$

$$Y = \alpha + \beta_1 ZX_1 + \beta_2 ZX_2 + \beta_3 |ZX_1 - ZX_2| + e$$

$$Y = \alpha + \beta_1 ZX_1 + \beta_2 ZX_3 + \beta_3 |ZX_1 - ZX_3| + e$$

Information:

Y : MSME Performance

X₁ : Financial literacy

X₂ : E-commerce adoption

X₃ : Environmental uncertainty

ZX₁ : Standardized X₁

ZX₂ : Standardized X₂

ZX₃ : Standardized X₃

|ZX₁ - ZX₂| : Moderation as measured by absolute values (ZX₁ - ZX₂)

|ZX₁ - ZX₃| : Moderation as measured by absolute values (ZX₁ - ZX₃)

α : constant

β₁... β₃ : Regression coefficient

e : Error

RESULTS AND DISCUSSION

Instrument Test

Reliability and validity are concepts used to evaluate the quality of research. They indicate how well a method, technique or test measures something. Reliability is about the consistency of a measure, and validity is about the accuracy of a measure.

Prior to the study, the validity of the instruments for measuring financial literacy, e-commerce, environmental uncertainty, and MSME performance was tested, with the results of all valid items demonstrating a p value of 0.05 or below. The SPSS program's data processing guarantees the following outcomes.



Table 1: Validity Test Results

Items	<i>p value</i>				α	Conclusion
	Financial Literacy	<i>e-commerce</i>	<i>environmental uncertainty</i>	Business performance		
1	0,000	0,000	0,000	0,000	0,05	Valid
2	0,000	0,000	0,000	0,000	0,05	Valid
3	0,000	0,000	0,000	0,000	0,05	Valid
4	0,000	0,000	0,000	0,000	0,05	Valid
5	0,000	0,000	0,000	0,000	0,05	Valid
6	0,000	0,000	0,000	0,000	0,05	Valid
7	0,000	0,000	0,000	0,000	0,05	Valid
8	0,000	0,000	0,000	0,000	0,05	Valid
9		0,000	0,000		0,05	Valid
10		0,000	0,000		0,05	Valid

Source: Primary data processed, 2021

Testing the reliability of financial literacy, e-commerce, environmental uncertainty, and MSME performance instruments shows the Cronbach Alpha value > 0.6, meaning that all research instruments are declared reliable. The results of data processing on the reliability test through the SPSS program are presented as follows.

Table 2: Instrument Reliability Test Results

Variable	<i>Cronbach Alpha</i>	Test Criteria	Conclusion
<i>Financial literacy</i>	0,954	0,60	Reliable
<i>e-commerce</i>	0,887	0,60	Reliable
<i>Environmental uncertainty</i>	0,902	0,60	Reliable
MSME Performance	0,860	0,60	Reliable

Source: Primary data processed, 2021

Classic assumption test

1. Multicollinearity Test

Each independent variable (financial literacy, e-commerce, environmental uncertainty), according to the findings of the multicollinearity test performed using the SPSS program, is not linearly connected. The tolerance values (0.930, 0.845, 0.823) and the variance inflation factors/VIF (1.075, 1.184, 1.215) indicate this. As a result, multicollinearity does not arise in the regression model used in this investigation.

2. Autocorrelation Test

The Runs test was used to perform the autocorrelation test. The Runs test with the SPSS program returned Asymp as the findings. Sig.(2-tailed)=0.497 > 0.05 As a result, the autocorrelation issues in the regression model used in this investigation are resolved.

3. Heteroscedasticity Test

Each independent variable (financial literacy, e-commerce, and environmental uncertainty), according to the Glejser test results with the SPSS program, is not significant to the absolute residual variable. The significance value (0.660; 0.771; 0.138) indicates that this is the case, proving that the regression model used in this study does not suffer from heteroscedasticity issues.

4. Normality test

The Kolmogorov-Smirnov test's Asymp.Sig. (2-tailed) result of 0.268 > 0.05 indicates that the residual is normal according to the normality test.



Table 3: Classical Assumption Test Results

Classic assumption test	Test results	Conclusion
Multicollinearity Test	<i>Tolerance</i> (0,930; 0,845; 0,823) > 0,1 <i>VIF</i> (1,075; 1,184; 1,215) < 10	There is no multicollinearity
Autocorrelation Test	<i>Asymp.Sig.(2-tailed)</i> (0,497) > 0,05	No Autocorrelation
Heteroscedasticity Test	<i>P value</i> (0,660; 0,771; 0,138) > 0,05	No Heteroscedasticity
Normality test	<i>Asymp.Sig.(2-tailed)</i> (0,268) > 0,05	Normal Residual

Source: Primary data processed, 2021

Hypothesis test

Based on multiple linear regression analysis and absolute difference test with SPSS version 24 program, the results can be presented as shown in the following table.

Table 4: Hypothesis Test Results

Independent Variable	Regression Coefficient	t count	Sig.
X1	0,430	6,525	0,000
Moderation X1*X2	0,676	2,167	0,032
Moderation X1*X3	0,330	1,022	0,308

Source: Primary data processed, 2021

Based on the results of the t-test calculations, the following describes the testing of each hypothesis:

1. Test of the effect of financial literacy on MSME performance
The test of the relationship between financial literacy and MSMEs' performance produced a t-count value of 6.525 with a p value of (0.000) < 0.05, indicating that financial literacy significantly impacted MSMEs' performance in Solo City's culinary industry. Thus, the first theory is accepted.
2. Test of the effect of financial literacy on the performance of MSMEs moderated by e-commerce adoption
Based on the calculation of the absolute difference test of 1, the results obtained on the effect of financial literacy on the performance of MSMEs moderated by e-commerce adoption with a t value of 2.167 with a p value of (0.032) < 0.05, meaning that e-commerce adoption can moderate the influence of financial literacy on MSME performance in the culinary sector in the city of Solo. Thus hypothesis 2 is accepted.
3. Test of the effect of financial literacy on the performance of MSMEs moderated by environmental uncertainty
Based on the calculation of the absolute difference test of 2, the findings indicate that environmental uncertainty cannot moderate the influence of financial literacy on the performance of MSMEs in the culinary sector in the city of Solo because the influence of financial literacy on MSMEs' performance produces a t-value of 1.022 with a p value of (0.308) > 0.05. As a result, hypothesis 3 is rejected.

DISCUSSION

1. The Effect of Financial Literacy on MSME Performance

This finding is successful in proving that financial literacy has a positive and significant effect on the performance of MSMEs in the culinary sector in Solo City. This result is evidenced by the significance test of the effect of financial literacy on the performance of MSMEs which produces a t-count value of 6.525 with a p value of (0.000) < 0.05. Financial literacy is one of the important factors in supporting the achievement of business performance, but this factor is still an obstacle for MSME actors in the city of Solo. The challenges MSME players confront will have an impact on financial management behavior, particularly in terms of financial understanding. The ability to manage finances effectively and with skill is related



to financial knowledge. Increasing financial literacy is one of the initiatives made to enhance knowledge and expertise about money and financial products. MSME players are anticipated to be able to make wise decisions based on their financial information and be able to prevent financial crises if they possess financial literacy abilities.

As a result, the ability of MSME actors to think about financial situations increases with their level of financial literacy, which can facilitate strategic decision-making about finances and business management. The management of the owned business will also improve as financial literacy increases, which will help boost business performance. As stated in earlier studies by Menike (2021), Utomo & Kaujan (2019), Sanistasya et al. (2019), Kasendah & Wijayaangka (2019), Ilarrahmah & Susanti (2021), Hilmawati & Kusumaningtias (2021), and Menike (2021), financial literacy has a significant positive impact on the financial performance of MSMEs. This finding supports those earlier studies.

2. The effect of financial literacy on MSME performance moderated by e-commerce adoption

This finding is successful in proving that the adoption of e-commerce can moderate the influence of financial literacy on the performance of MSMEs in the culinary sector in Solo City. This result is evidenced by the absolute difference test of 1 which produces a t-count value of 2.167 with a p value of $(0.032) < 0.05$. Utilizing e-commerce to its fullest potential is crucial for promoting improved performance and company continuity.

In order to accomplish this, SMEs in the culinary industry in the city of Solo benefit from the adoption of e-commerce by using the internet to carry out company operations, such as marketing, payments, and delivery. In order to facilitate sales transactions made through GoFood, GrabFood, Shopee Food, and other food delivery order applications, MSME actors have leveraged applications in their deployment. The usage of e-commerce will benefit MSME actors because it can reduce costs and speed up access to information provided, which will help to increase orders and sales turnover. Therefore, the performance of the culinary SMEs in the city of Solo will be impacted by the use of e-commerce to its fullest extent.

This finding supports the previous research conducted by Farida et al., (2019) states, the greater the interest of SMEs in using e-commerce, the performance of these SMEs shows increasing results. This finding is also in line with research conducted by Sarastyarini & Yadnyana (2018); Nurlinda & Fatimah (2019); and Silalahi & Sahara (2021) which states that the adoption of e-commerce has a positive and significant effect on the performance of MSMEs.

3. The effect of financial literacy on MSME performance moderated by environmental uncertainty

The findings of this study indicate that environmental uncertainty cannot moderate the effect of financial literacy on the performance of MSMEs in the culinary sector in Solo City. This result is evidenced by the absolute difference test 2 which produces a t-count value of 1.022 with a p value $(0.308) > 0.05$. The existence of environmental uncertainty does not contribute to increasing the association between financial literacy and the performance of MSMEs, which can lead to the untested premise because there is only a direct relationship between the two.

The perception of environmental unpredictability by managers, however, is another aspect that affects how well a business performs. This is corroborated by studies done by Fahmia (2017), Kristanti (2018), and Iriani et al., (2021), which found that environmental unpredictability or uncertainty has a positive and significant impact on MSMEs' performance.

The planning and control process will be more challenging and encounter numerous issues when there is uncertainty because it is difficult to foresee what will happen in the future. Managers must be proactive in responding to uncertainties that arise in uncertain circumstances like the economic crisis, fierce business competition, and client expectations. They must also seek out varied information to build plans so that the company may continue to exist.

CONCLUSION

The results of this study indicate (1) Financial literacy has a significant effect on the performance of MSMEs in the culinary sector in Solo City. Thus, hypothesis 1 is accepted. (2) E-commerce can moderate the influence of financial literacy on the performance of MSMEs in the culinary sector in Solo City. Thus hypothesis 2 is accepted. (3) Environmental uncertainty cannot moderate the influence of financial literacy on the performance of MSMEs in the culinary sector in Solo City. Thus hypothesis 3 is rejected.

The results of this study cannot be generalized because the sample of this research is solely restricted to the SMEs in the culinary industry in the city of Solo. In this study, there is only one independent variable that has an impact on MSMEs'



performance: financial literacy. The value of Adjusted R2 produced by the moderating regression model in this study is still below 40%, necessitating more research into additional variables that influence MSMEs' performance.

Based on these findings, MSME players in Solo City should improve their performance in analyzing prepared financial plans and expenditures, and they should be cautious when acquiring credit or debt from financial institutions. It is projected that SMEs will fully utilize e-commerce as a tactic to boost operational efficiency. E-commerce can be a solution for the processes of purchasing, selling, and marketing with its adoption. These results suggest that environmental uncertainty contributes to sustaining business continuity even though it has not been demonstrated to be a moderating variable. SMEs are expected to acquire the capacity to remove potential environmental risks. In order to overcome the emergence of quick and dynamic environmental changes, MSME actors are obliged to build management capabilities and skills. It is strongly anticipated that future study will examine additional elements that have an impact on MSMEs' performance by including contingent variables that serve as moderating or intervening variables.

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