

The Influence Of Financial Literacy, Digital Payment, And Interest In Using E-Commerce On Msme Income (A Case Study on MSME Traders in the Trade Sector in Surakarta City)

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ABSTRACT

This study aims to analyze the influence of financial literacy, digital payment, and interest in using e-commerce on the income of MSMEs in the trade sector in Surakarta City. Financial literacy reflects the ability of business owners to manage finances effectively, while digital payment and e-commerce play a crucial role in supporting transactions and digital marketing. Data were collected through questionnaires distributed to 115 respondents selected using purposive sampling. The results of multiple linear regression analysis indicate that financial literacy, digital payment, and interest in using e-commerce have a significant positive effect on MSME income. These findings highlight the importance of improving financial literacy and adopting digital technology as strategies to enhance MSME performance and income.

1. INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) represent a vital sector that significantly contributes to driving the economy of a country** (Anggraini et al., 2022). However, despite the continuous growth of MSMEs, they face numerous obstacles that hinder their development, such as limited market access, difficulties in obtaining funding, and the inability to utilize information technology. They also often encounter other challenges, including minimal market penetration, inadequate business networks, and low-quality human resources. Ineffective management and a lack of support from the business environment exacerbate their competitive challenges. These issues are often caused by a lack of skills in financial monitoring and assessment among MSME owners, leading to ineffective fund management. Therefore, strategic steps, such as improving financial literacy, are needed to enhance the performance and sustainability of MSMEs. By increasing information and knowledge about financial management, MSME owners are expected to improve accountability and efficiency in fund utilization, ensuring their businesses survive and grow (Rahmanisa et al., 2023).

On the other hand, due to the various obstacles hindering MSME growth, many are forced to close down as they fail to compete due to a lack of knowledge in business management. MSME owners must understand and master financial management and responsibility to improve their long-term business performance. One actionable step is financial literacy. Financial literacy refers to the ability to understand, manage, plan, and utilize financial resources, such as capital and income, to achieve economic well-being and a better standard of living. Therefore, financial literacy is defined as the skill or level of understanding individuals or communities have about managing their finances effectively according to their needs and economic conditions (Dwiyanti & Jati, 2019).

Furthermore, financial literacy is closely linked to financial knowledge. The level of financial literacy among MSME owners is influenced by their conditions and backgrounds. Financial literacy requires more than just financial knowledge; a deeper understanding can aid in making accurate financial decisions (Kusuma et al., 2022). However, many business owners lack financial comprehension, making it harder to manage their finances (Sari et al., 2020). According to Rafif Rziqullah, founder of Barisan Usaha Rakyat (BARA), one of the main reasons for the MSME sector's stagnation is the limited financial capability of business owners. Thus, comprehensive financial understanding is crucial to supporting economic activities. The more individuals recognize the benefits of financial goods and services, the greater the potential for generating long-term economic activities. In this context, financial literacy has a significant economic impact, as increasing public awareness of financial goods and services drives their broader use, thereby accelerating economic growth (Putra et al., 2020).

In today's digital era, the rapid advancement of information technology and innovation in financial administration in Indonesia should result in substantial progress. With widespread internet access and smartphone ownership, the use of digital financial services, such as digital payments, has become mainstream in society. Popular digital payment systems, such as e-wallets and electronic money, have garnered significant attention, with the number of users projected to increase from 158.7 million in 2021 to around 247.26 million by 2027. More than 48 local businesses utilize these single e-wallet systems, and mobile wallet usage has grown significantly, reaching 26% in 2020 and projected to reach 77% by 2025. Despite this remarkable progress, Indonesia still faces challenges in accommodating the population that has not fully adopted cashless transactions (DTI, 2023).

Therefore, digital payment is a crucial factor for MSME owners to understand, as it can significantly impact their business financial income. The use of digital payment methods among MSMEs goes beyond serving as a transaction tool—it is also a support strategy integrating marketing, sales, and customer service. In this context, digital payment plays a vital role for sellers and buyers in completing transactions and communicating payment-related information (Aulia et al., 2022).

Additionally, Indonesians' interest in e-commerce has grown significantly over the past five years, particularly since 2016. This surge is driven by increased trust in online buying and selling activities and easy access to information enabled by Indonesia's technological advancements. E-commerce has a significant impact on economic and

business growth in Indonesia, inspiring people to start their businesses. This is evident in the increasing number of e-commerce users who, previously focusing solely on online purchases, are now becoming online sellers by opening stores on e-commerce platforms. E-commerce provides a marketplace for vendors and consumers to transact, simplifying supplier contacts, promotions, and operations without needing a physical store.

The presence of e-commerce in Indonesia can assist and support MSMEs in promoting their products or services and expanding their sales reach across various regions in Indonesia. MSME owners benefit greatly from e-commerce, as once they register or establish a store on the platform, their products become more discoverable through simple search functions. Additionally, online stores listed on e-commerce platforms are accessible to consumers nationwide, enabling MSMEs to compete with large corporations. Indonesian MSME products are also highly sought after internationally for their distinctive beauty and originality. E-commerce makes it easier for MSMEs to promote and operate their businesses globally.

However, many MSME actors still do not utilize e-commerce to sell their products. According to data from the Ministry of Cooperatives and SMEs, Indonesia has 64.2 million MSMEs, but only 21.8 million, or 33.98% of the total, use e-commerce for product sales and promotion. The Indonesian government aims to have 30 million MSMEs go digital by 2023. With only 21.8 million achieved, there is still a long way to go, highlighting that many MSMEs have yet to integrate e-commerce into their digital sales systems.

Based on the explanation above, this study aims to examine the influence of financial literacy, digital payment, and interest in using e-commerce on MSME income (a case study of MSME traders in the trade sector in Surakarta City). The results of this study are expected to contribute both theoretically and practically. From a theoretical perspective, this research can enrich the knowledge and information base regarding financial literacy, digital payment, interest in using e-commerce, and MSME income. Practically, this study aims to provide guidance to MSME actors on aspects that can affect their business income. Based on this, the researchers present the title: *The Influence of Financial Literacy, Digital Payment, and Interest in Using E-Commerce on MSME Income (A Case Study on MSME Traders in the Trade Sector in Surakarta City)*.

2. METHOD

This study aims to examine the influence of financial literacy, digital payment usage, and interest in using e-commerce on the income of MSMEs in the trade sector in Surakarta. The research adopts a quantitative approach with a descriptive method, collecting numerical data and analyzing it statistically. The focus is to explore the relationships among these variables and provide strategic recommendations for MSME actors and policymakers to increase income through digital technology and financial literacy improvements. The study population includes MSMEs in the trade sector in Surakarta, with the sample consisting of business owners in the culinary, fashion, crafts, and foodstuffs sectors. The findings are

expected to contribute both academically and practically to support local economic growth. The data analysis technique used in this study is hypothesis testing, aimed at identifying the relationships among the analyzed variables. To test the hypothesis, **multiple linear regression analysis is applied. This method enables the identification and measurement of the effect of independent variables on the dependent variable simultaneously (Ghozali, 2018).

3. RESULT AND ANALISIS

a. Data Collection Methodology

This study employed **questionnaires** as the primary instrument for data collection, designed to identify factors relevant to the research objectives. The aim was to examine the impact of financial literacy, digital payment usage, and interest in using e-commerce on the income of MSMEs in Surakarta's trade sector.

The questionnaires were distributed in two ways:

- 1) **Face-to-face distribution**, where questionnaires were handed directly to respondents.
- 2) **Online distribution** through Google Forms.
- 3) During the distribution process, many business owners were unavailable, so the questionnaires were left with employees to be forwarded to the owners. Out of 115 distributed questionnaires, six were ineligible for data processing, and four were not returned. Thus, **105 valid questionnaires** were analyzed further for the study.

Table 1 Questionnaire Distribution

Description	Number	Percentage
Distributed Questionnaires	115	100%
Invalid Questionnaires	6	5%
Unreturned Questionnaires	4	3%
Processable Questionnaires	105	92%

Source: Processed primary data using SPSS 25 (2024).

b. Respondent Characteristics

Respondents' characteristics were analyzed based on variables like business type, gender, age, educational background, business duration, monthly sales, and digital payment adoption. These attributes provided a profile of MSME owners in Surakarta to evaluate the influence of financial literacy, digital payment, and e-commerce usage on their income.

c. Business Type

Business Type	Number of Respondents	Percentage
Culinary	83	79%
Fashion	10	9.5%
Handicraft	3	2.9%

Food Supplies	9	8.6%
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Conclusion: The majority (79%) of respondents operate in the culinary sector, followed by fashion (9.5%).

d. Gender

Gender	Number of Respondents	Percentage
Male	24	22.9%
Female	81	77.1%

Conclusion: Most respondents (77.1%) are female.

e. Age

Age Range	Number of Respondents	Percentage
17–25 years	11	10.5%
26–35 years	30	28.6%
36–45 years	25	23.8%
46–55 years	31	29.5%
>55 years	8	7.6%

Conclusion: Most respondents (29.5%) fall within the 46–55 age range, indicating they are in their productive years.

f. Educational Background

Education Level	Number of Respondents	Percentage
Elementary School	3	2.9%
Middle School	16	15.2%
High School/Vocational	58	55.2%
Diploma	11	10.5%
Bachelor's Degree	17	16.2%
Master's/Doctorate	0	0%

Conclusion: The majority of respondents (55.2%) have completed high school or vocational education, with no participants having postgraduate education.

g. Business Duration

Duration of Operation	Number of Respondents	Percentage
<1 year	8	7.6%
1–5 years	56	53.3%
6–10 years	25	23.8%
>10 years	16	15.2%

Conclusion: Most businesses (53.3%) have operated for 1–5 years, indicating a predominance of relatively young enterprises.

h. Average Monthly Sales

Monthly Sales Range	Number of Respondents	Percentage
≤ IDR 10,000,000	53	50.5%

IDR 10,000,000–20,000,000	33	31.4%
IDR 25,000,000–35,000,000	14	13.3%
IDR 40,000,000–50,000,000	2	1.9%
≥ IDR 50,000,000	3	2.9%

Conclusion: Half (50.5%) of respondents report monthly sales of ≤ IDR 10,000,000, with only 2.9% earning over IDR 50,000,000. This indicates diverse income levels among the MSMEs.

Berikut adalah terjemahan teks Anda ke dalam bahasa Inggris:

Respondents' Monthly Sales Average

Based on **Table 2**, the majority of respondents have an average monthly sales of ≤Rp 10,000,000, amounting to **53 individuals (50.5%)**. Furthermore, respondents with average monthly sales of:

- Rp 10,000,001–Rp 20,000,000: **33 individuals (31.4%)**
- Rp 25,000,001–Rp 35,000,000: **14 individuals (13.3%)**
- Rp 40,000,001–Rp 50,000,000: **2 individuals (1.9%)**
- ≥Rp 50,000,000: **3 individuals (2.9%)**

This indicates that business owners have varying sales records, with most businesses maintaining stable income, while fluctuations are influenced by the type of products or services sold.

Usage of Digital Payment Services

The characteristics of respondents based on their use of digital payment services are shown in **Table 8**:

Digital Payment Method	Number of Respondents	Percentage
Not using	0	0%
Using e-wallets (e.g., OVO, DANA, QRIS, etc.)	92	87.6%
Using bank transfers	13	12.4%
Total	105	100%

The majority of respondents use e-wallets as a digital payment method (**87.6%**), while respondents using bank transfers account for **12.4%**. None of the respondents completely abstained from using digital payments. This demonstrates that all respondents have adopted digital payment technologies in their business operations. Therefore, it can be concluded that there is a strong tendency to adopt **digital payment systems** among SMEs in the trading sector in Surakarta City.

Descriptive Statistics Analysis

Descriptive statistics are used to provide a deeper understanding of the characteristics of the research data. The results of the descriptive statistical analysis are presented in below:

Table 9

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Financial Literacy (LK)	105	19.00	35.00	29.67	3.45
Digital Payment (DP)	105	18.00	30.00	26.61	2.37
E-Commerce Interest (MM)	105	21.00	35.00	31.18	2.92
SME Income (PDT)	105	18.00	30.00	26.57	2.71

Based on **Table 9**, the following information is obtained:

1. **Financial Literacy (LK):**
 - a. Minimum value: **19**
 - b. Maximum value: **35**
 - c. Average (Mean): **29.67**
 - d. Standard Deviation: **3.45**
2. **Digital Payment (DP):**
 - a. Minimum value: **18**
 - b. Maximum value: **30**
 - c. Average (Mean): **26.61**
 - d. Standard Deviation: **2.37**
3. **E-Commerce Interest (MM):**
 - a. Minimum value: **21**
 - b. Maximum value: **35**
 - c. Average (Mean): **31.18**
 - d. Standard Deviation: **2.92**
4. **SME Income (PDT):**
 - a. Minimum value: **18**
 - b. Maximum value: **30**
 - c. Average (Mean): **26.57**
 - d. Standard Deviation: **2.71**

The results above indicate that the distribution of values for each variable has moderate variation, with relatively small standard deviations.

Here is the translation of the text into English:

Data Quality Test

Validity Test

The validity test in this study is used to measure the validity level of each question item in the questionnaire. This study measures three variables, including independent variables consisting of financial literacy, digital payment, and interest in using e-commerce, while the dependent variable is MSME income.

Table 10

Validity Test Results

No.	Item	<i>rhitung</i>	<i>rtabel</i>	Remarks
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Financial Literacy			
1	0.665	0.192	Valid
2	0.663	0.192	Valid
3	0.624	0.192	Valid
4	0.710	0.192	Valid
5	0.613	0.192	Valid
6	0.659	0.192	Valid
7	0.621	0.192	Valid
Digital Payment			
1	0.632	0.192	Valid
2	0.694	0.192	Valid
3	0.728	0.192	Valid
4	0.473	0.192	Valid
5	0.614	0.192	Valid
6	0.712	0.192	Valid
Interest in using e-commerce			
1	0.773	0.192	Valid
2	0.716	0.192	Valid
3	0.551	0.192	Valid
4	0.727	0.192	Valid
5	0.664	0.192	Valid
6	0.704	0.192	Valid
7	0.690	0.192	Valid
MSME Income			
1	0.696	0.192	Valid
2	0.712	0.192	Valid
3	0.749	0.192	Valid
4	0.735	0.192	Valid
5	0.744	0.192	Valid
6	0.681	0.192	Valid

Source: Primary data processed using SPSS 25 (2024)

Based on **Table 10**, the r_{table} value for a significance level of 0.05 is 0.192. Since the $r_{calculated}$ value for each statement item is greater than the r_{table} value, it can be concluded that all statement items used in the questionnaire for financial literacy, digital payment, interest in using e-commerce, and MSME income meet the validity criteria. This indicates that these statement items are reliable for measuring the variables accurately in this study.

Reliability Test

The reliability test in this study is conducted by comparing the Cronbach's Alpha value for each instrument used to assess each variable. Below are the results of the reliability test for each variable tested:

Table**11****Reliability Test Results**

Variable	Cronbach's Alpha	Remarks
LK	0.750	Reliable
DP	0.716	Reliable
MM	0.810	Reliable
PDT	0.802	Reliable

Source: Primary data processed using SPSS 25 (2024)

Table 11 shows that the Cronbach's Alpha values for each variable are above 0.60. This result indicates that the variables used in this study have acceptable consistency. Therefore, it can be concluded that all variables used in this study are reliable, meaning they can produce consistent and dependable data for further analysis.

Classical Assumption Test**Normality Test**

The normality test for the data in this study is conducted using the Kolmogorov-Smirnov test to determine whether the data is normally distributed. The complete results of the normality test can be seen in the table below:

Table**12****Normality****Test****Results***One-Sample Kolmogorov-Smirnov Test*

Unstandardized Residual			
N	105		
Normal Parameters (a,b)	Mean	0.0000000	
	Std. Deviation	2.33218355	
Most Extreme Differences	Absolute	0.039	
	Positive	0.039	
	Negative	-0.038	
Test Statistic	0.039		
Asymp. Sig. (2-tailed)	0.200c,d		

Source: Primary data processed using SPSS 25 (2024)

Based on **Table 4.12**, the Kolmogorov-Smirnov normality test results show that the probability value (Asymp. Sig.) for all variables is greater than 0.05. Therefore, it can be concluded that the data in this study is normally distributed. This shows that the data distribution does not deviate from a normal distribution, and the assumption of normality for further statistical analysis is met.

Multicollinearity Test

In this study, the multicollinearity test is performed by examining the Tolerance and Variance Inflation Factor (VIF) values to ensure there is no relationship between

independent variables. The results of the multicollinearity test for the regression model are shown in the table below:

Table**13****Multicollinearity Test Results**

Variable	Tolerance	VIF	Remarks
LK	0.874	1.144	No multicollinearity
DP	0.727	1.376	No multicollinearity
MM	0.701	1.427	No multicollinearity

Source: Primary data processed using SPSS 25 (2024)

Based on **Table 13**, it can be seen that no multicollinearity symptoms appear in the regression equation of this study. This is evident from the tolerance values being above 0.1 and the VIF values being less than 10 for all independent variables. These criteria indicate that there is no relationship between independent variables that might affect the regression results, ensuring that the regression model used is valid and reliable.

Heteroscedasticity Test

The heteroscedasticity test in this study is performed using the Glejser test method to detect any issues with unequal variance (heteroscedasticity) in the regression model. Heteroscedasticity occurs when the residual variance (measurement errors) is not constant across all independent variables. **Table 14** below presents the results of the heteroscedasticity test:

Table**14****Heteroscedasticity Test Results**

Variable	Sig (p-value)	Remarks
LK	0.132	No heteroscedasticity found
DP	0.467	No heteroscedasticity found
MM	0.528	No heteroscedasticity found

Source: Primary data processed using SPSS 25 (2024)

Based on **Table 14**, the $t_{\text{calculated}}$ value for each variable is greater than 0.05 (α). This indicates that there is no heteroscedasticity in the regression model used in this study. In other words, the model's error variance is constant, which confirms that the homoscedasticity assumption is met.

Multiple Linear Regression Test

Regression analysis is used to determine the relationship and impact of one variable on another. The data analysis results using SPSS version 25 generate a regression equation representing the relationship between independent and dependent variables in this study.

Table**15****Multiple Linear Regression Equation**

B	T	Sig (p-value)
Constant	12.751	4.090
LK	-0.147	-2.038
DP	0.231	2.016
MM	0.385	4.062

Source: Primary data processed using SPSS 25 (2024)

Based on **Table 15**, the coefficients indicate the parameter estimates for the regression model used in this study. These coefficients represent how much each independent variable affects the dependent variable being studied. The regression equation is as follows:

$$PDT = 12.751 - 0.147LK + 0.231DP + 0.385MM + e$$

Explanation of each variable's coefficient:

- a. The constant value is 12.751, meaning if all independent variables (financial literacy, digital payment, and interest in using e-commerce) are 0, the MSME income is estimated at 12.751. This represents the base MSME income unaffected by these variables.
- b. The regression coefficient for financial literacy is -0.147, meaning a one-unit increase in financial literacy will result in a 0.147 decrease in MSME income. This suggests that financial literacy may not have a significant impact on MSME income in this study, or other factors may be more dominant in affecting income.
- c. The regression coefficient for digital payment is 0.231, indicating that a one-unit increase in digital payment adoption will lead to a 0.231 increase in MSME income. This shows the potential benefits of utilizing digital payment technology for increasing MSME income.
- d. The regression coefficient for interest in using e-commerce is 0.385, meaning a one-unit increase in interest in e-commerce will increase MSME income by 0.385. This suggests that interest in e-commerce platforms has the potential to effectively increase MSME income.

Model Accuracy Test

F-Test

The F-test is performed to determine whether the regression model consisting of independent and dependent variables has a significant effect together. The F-test also indicates whether the proposed model can explain the fluctuations in the dependent variable. The F-test results are summarized in the table below:

Table 16

F-Test Results

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	200.050	3	66.683	11.906	0.000b
Residual	565.664	101	5.601		
Total	765.714	104			

Source: Primary data processed using SPSS 25 (2024)

Based on **Table 4.16**, the $F_{\text{calculated}}$ value is 11.906 with a significance value of 0.000. Since the Sig. F is less than $\alpha = 0.05$ ($0.000 < 0.05$), it can be concluded that all independent

variables (financial literacy, digital payment, and interest in using e-commerce) have a significant effect on. **Coefficient of Determination (R²) Test**

The Coefficient of Determination (R²) is used to measure the extent to which a regression model can explain fluctuations or variations in the dependent variable. The value of R² ranges from 0 to 1, where the higher the R² value, the better the model explains the data. Based on the calculations, the Adjusted R² value for the regression model is 0.239, meaning that 23.9% of the variation in the income of MSMEs can be explained by financial literacy, digital payment, and the interest in using e-commerce. The remaining 76.1% is explained by other factors outside the model, which are not covered by the independent variables in this study.

Hypothesis Test (t-test)

The t-test is used to examine the effect of each independent variable on the income of MSMEs. Below are the results of the t-test for each variable:

Table 18 t-test Results

Variable	B	t_calculated	t_table	Sig.	Explanation
LK (Financial Literacy)	-0.147	-2.038	1.984	0.044	H ₁ accepted
DP (Digital Payment)	0.231	2.016	1.984	0.046	H ₂ accepted
MM (Interest in Using E-commerce)	0.385	4.062	1.984	0.000	H ₃ accepted

Using a significance level of 0.05 ($\alpha = 5\%$) and degrees of freedom (df) calculated as $df = n - k - 1 = 105 - 3 - 1 = 101$, the t-table value used is 1.984.

Effect of Financial Literacy on MSME Income

The t-test result shows the t_calculated value for financial literacy is 2.038, which is greater than the t_table value ($2.038 > 1.984$), and the significance value is 0.044, which is less than 0.05. Therefore, H₁ is accepted, meaning that financial literacy has an effect on MSME income.

Effect of Digital Payment on MSME Income

The t-test result shows the t_calculated value for digital payment is 2.016, which is greater than the t_table value ($2.016 > 1.984$), and the significance value is 0.046, which is less than 0.05. Therefore, H₂ is accepted, meaning that digital payment has an effect on MSME income.

Effect of Interest in Using E-commerce on MSME Income

The t-test result shows the t_calculated value for interest in using e-commerce is 4.062, which is greater than the t_table value ($4.062 > 1.984$), and the significance value is 0.000, which is less than 0.05. Therefore, H₃ is accepted, meaning that interest in using e-commerce has an effect on MSME income.

Discussion of Data Analysis Results

Effect of Financial Literacy on MSME Income

This study found that financial literacy affects the income of MSMEs. This is evident from the t-test result for financial literacy, which shows a t_calculated value of 2.038 and a t_table value of 1.984 with a significance level of 0.044. Since t_calculated is greater than t_table ($2.038 > 1.984$) and the significance value is smaller than 0.05 ($0.044 < 0.05$), and

the coefficient of regression shows a negative value of -0.147, the first hypothesis that states financial literacy affects MSME income in the trade sector in Surakarta City is accepted.

These findings are supported by previous research conducted by (Evita et al., 2024), which concluded that having a good understanding of financial literacy in managing finances can increase MSME income. This will affect MSME actors in making productive decisions, such as adding capital to their business to help it grow. This is also supported by research conducted by (Santiara & Sinarwati, 2023), which stated that financial literacy affects MSME financial management. The research shows that the higher the level of financial literacy understanding held by MSME actors, the more effective their financial management will be, and vice versa.

This finding is in line with the theory of planned behavior, as personal financial attitudes reflect how capable someone feels in controlling their finances, which can be influenced by financial management skills derived from their income. Financial literacy is essential as it involves knowledge of finance that benefits MSMEs in managing the finances derived from their income.

Effect of Digital Payment on MSME Income

This study found that digital payment affects the income of MSMEs. This is evident from the t-test result for digital payment, which shows a $t_{\text{calculated}}$ value of 2.016, greater than the t_{table} value ($2.016 > 1.984$), and a significance value of 0.046, which is less than 0.05. Therefore, the second hypothesis stating that digital payment affects MSME income is accepted.

This research is consistent with previous studies by Mutia and Ruzikna (2024), which stated that the better MSMEs adopt digital payment, the greater the opportunity to expand operational accessibility. The adoption of new technologies, such as digital payments, provides convenience and ease of access, allowing MSMEs to attract new customers from remote areas who prefer to interact online. With increased accessibility, the opportunity for MSMEs to increase their income becomes greater. Additionally, this research is supported by studies by (Evita et al., 2024), which found that digital payments have a positive impact on MSME income in the Alang-Alang Lebar District, Palembang. Their study revealed that business income will increase if MSMEs take advantage of opportunities such as digital payments.

This is consistent with the Technology Acceptance Model (TAM) theory, which states that the use of existing technology, such as digital payments, simplifies transactions for MSMEs in buying and selling, which helps increase their income.

Effect of Interest in Using E-commerce on MSME Income

This study found that interest in using e-commerce affects the income of MSMEs. This is evident from the t-test result for interest in using e-commerce, which shows a $t_{\text{calculated}}$ value of 4.062, greater than the t_{table} value ($4.062 > 1.984$), and a significance value of

0.000, which is less than 0.05. Therefore, the third hypothesis stating that interest in using e-commerce affects MSME income is accepted.

This finding is consistent with research conducted by Yusuf (2022), which explained how the use of e-commerce affects the income of Micro, Small, and Medium Enterprises (MSMEs) in North Bekasi District. It shows that the greater the impact of e-commerce on business operations, the higher the income that MSME actors will generate. MSMEs that use e-commerce for sales transactions and marketing operations report increases in various areas, including revenue, sales volume, and total income. In other words, e-commerce offers a robust platform for developing markets and improving business operations.

This is also supported by (Ramadhana & Indrayeni, 2024), which concluded that interest in using e-commerce can improve the sales performance of MSMEs, allowing them to reach a broader market that can engage with consumers from various locations. Through online product galleries, customer reviews, and digital promotions, MSMEs can build a strong brand image, attract more potential customers, and influence sales performance. E-commerce simplifies the process for MSME actors, making their businesses more recognized. It can be concluded that by using e-commerce, their business can experience increased production and sales.

4. DISCUSSION/CONCLUSION

Based on the research results on financial literacy, digital payment, and interest in using e-commerce on the income of MSMEs in the Trade Sector in Surakarta City, the following conclusions can be drawn:

- a. **Financial literacy affects the income of MSMEs in the trade sector in Surakarta City.** This indicates that a good understanding and skill in managing finances help MSME actors optimize the resources they have, which can increase their business income.
- b. **Digital payment affects the income of MSMEs in the trade sector in Surakarta City.** This conclusion shows that the ease of transaction processes and the flexibility offered by digital payment methods enable MSME actors to improve efficiency and comfort for consumers, which ultimately leads to increased income.
- c. **Interest in using e-commerce affects the income of MSMEs in the trade sector in Surakarta City.** This result shows that e-commerce opens up broader market opportunities and makes it easier for MSMEs to market their products more effectively, thus helping increase their income potential.

B. Limitations

This study has several limitations that need to be considered, although it is hoped that these limitations do not reduce the benefits that can be gained. Some of these limitations are as follows:

1. This study is limited to the scope of MSMEs in the trade sector in Surakarta City. Therefore, the results may not be fully representative of MSMEs in other regions of Indonesia that have different economic characteristics and digital literacy levels.
2. There are other independent variables that have not been explained by 76.1% of the MSME income variable. This study focuses only on the variables of financial literacy, digital payment usage, and interest in using e-commerce, without considering other

external factors such as government policy support, macroeconomic conditions, or competition factors, which can also affect MSME income.

3. The data in this study were collected through questionnaires filled out directly by respondents. This raises the risk of bias, where respondents may provide inaccurate answers due to a lack of understanding of the questions or other subjective factors, which led to the need to exclude outliers to ensure the validity of the results.
4. This study focuses more on MSMEs in the trade sector, while other business sectors may have different characteristics in terms of the impact of financial literacy, digital payment, and e-commerce interest on income, which were not covered in this study.

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