



INTERNATIONAL JOURNAL OF TRENDS IN ACCOUNTING RESEARCH

Journal homepage: <https://jurnal.adaai.or.id/index.php/ijtar/index>



E-Commerce, Accounting Information Systems, Financial Inclusion, and Financial Performance of SHOPEE UMKM in Surabaya

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ARTICLE INFO

Article history:

Received: 25 May 2025

Accepted: 27 May 2025

Published: 30 May 2025

Keywords:

E-Commerce

Accounting Information System

Financial Inclusion

Financial Performance

SMEs

ABSTRACT

The expansion of small and medium-sized enterprises (SMEs) has played a crucial role in driving Indonesia's economic development, including the financial performance of the SMEs themselves, particularly those in Surabaya that utilize e-commerce/online retail platforms like Shopee. The objective of this research is to examine the effects of e-commerce, Systems for managing information in the field of accounting, and the integration of financial services, both partially and simultaneously, regarding the economic outcomes of small and medium-sized enterprises utilizing the Shopee platform in Surabaya. The results from the partial test indicate that e-commerce significantly enhances financial performance, as evidenced by a significance value of 0.003. The variable of the accounting information system also exerts a notable positive influence on financial performance, with a significance value of 0.021. Financial inclusion demonstrates a profound effect on financial performance, with a p-value of 0.000, indicating high statistical significance. These results highlight the significant impact of the three variables in enhancing the financial outcomes of SMEs on Shopee in Surabaya, and the consequences of this can serve as a foundation for crafting policies that foster the growth of SMEs in the digital age.

1. INTRODUCTION

The COVID-19 outbreak has had a major impact on various aspects of life, including the Indonesian economic sector, especially on Micro, Small, and Medium Enterprises (MSMEs). This sector faces challenges such as declining sales, difficulty accessing capital, obstructed distribution, raw material shortages, and layoffs that affect national economic stability (Rahmawati, 2022). MSMEs contribute 61% of Gross Domestic Product (GDP) and absorb

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90% of the national workforce, making them the main drivers of the people's economy (Ekon, 2023). Its crucial role is also supported by its 99% contribution to the total business units in Indonesia, with around 66 million MSME players in 2023 that absorb 117 million workers (Kadin, Id, 2023). Fauziah et al. (2025) demonstrate that family self-employment plays a key role in promoting sustainable entrepreneurship by cultivating resilience, a long-term vision, and ethical business practices. Family-owned businesses are found to adopt sustainability frameworks like the Triple Bottom Line, circular economy principles, and collaborative networks. However, the diverse nature of family businesses presents difficulties in making broad generalizations, suggesting the necessity for further research tailored to specific contexts.

The recovery of MSMEs continues to show positive trends, such as the growth in the number of business units from 64.19 million in 2018 to 66 million in 2023, driven by digitalization efforts that target 30 million MSMEs to enter the digital ecosystem by 2024 (Kadin, Id, 2023). Surabaya City, as one of the business centers, has a large contribution to the MSME sector with 60 thousand business units, contributing 58.17% of MSME turnover in East Java (Jatim Tribunnews, 2023). However, micro MSMEs in Surabaya still face constraints in accessing wider markets, even though e-commerce offers opportunities to reach larger markets and improve operational efficiency (Mia et al., 2022).

The adoption of e-commerce can improve the competitiveness of MSMEs, but challenges such as low digital literacy and high logistics costs often hinder the optimization of financial performance (Riski et al., 2023). Fauziah et al. (2024) show that adopting the Pentuple Bottom Line approach not only encourages sustainable business practices but also aligns entrepreneurial ventures with wider societal objectives. By emphasizing ethical factors in addition to conventional profit measures, businesses can foster a more sustainable future while securing long-term success. Meanwhile, Accounting Information Systems (AIS) can improve the accuracy of transaction recording and financial management, although implementation is still constrained by a lack of understanding and technical support (Suhaila and Lufriansyah, 2024). In addition, financial inclusion provides access to services such as credit and savings that are important for MSME growth, although its effectiveness is still affected by limited financial literacy and resistance to change (Wulandari et al., 2023).

Based on various studies, the topic of the influence of e-commerce, accounting information systems, and financial inclusion on the financial performance of MSMEs in Surabaya, especially those using the Shopee platform, is still rarely discussed specifically. Therefore, this study aims to fill the literature gap and dig deeper into the impact of these three elements on the financial performance of MSMEs in the Surabaya area (Prasetyo and Ambarwati, 2021). In essence, financial performance emphasizes the evaluation of current operational and financial results, whereas company value places greater emphasis on the market's perception of the company's prospects (Rahman et al., 2024).

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

E-commerce, as defined by Akbar & Alam (2020), encompasses the transactions of buying and selling, together with the marketing of items and services, facilitated through electronic media. Similar to media forms such as television, radio, and computer equipment or internet connections. E-commerce denotes the transactions of purchasing and selling conducted over digital platforms, including the internet. Any individual with internet access can participate in e-commerce activity.

H1: There is a significant influence on e-commerce related to the financial performance of Shopee MSMEs in the Surabaya area.

As posited by Marina et al. (2017), an accounting information system can be conceptualized as a series of procedures, documents, records, and tools that function to process financial information into reports. These reports are then utilized by management to control the company's operations and as a foundation for managerial decision-making. AIS constitutes a component of an integrated system, in which it is inextricably linked to an interconnected business process.

H2: *There is a significant influence of information systems in accounting related to financial performance in Shopee MSMEs in the Surabaya area.*

According to Durai and Stella (2019:122), financial inclusion can be defined as the process of ensuring access to financial services and credit that are accessible to vulnerable and low-income groups at an affordable cost. According to the World Bank (2014:1), financial inclusion is defined as the ability of individuals or groups to access financial products and services. The aforementioned services are considered official, offering benefits at a reasonable cost and are designed to meet the needs of individuals and businesses. These services encompass a range of financial transactions, payments, savings opportunities, credit options, and insurance policies, all of which are provided responsibly and sustainably.

H3: *There is a significant influence of financial inclusion on financial performance in Shopee MSMEs in the Surabaya area.*

3. RESEARCH METHOD

The research approach used in this research is quantitative research, namely, research that provides conclusions that can be generalized. The data used in this study are primary. Primary data is research data obtained directly through indicators on the variables of this study, then used as the basis for designing question items on the questionnaire, the results of which can be measured using a Likert scale. The levels on the Likert scale measurement are: Completely agree (SS) received a score of 5, Agreeing (S) will receive a score of 4, At the Sufficient Consent (CS) level, a score of 3 is given, If disagree (TS), a score of 2 is given, and Very strong rejection (STS) is given a score of 1.

The data collection method is carried out with a literature study approach, namely by collecting information from sources such as books, journals, news, and the internet that are relevant to the research topic. In addition, primary data is also analyzed and obtained from the results of questionnaires that have been distributed to at least 100 questionnaires through an online platform for *Sellers* in the Shopee marketplace to obtain information and research results. The results of distributing questionnaires are then measured by making a class interval table, which is used to calculate the score or value of the answers given by the respondents.

$$\text{Class interval} = \frac{\text{Highest Score} - \text{Lowest Score}}{\text{Number of classes}}$$

Table 1. Interval Classes (Survey Research Methods)

Interval Value	Category	Value
4.20 < x ≤ 5.00	Strongly Agree	5
3.40 < x ≤ 4.20	Agree	4
2.60 < x ≤ 3.40	Moderately Agree	3
1.80 < x ≤ 2.60	Disagree	2
1.00 < x ≤ 1.80	Strongly disagree	1

Source: Masri (2014)

In the context of multiple linear regression with one dependent (Y) and three independent variables (X1, X2.X3), some commonly used statistical tests involve assessing the significance of regression coefficients and model fit.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Description:

- Y : dependent variable that you want to predict (UMKM Financial Performance)
 α : konstanta
 β_1 : e-commerce regression coefficient
 β_2 : regression coefficient of the financial accounting system
 β_3 : regression coefficient of financial inclusion
 X_1 : e-commerce variable
 X_2 : financial accounting system variable
 X_3 : financial inclusion variable
e : error

4. RESULTS

Data Quality Test

a. Validity Test

Table 2. Results of the e-commerce Variable Validity Test

Indicator	Pearson Correlation	Sig Level	Description
Item X1.1	0,630	0,000	Valid
Item X1.2	0,538	0,000	Valid
Item X1.3	0,584	0,000	Valid
Item X1.4	0,425	0,000	Valid
Item X1.5	0,394	0,000	Valid
Item X1.6	0,329	0,000	Valid
Item X1.7	0,534	0,000	Valid
Item X1.8	0,398	0,000	Valid
Item X1.9	0,414	0,000	Valid
Item X1.10	0,420	0,000	Valid

Source: Results on Statistics in SPSS (Researcher, 2024)

Table 2 shows ten statement items used to measure the *e-commerce variable*, all results show a significance level below 5%. This finding indicates that each statement used as an indicator of the e-commerce variable has been measured as valid.

Table 3. Accounting Information System Variable Validity Test Results

Indicator	Pearson Correlation	Sig Level	Description
Item X2.1	0,590	0,000	Valid
Item X2.2	0,627	0,000	Valid
Item X2.3	0,601	0,000	Valid
Item X2.4	0,661	0,000	Valid
Item X2.5	0,436	0,000	Valid
Item X2.6	0,432	0,000	Valid
Item X2.7	0,433	0,000	Valid

Item X2.8	0,487	0,000	Valid
Item X2.9	0,419	0,000	Valid
Item X2.10	0,371	0,000	Valid

Source: Results on Statistics in SPSS (Researcher, 2024)

Table 3 shows that the ten statement items used to measure the accounting information system variable all have a significance level lower than 5%, are declared valid.

Table 4. Results of the Financial Inclusion Variable Validity Test

Indicator	Pearson Correlation	Sig Level	Description
Item X3.1	0,643	0,000	Valid
Item X3.2	0,688	0,000	Valid
Item X3.3	0,692	0,000	Valid
Item X3.4	0,577	0,000	Valid
Item X3.5	0,550	0,000	Valid
Item X3.6	0,688	0,000	Valid
Item X3.7	0,739	0,000	Valid
Item X3.8	0,658	0,000	Valid
Item X3.9	0,596	0,000	Valid
Item X3.10	0,539	0,000	Valid

Source: Results on Statistics in SPSS (Researcher, 2024)

Table 4 shows that the ten statement items used to measure the financial inclusion variable all have a significance level value below 5%. This finding indicates that each statement item used to evaluate the variables involved in measuring financial inclusion is valid.

Table 5. Financial Performance Variable Validity Test Results

Indicator	Pearson Correlation	Sig Level	Description
Item Y.1	0,565	0,000	Valid
Item Y.2	0,642	0,000	Valid
Item Y.3	0,524	0,000	Valid
Item Y.4	0,604	0,000	Valid
Item Y.5	0,730	0,000	Valid
Item Y.6	0,678	0,000	Valid
Item Y.7	0,519	0,000	Valid
Item Y.8	0,523	0,000	Valid
Item Y.9	0,585	0,000	Valid
Item Y.10	0,585	0,000	Valid

Source: Results on Statistics in SPSS (Researcher, 2024)

Table 5 shows that the ten statement items used to measure financial performance variables all have a significance level lower than 5%. The results of this study indicate that each statement element applied in measuring financial performance variables is declared in the form of validity.

b. Reliability Test

Table of the results for testing in reliability:

Table 6. Reliability Test Results

Variables	Cronbach Alpha	N of Items	Critical Value	Description
E-Commerce	0,790	10	0,60	Reliable
Accounting Information System	0,802	10	0,60	Reliable
Financial Inclusion	0,837	10	0,60	Reliable
Financial Performance	0,797	10	0,60	Reliable

Source: SPSS statistical research results (Researcher, 2024)

Table 6 shows the Cronbach's Alpha reliability coefficient for each variable in *e-commerce*, accounting information systems, financial inclusion, and financial performance, all have values greater than 0.60. This finding indicates that all statement elements of each variable have a very high level of reliability or are reliable.

Classical Assumption Test

According to this research, we find that the Asymp sig (2-tailed) value recorded is 0.801, which is greater than 0.050. Based on this, it can be concluded that through the Kolmogorov-Smirnov method, no problems related to data normality were found. The VIF value obtained from each variable is below 10, and the Tolerance value is above 0.10. These results reflect that each of the independent variables is not affected by multicollinearity problems. Our heteroscedasticity test shows that the distribution of points is randomly scattered above and below the Y axis, without showing a regular or clear pattern. It can be concluded unequivocally that this analysis model does not experience heteroscedasticity problems.

Multiple Linear Regression

The results of the tests that have been carried out show the following multiple linear regression findings:

Table 7. Multiple Regression Test Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-,283	4,851		-,058	,954
E-Commerce	,401	,130	,273	3,079	,003
Accounting Information System	,230	,098	,196	2,342	,021
Financial Inclusion	,337	,074	,390	4,561	,000

a. Dependent Variable: Financial Performance

Source: Primary Data (2024)

The results of a series of tests that have been carried out can be seen in the table, namely:

Table 8. F Test Results

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	892,330	3	297,443	26,049	,000 ^b
1 Residuals	1096,180	96	11,419		
Total	1988,510	99			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Financial Inclusion, Accounting Information System, E-Commerce

Source: Primary Data (2024)

Table 8. shows that the level of significance obtained is 0.000, which is much smaller than $\alpha = 5\%$. This condition shows that the independent effect on the dependent variable is significant. This result also reflects that the rise and fall of the financial performance of Shopee MSMEs in Surabaya is influenced by the extent to which the quality of e-commerce implementation, accounting information systems, and financial inclusion in these MSMEs.

a. Test t

The results of individual analysis of each variable can be seen in the following table:

Table 9. Significant Level of Each Variable

Variables	Regression Coefficient	Sig Level	Description
<i>e-commerce</i>	0,401	0,003	Influential
Accounting Information System	0,230	0,021	Influential
Inclusion Performance	0,337	0,000	Influential

Source: Data Processed (2024)

From table 9, we can explain the impact of e-commerce variables, accounting information systems, and financial inclusion on the financial performance of Shopee MSMEs in Surabaya as follows: (a). The test results have been carried out showing that the significant level of the e-commerce variable obtained is $0.003 \leq \alpha = 0.050$ (level of significance) with a positive regression coefficient of 0.401. These results reflect that there is a significant positive influence between e-commerce variables related to the financial performance of Shopee micro, small and medium enterprises in Surabaya city. (b). The results of the tests carried out show that the accounting information system variable has a significance level of 0.021, which is smaller than $\alpha = 0.050$ (significance level), with a positive regression coefficient value of 0.230. These results reflect that there is a significant positive effect between the accounting information system variables related to the financial performance of Shopee MSMEs in Surabaya. (c). The test results that have been carried out show that the inclusion performance variable has a very low level of significance, with a p value of 0.000 which is much smaller than $\alpha = 0.050$ (significance limit), as well as a positive regression coefficient recorded of 0.334. These results reflect that there is a significant positive influence between the inclusion performance variable and the financial performance of Shopee MSMEs in Surabaya.

The Effect of E-Commerce on the Financial Performance of Shopee MSMEs in Surabaya

Based on the results of the data analysis, it was found that electronic commerce has a huge impact on the financial results of MSMEs operating on the Shopee platform in Surabaya. The t-test conducted yielded a significance figure of 0.003, which lies very much below the critical limit of 0.005. This indicates that the effect of *e-commerce* on financial performance does not occur by chance, but is a statistically reliable effect. In addition, the resulting regression coefficient is positive at 0.401

Effect of Financial Inclusion on Financial Performance in Shopee MSMEs in Surabaya

Through the t test analysis conducted, it can be concluded that the accounting information system (X2) has a significant effect on the financial performance of Shopee MSMEs in the Surabaya area because the significance value obtained is 0.021, which is lower than the alpha level set at 0.050, Based on the analysis conducted, it can be said that the accounting information system variable has a very large impact on the financial performance of these Shopee MSMEs. The resulting regression coefficient level is positive at 0.230.

Influence of Financial Inclusion on Financial Performance in Shopee MSMEs in Surabaya.

Based on the results of the t-test analysis applied to the financial inclusion variable on the financial performance of Shopee MSMEs in Surabaya, a significance value of 0.000 is obtained, which is smaller than the alpha value (0.050). This indicates a very strong and significant impact of financial inclusion and the financial performance of these MSMEs. The resulting regression coefficient level is positive at 0.337,

5. CONCLUSION

The research findings indicate that E-commerce has a positive and significant influence on the financial performance of MSMEs operating on the Shopee platform in Surabaya. The study demonstrates that the integration of E-commerce practices has contributed to increased revenue and overall business performance. Furthermore, the accounting information system in these MSMEs plays a crucial role in enhancing their financial performance, as it enables better financial management and decision-making. The research also reveals that financial inclusion significantly affects the achievement of financial results, with MSMEs benefiting from broader access to financial services, leading to improved financial outcomes. Collectively, E-commerce, accounting information systems, and financial inclusion form a powerful trio that directly and substantially impacts the financial success of MSMEs on the Shopee Surabaya platform.

Based on these findings, several recommendations are proposed to deepen the understanding and expand the contributions in this area. First, future research could incorporate more relevant and complex variables to explore the factors influencing pricing strategies and promotions on e-commerce platforms. This could offer insights into how MSMEs can optimize their marketing strategies to further enhance financial performance. Additionally, expanding the sample and geographic coverage to include a wider range of e-commerce platforms and sellers across different regions would provide a more comprehensive view of the broader impact of these factors. Lastly, employing a combination of quantitative and qualitative methods in future research would offer a more holistic and detailed perspective on the role of E-commerce and financial inclusion in the success of MSMEs.

Despite the valuable insights provided by this research, several limitations should be considered. First, the study focuses solely on MSMEs operating on the Shopee platform in Surabaya, which may not fully represent the broader population of MSMEs across different platforms or geographic locations. This limited scope may affect the generalizability of the findings to other e-commerce platforms or regions. Second, the study primarily relies on quantitative data, which may not capture the full complexity of the factors influencing financial performance. Qualitative insights, such as the experiences and perceptions of MSME owners, could provide a more nuanced understanding of the relationship between e-commerce, accounting information systems, and financial inclusion. Third, the research does not address external factors, such as market conditions or government policies, that could also significantly impact the financial performance of MSMEs. Future studies could address these limitations by expanding the sample size to include a wider variety of e-commerce platforms and geographic regions, which would allow for more robust conclusions and greater external validity. Additionally, incorporating both quantitative and qualitative methods could provide a more comprehensive understanding of the mechanisms at play. Furthermore, exploring other relevant variables, such as customer behavior or the role of digital marketing, would contribute to a more holistic approach to understanding the factors influencing MSME performance. It would also be beneficial to examine the impact of external elements, such as regulatory changes or economic shifts, on the financial performance of MSMEs in the context of e-commerce.

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