# THE INFLUENCE OF ACCOUNTING AND E-COMMERCE INFORMATION SYSTEMS ON MSME PERFORMANCE IN THE CITY OF SURABAYA

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## Abstract

This study examines how accounting information systems and e-commerce adoption affect the operational performance of MSMEs. As digital transformation and efficient financial reporting become increasingly important for business sustainability, this study investigates their role in enhancing MSME growth. Using a quantitative approach, this study collected data through a survey distributed to MSME owners in Surabaya, Indonesia. Multiple linear regression analysis, conducted using SPSS, showed that a robust accounting system significantly improved market expansion and sales performance. The findings highlight that the integration of digital tools in financial management and the utilization of e-commerce platforms can improve operational efficiency, accuracy, and overall competitiveness for MSMEs in today's digital economy.

**Keywords:** Accounting Information System, E-Commerce, MSME Performance

## INTRODUCTION

The dynamics of the Indonesian economy have evolved significantly in recent times, one of which is through the development of MSMEs (Sauerman & Isbahi, 2023; Fatkhurrozi, 2024). MSMEs play an important role in supporting the government, reducing unemployment, and contributing significantly to GDP and national labor absorption (Handayani, 2015; Kaswinata et al., 2023). Data from the Ministry of Cooperatives and SMEs (2020) shows that the contribution of MSMEs to Indonesia's GDP has reached more than 61% and absorbs around 97% of the national workforce, confirming their vital role in economic stability and growth (MSMEs Become an Important Pillar in the Indonesian Economy, 2021).

In line with that, the city of Surabaya, as one of the main economic centers, shows rapid growth of MSMEs, increasing from around 4,000 units in 2020 to more than 12,320 units in 2023 (Surabaya City Cooperatives, MSMEs and Trade Service, 2024). This growth is also reflected in the contribution of gross added value of Surabaya MSMEs, which reached IDR 215,364 billion in 2022, the highest in East Java, indicating its strategic role (Surabaya City Cooperatives, MSMEs and Trade Service, 2023; Aminy, 2022). This success is supported by various government programs and business actors' adaptation efforts (E-Peken Application Provides Convenience in Developing MSMEs, 2022).

However, amidst the rapid development of the digital economy, MSMEs are faced with the challenge of adapting to technology. The implementation of appropriate information systems, including accounting information systems (AIS), is crucial for efficient operational management and better decision-making (Rohman et al., 2023; Marshal in Faridawati et al., 2024). E-commerce has also

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become a vital channel for MSMEs to expand market reach and improve operational efficiency (Ramadhan & Nofiar, 2025; Sariyani & Nasution, 2025).

Several studies have examined this relationship. A study by (Silvia et al., 2022) in Bandar Lampung City found a significant influence of SIA and e-commerce on the performance of MSMEs, although the use of e-commerce is not yet optimal. In line with that, research (Indahsari et al., 2024) in Banyuwangi also showed that the implementation of SIA and e-commerce contributed positively to the performance of MSMEs. These findings underline the importance of technology adaptation in improving the efficiency and effectiveness of MSME operations in the digital era (Ulyasari et al., 2023).

Given the rapid development of MSMEs and the adoption of technology in Surabaya, as well as existing findings from other contexts, a more comprehensive study is needed to examine the influence of the use of AIS and e-commerce on the performance of MSMEs in this city. This study aims to empirically test the extent to which these two variables contribute to improving the performance of MSMEs in Surabaya. It is hoped that the results of the study can provide valuable insights for stakeholders in designing policies that support the growth of MSMEs, as well as encourage business actors to optimize the use of technology (Faridawati et al., 2024; Reginata et al., 2024).

## LITERATURE REVIEW

### Theory of Technology Acceptance Model (TAM)

TAM, as proposed by Davis (1989), explains the factors that influence the acceptance of computer technology. This model emphasizes two crucial constructs, namely perceived usefulness and perceived ease of use. The higher

the positive perception of these two factors, the greater the likelihood that the technology will be accepted and used by individuals.

Perceived usefulness is a personal view that the implementation of accounting information systems and e-commerce can improve their work activities. Meanwhile, perceived ease of use is the belief that the technology is easy to use and does not require much effort (Minan, 2021). Maharani et al. (2024) prove that these two factors have an influence on user attitudes and behavior in adopting information technology, including AIS.

## The Influence of Accounting Information Systems on MSME Performance in Surabaya City

The influence of accounting information systems on the performance of MSMEs in Surabaya City is the main focus of this study, considering the importance of accurate financial information in making wise decisions in running a business. AIS allows MSMEs to administer financial information more optimally, which contributes to improving operational performance and profitability.(Revalina & Azahra, 2023). Previous research, such as that conducted by (Fitrah & Yuliati, 2023), proves that the implementation of SIA has a positive and significant impact on the performance of MSMEs, which helps in supporting business development strategies. Other research by (Ulansari et al., 2024) also proves that the implementation of SIA has a positive impact on the performance of MSMEs in Madiun City. Research emphasizes that a good information system can improve operational optimization and support the determination of appropriate actions, which will contribute to the overall success of MSMEs.

**H1:** Accounting Information Systems have a positive effect on the performance of MSMEs in the City of Surabaya.

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**The Influence of E-Commerce on MSME Performance in Surabaya City**

E-commerce has been proven to have a positive effect on the performance of MSMEs in Surabaya, especially in expanding market reach without geographical boundaries, which contributes to increasing revenue and profitability. Previous research conducted by (Magdalena et al., 2024), proves that e-commerce has an impact and is significant in increasing MSME income, where the adoption of digital technology helps business actors in marketing their products effectively. This finding strengthens the hypothesis regarding the positive impact of e-commerce on MSME performance. Other research by (Yuscintara & Hendrani, 2022) also found that the integration of e-commerce and AIS has a positive impact on the effectiveness of MSME financial performance, indicating the importance of digitalization in improving overall business performance.

**H2:** E-Commerce has a positive effect on the performance of MSMEs in Surabaya City.

**The Influence of Accounting Information Systems and E-Commerce on MSME Performance in Surabaya City**

The influence of accounting information systems and e-commerce on the performance of MSMEs in Surabaya City is very important to understand, considering that these two variables can make a significant contribution to increasing operational effectiveness and competitiveness of business actors. AIS functions to provide accurate financial information, which supports strategic decision-making and efficiency in resource management. On the other hand, e-Commerce allows MSMEs to expand their markets and increase sales through digital platforms, thus facilitating interaction with customers (Faridawati et al.,

2024). Previous research, namely the findings(Fitrah & Yuliati, 2023), proves that accounting information systems and e-commerce simultaneously have a positive impact on MSME performance, which indicates that the integration of these two systems can create synergy that improves business performance. Thus, the hypothesis proposed is that there is a positive impact of AIS and e-commerce on MSME performance in Surabaya City.

**H3:** There is a positive influence between accounting information systems and e-commerce on the performance of MSMEs in the city of Surabaya.

## RESEARCH METHOD

This study uses a quantitative approach with a descriptive correlational design to analyze the effect of Accounting Information Systems and e-commerce on the performance of MSMEs in Surabaya. A sample of 387 MSMEs was determined using the Slovin formula with a purposive sampling technique, based on certain criteria. Data were collected through a structured online questionnaire with a five-point Likert scale. Data analysis was carried out using SPSS through instrument testing, classical assumption testing, and multiple linear regression.

## RESULTS AND DISCUSSION

Based on this study, it was distributed to 387 respondents with a total of 18 questions, each consisting of 6 items for each variable X1, X2, and Y. The data obtained from MSME respondents are presented as follows.

**Table 1**

**Respondent Identification**

| No | Category | Amount | Percentage |
|----|----------|--------|------------|
|    | Gender   |        |            |

| | | | |
|---|---|---|---|
| 1 | Woman | 223 | 74.2% |
| 2 | Man | 164 | 25.8% |
| | Age Range | | |
| 1 | <20 Years | 9 | 2.3% |
| 2 | >30 Years | 72 | 18.6% |
| 3 | 20-25 Years | 132 | 34.1% |
| 4 | 26-30 Years | 174 | 45.0% |
| | Type of Perpetrator | | |
| 1 | Business Owner | 287 | 74.2% |
| 2 | Staff/Employees | 100 | 25.8% |
| | Total | 387 | 100% |

Source: (Processed Primary Data, 2025)

The results of the descriptive analysis show that the majority of respondents are women (74.2% or 223 people). In terms of age, MSME actors are dominated by the 26–30-year age range, which reaches 45% or 174 respondents, followed by the 20–25-year age group (34.1%). Based on business status, most respondents are business owners, namely 287 people or 74.2% of the total respondents, while the rest (25.8%) are staff or employees.

**Table 2**

**SIA Usage, Activities, E-Commerce, and Length of Business Operations**

| Question | | Amount | Percentage |
|---|---|---|---|
| Does your business already use an Accounting Information System? | Yes | 387 | 100% |
| Is the business active in e-commerce? | Yes | 387 | 100% |
| Has the business been operating for at least 1 year? | Yes | 387 | 100% |

Source: (Processed Primary Data, 2025)

All 387 respondents in this study met the established criteria, namely the use of accounting information systems, active involvement in e-commerce, and a minimum of one year of business operational experience. These conditions reflect

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the level of technological readiness, the implementation of structured financial practices, and business stability and sustainability, which simultaneously support the validity and reliability of the research data.

**Table 3**

**Applications in Financial Recording**

| No | Financial Recording | Amount | Percentage |
|----|---------------------|--------|------------|
| 1 | Manual Book | 35 | 9.0% |
| 2 | Excel | 221 | 57.1% |
| 3 | Jubilee | 131 | 33.9% |
| | Total | 387 | 100% |

Source: (Processed Primary Data, 2025)

In terms of applications used for financial recording, the majority of respondents (57.1% or 221 MSMEs) rely on Excel. Followed by Jubelio application users as many as 33.9% (131 respondents), while only a small portion (9.0% or 35 respondents) still use manual books. This finding shows a strong preference among MSMEs for the use of digital-based applications to manage their financial records compared to manual methods.

**Table 4**

**E-Commerce Used**

| No | E-Commerce | Amount | Percentage |
|----|------------|--------|------------|
| 1 | Facebook | 70 | 18.1% |
| 2 | Instagram | 147 | 38.0% |
| 3 | Marketplace (Shopee, Tokopedia, Tiktok Shop, etc.) | 170 | 43.9% |
| | | 387 | 100% |

Source: (Processed Primary Data, 2025)

Regarding the e-commerce platform used, Marketplace (such as Shopee, Tokopedia, and TikTok Shop) is the main choice for 43.9% of respondents (170 MSMEs). Instagram is in second place with 38.0% of respondents (147 MSMEs),

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while Facebook is used by 18.1% of respondents (70 MSMEs). This data indicates that the majority of business actors tend to choose the marketplace for online buying and selling activities, although social media platforms such as Instagram and Facebook also play an important role in their e-commerce strategy.

**Data Quality Test Results**

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**Table 5**

**Validity Test Results**

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| Variables | Question Items | r-count | Sig <0.05 | r-table | Caption |
|---|---|---|---|---|---|
| Accounting Information System | X1.1 | 0.752 | 0.001 | 0.108 | Valid |
| | X1.2 | 0.756 | 0.001 | 0.108 | Valid |
| | X1.3 | 0.782 | 0.001 | 0.108 | Valid |
| | X1.4 | 0.767 | 0.001 | 0.108 | Valid |
| | X1.5 | 0.757 | 0.001 | 0.108 | Valid |
| | X1.6 | 0.758 | 0.001 | 0.108 | Valid |
| E-Commerce | X2.1 | 0.758 | 0.001 | 0.108 | Valid |
| | X2.2 | 0.767 | 0.001 | 0.108 | Valid |
| | X2.3 | 0.760 | 0.001 | 0.108 | Valid |
| | X2.4 | 0.746 | 0.001 | 0.108 | Valid |
| | X2.5 | 0.716 | 0.001 | 0.108 | Valid |
| | X2.6 | 0.777 | 0.001 | 0.108 | Valid |
| MSME Performance | Y1 | 0.751 | 0.001 | 0.108 | Valid |
| | Y2 | 0.762 | 0.001 | 0.108 | Valid |
| | Y3 | 0.743 | 0.001 | 0.108 | Valid |
| | Y4 | 0.781 | 0.001 | 0.108 | Valid |
| | Y5 | 0.742 | 0.001 | 0.108 | Valid |
| | Y6 | 0.730 | 0.001 | 0.108 | Valid |

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Source: (SPSS Output, 2025)

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**Table 6**

**Reliability Test Results for Each Variable**

| Variables | Cronbach's Alpha | Number of Items |
|---|---|---|
| SIA | 0.856 | 6 |
| E-Commerce | 0.848 | 6 |
| MSME Performance | 0.846 | 6 |

Source: (SPSS Output, 2025)

The test results show that the research instrument meets the validity and reliability criteria. Validity test at a significance level of 5% shows that all items in the SIA, E-Commerce, and MSME Performance variables have a calculated r-value> r-table (0.108) and significance <0.05, so they are declared valid. Reliability test through Cronbach's Alpha shows a value> 0.80 in all three variables, indicating the consistency and reliability of the instrument. Thus, the instrument is declared feasible for further analysis.

**Classical Assumption Test Results**

**Table 7**

**Normality Test Results**

| One-Sample Kolmogorov-Smirnov Test | | Unstandardized Residual |
|---|---|---|
| N | | 387 |
| Normal Parametersa.b | Mean | .0000000 |
| | Std. Deviation | 1.46719805 |
| Most Extreme Differences | Absolute | .044 |
| | Positive | .044 |
| | Negative | -.035 |
| Test Statistics | | .044 |
| Asymp. Sig. (2-tailed)c | | .074 |
| Monte Carlo Sig. (2-tailed)d | Sig. | .075 |

| | |
|---|---|
| 99% Lower Bound | .068 |
| Upper Bound | .082 |

Source: (SPSS Output, 2025)

This finding is stated as a normal distribution, because the Sig. value is 0.074 > 0.05, which indicates that the residuals of the research variables are normally distributed.

## Multicollinearity Test Results

**Table 8**

**Multicollinearity Test Results**

| Model | | Collinearity Statistics | |
|---|---|---|---|
| | | Tolerance | VIF |
| t1 | (constant) | | |
| | Accounting Information System | .250 | 4.004 |
| | E-Commerce | .250 | 4.004 |

Source: (SPSS Output, 2025)

The findings indicate that there is no multicollinearity in the independent variables, because the Tolerance value is > 0.10 and VIF < 10.0.

## Glejser Heteroscedasticity Test Results

**Table 9**

**Heteroscedasticity Test Results Glacier**

| Model | | Unstandardized Coefficients | | Standardized Coefficients Beta | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | | | |
| t | (constant) | 1,979 | .349 | | 5,665 | <.001 |
| | Accounting Information System | -.035 | .028 | -.130 | -1.279 | .202 |
| | E-Commerce | .002 | .028 | .006 | .055 | .956 |

Source: (SPSS Output, 2025)

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Based on the basis of decision making and also the SPSS 29.0 output table above, the data is said not to be hetero. This decision was taken by the researcher because the Significance value of each variable is more than 0.050.

**Multiple Linear Regression Analysis Test Results**

Table 10

Results of Multiple Linear Regression Analysis Test

| | Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | **B** | **Std. Error** | **Beta** | | |
| t | (constant) | 2,089 | .585 | | | |
| | Accounting Information System | .463 | .046 | 3,573 | <.001 | |
| | E-Commerce | .442 | .047 | 10,035 | <.001 | |

Source: (SPSS Output, 2025)

The results of the partial test show that the significance value of variables X1 and X2 is <0.05 and the t-count value is > t-table (1.9661), which indicates a positive and significant influence on variable Y. Thus, the hypotheses Ha1 and Ha2 are accepted, namely SIA and E-Commerce have a positive influence on MSME Performance, while H0 is rejected.

**Determination Coefficient Results**

Table 11

Results of the Determination Coefficient/ R2 Test

| Model | R | R Square | Adjusted R Square | Std Error of the Estimate |
|---|---|---|---|---|
| 1 | .886 a | .786 | .785 | 1.47101 |

Source: (SPSS Output, 2025)

The R Square value of 0.786 means that there is an influence of X1, X2, on Y of 78.6%. While 21.4 & others are influenced by factors outside this study.

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**Influence of SIA on MSME Performance in Surabaya City**

Findings prove that SIA has a positive impact on MSME performance. The more optimally the system is implemented, the easier it is for business actors to record and manage financial data neatly, accurately, and on time. This can help MSMEs monitor financial conditions, identify inefficient spending, and make more measurable business plans..

Information systems contribute to accurate transaction recording and the preparation of relevant and timely financial reports, as recognized by most respondents. In addition to increasing work efficiency, this system also supports the preparation of structured financial reports, thus becoming an important basis for fast and effective decision-making. Business partners' trust in MSMEs will increase if the MSMEs implement an accounting information system that can improve the accuracy of financial data..

The research results support the research of Indahsari et al. (2024), Fitrah & Yuliati (2023), and Terisiana et al. (2023).

**The Influence of E-Commerce on MSME Performance in Surabaya City**

Findings prove that e-commerce has a positive influence on the performance of MSMEs. Good use of e-commerce will result in increased sales, promotion efficiency, and ease of interaction with consumers directly. E-commerce allows businesses to expand the market without being limited by location and helps business actors in running operations flexibly.

E-commerce helps MSMEs in displaying products, speeding up the transaction process, and reaching new customers digitally. This is in accordance with the answers of most respondents. E-commerce also makes it easier for MSMEs to promote and serve consumers because this system is able to increase

operational efficiency and save distribution costs. So that e-commerce not only functions as a sales medium, but also becomes a strategic channel in expanding market reach and improving business performance.

The research results support the research of Terisiana et al. (2023), Ami et al. (2023), and Indahsari et al. (2024).

**The Influence of SIA and E-Commerce on MSME Performance in Surabaya City**

Findings prove that the use of SIA and e-commerce simultaneously provides a more optimal impact on MSME performance. The combination of the two drives efficiency on the internal side of financial management, and on the external side through marketing expansion and transaction acceleration.

Implementation of SIA and e-commerce simultaneously directs MSMEs to manage finances digitally and reach consumers widely. This follows the answers of most respondents. The integration of these two systems also makes it easier for MSMEs to prepare financial reports, monitor cash flow, and respond to market needs quickly and efficiently. So that the implementation of both can increase operational effectiveness and data-based business decision making.

The research results support the research of Indahsari et al., (2024), Fitrah & Yuliati (2023), and Rahim, (2023).

**CONCLUSION**

This study concludes that SIA and e-commerce have a positive and significant effect on the performance of MSMEs in Surabaya. SIA supports accurate financial records and effective decision-making, while e-commerce expands market reach and increases sales. The combination of both is an effective

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strategy to improve the performance and sustainability of MSMEs in the digital era. It is recommended that MSMEs adopt an integrated digital-based system, while the government and related institutions need to provide training and technical support. These findings can also be a reference for further research in the field of accounting and digital entrepreneurship of MSMEs.

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