

EXAMINING THE INFLUENCE OF ACCESS TO CAPITAL, FINANCIAL LITERACY, PRODUCT INNOVATION, AND INTENTION TO ADOPT E-COMMERCE ON MSME PERFORMANCE: EVIDENCE FROM SAPURAN

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Abstract

This study examines the impact of access to capital, financial literacy, product innovation, and e-commerce adoption intention on the performance of micro, small, and medium enterprises (MSMEs) in Sapuran District. A quantitative approach was employed, with data collected through an online survey administered to 100 MSME owners selected using the Slovin formula. The data were analyzed using descriptive statistics and multiple linear regression. The results indicate that all independent variables have a positive and statistically significant effect on MSME performance. These findings suggest that strengthening financial access, enhancing financial literacy, fostering continuous product innovation, and promoting digital adoption are critical to improving business performance. However, this study is limited by its relatively small sample size and potential response bias inherent in self-reported data. Despite these limitations, the study offers practical implications for MSME development, particularly in promoting sustainable competitiveness through financial and digital capabilities.

Keywords: MSME Performance, access to capital, financial literacy, product innovation, intention to adopt e-commerce

INTRODUCTION

Due to their crucial role in job generation and local economic activity, SMEs are becoming more and more significant in bolstering the local economy. However, access to resources and the caliber of business management play a major role in the viability and expansion of SMEs. Improving SMEs' performance is therefore crucial, especially in Sapuran Subdistrict, Wonosobo Regency, which is home to a wide variety of firms. Sapuran Subdistrict, on the other hand, has the fewest MSMEs in comparison to other subdistricts, suggesting that the community's entrepreneurial potential is yet to be fully realized and that there are still barriers preventing business growth in the area (Disdagkopukm, 2025). The integrated internal performance of companies like MSMEs also affects their growth (Supriatna et al., 2023). Performance, as determined by the quantity and quality of work produced in compliance with given tasks, is a company's capacity to meet goals (Nisfu, 2021). According to business standards, performance in the context of MSMEs represents individual work output over a given time period; as a result, strong performance enhances MSMEs' position as a pillar of the national economy (Aribawa, 2016).

According to the Resource-Based View (RBV) paradigm, capital is a vital resource for promoting business sustainability and productivity, hence access to capital is a major element affecting MSMEs' performance. However, MSME operators continue to confront a number of obstacles, including a lack of collateral, a lack of financial literacy, administrative hurdles, and difficulties gaining access to formal financial institutions, who typically consider MSMEs to be high-risk. High interest rates and a lack of collateral continue to be barriers, despite the government's efforts to increase access to financing through banking legislation (Ramadhan, 2018). Although research indicates that access to capital has a favorable and significant impact on the performance of SMEs, the inability to get capital might also prevent business growth (Yudhi et al., 2024).

In spite of capital, another important factor affecting MSMEs' performance is financial literacy. While lacking financial literacy results in ineffective business management, great financial literacy enables business owners to manage cash flow, create financial strategies, and make wise investment decisions. Financial literacy is the ability to understand and manage finances effectively in accordance with one's needs and with a focus on future well-being (Puspitaningtyas, 2017; Wuryani & Septiyani, 2020). This is supported by research showing that financial literacy has a significant impact on the performance of SMEs (Wismanjaya & Werastuti, 2022).

Moreover, MSMEs' performance is significantly impacted by product innovation in addition to financial literacy. Since innovation allows businesses to adapt through the development of new concepts and products as well as enhancements in service quality, MSMEs that are able to innovate are typically more viable in the face of dynamic market changes (Hurley & Hult, 1998). In order for enterprises to meet market demand and compete with rivals through product development or renewal, innovation must be consistently sought (Herlambang, 2017). Research demonstrating that product innovation improves SME performance lends credence to this (Suryanto & Mikro, 2024).

Together with product innovation, e-commerce interest has emerged as a crucial element in enhancing SMEs' performance in the digital era. SMEs can grow their markets and boost sales through digital transformation, but there are still obstacles to overcome, like low digital literacy, low trust in online systems, and inadequate digital infrastructure. SMEs can reach a wider market, even on a worldwide scale, using e-commerce, which is an electronic system for purchasing, selling, and marketing goods (Karyati, 2019). Therefore, maximizing SME performance requires the use of technology in business operations including marketing, transactions, and payments. Research demonstrating that interest in e-commerce has a favorable and substantial impact on SME performance supports this (Ramadhana & Indrayeni, 2024).

The disparity between Sapuran Subdistrict's population size and MSMEs is what makes this study important. Despite having a sizable population, the number of MSMEs that are now in operation is still quite low, which suggests that the community's entrepreneurial potential has not yet been completely realized and that a number of barriers continue to impede its growth. These circumstances highlight the necessity of conducting research on the variables affecting SME performance, including capital availability, financial literacy, product innovation, and e-commerce use. In order to improve SME growth and economic equity in Wonosobo Regency, it is anticipated that the research findings will offer an empirical overview and serve as a basis for the government and business actors in developing more effective strategies and policies.

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

Access to Capital

Wismanjaya & Werastuti (2022) define access to capital as the capacity of entrepreneurs to secure funding from outside sources, including formal and informal financial institutions, in order to run and grow their enterprises. For MSMEs, easy access to financing is essential because it allows business owners to maintain cash flow, invest in profitable assets, and more successfully take advantage of market opportunities.

MSMEs have more opportunities to grow their operations, innovate, boost production, and improve their financial management when they have easier access to funding. According to studies by Sinaga et al. (2025) and Gunawan & Suandana (2024), MSME performance is positively and significantly impacted by access to finance.

H1: Access to capital has a positive effect on MSME performance

Financial Literacy

Suardana (2020) asserts that there is a strong correlation between MSMEs' performance and financial literacy, with higher levels of financial literacy increasing the likelihood of improved business performance. This is due to the fact that a strong grasp of finance enables MSME owners to undertake cost-benefit analyses to maximize earnings and guarantee firm sustainability, manage operations more carefully, and effectively handle cash flow.

According to Margareta & Mandasari (2025) and Azis & Effendy (2024) financial literacy significantly and favorably affects the performance of SMEs. Therefore, a key component of improving corporate performance and efficiency is the degree of financial knowledge and managerial proficiency.

H2: Financial literacy has a positive effect on MSME performance.

Product Innovation

Product innovation, according to Kotler (2016) is the outcome of several interconnected processes used to produce new products or innovatively develop ones that already exist. Innovation is crucial in the context of MSMEs since it can promote business growth and enhance business quality through innovation and product renewal.

Owners of businesses can innovate by developing new goods, enhancing current ones, or introducing more efficient production techniques. According to research studies by Anderson & Hidayah (2023), Jannah et al. (2019), and Sinaga et al. (2025), product innovation significantly and favorably affects SME performance. This is due to the fact that innovation increases competitiveness, draws in customers, opens up new markets, and produces efficiency and additional value. Thus, product innovation is a crucial factor in improving the performance and sustainability of SMEs.

H3: Product innovation has a positive effect on MSME performance.

Intention to Adopt E-Commerce

The Theory of Planned Behavior states that a person's desire or purpose to perform is a major determinant of their actual conduct. Interest in e-commerce in the context of SMEs indicates how prepared business owners are to use digital technology to support their operations, including customer service, sales, and marketing.

SME owners are more likely to regularly use digital platforms if they are interested in leveraging e-commerce. This is supported by research by Ramadhana & Indrayeni (2024), Hamida et al (2023), and Margareta & Mandasari (2025), which shows that interest in using e-commerce has a positive and significant effect on SME performance.

High interest in e-commerce offers various benefits, such as expanding market reach beyond geographical boundaries, improving operational efficiency, and driving innovation in marketing, services, and product packaging. These conditions ultimately enhance the competitiveness and overall financial performance of SMEs.

H4: Intention to Adopt E-Commerce has a positive effect on MSME Performance

RESEARCH METHODS

Research Design

This study employs a quantitative approach with a correlational design to examine the influence of access to capital, financial literacy, product innovation, and e-commerce adoption intention on MSME performance (Sugiyono, 2019). The independent variables include access to capital, financial literacy, product innovation, and e-commerce adoption intention, while MSME performance is treated as the dependent variable. A multiple regression framework is adopted as it enables the simultaneous examination of the effects of multiple predictors on a single outcome variable, providing a more comprehensive understanding of their relative contributions.

Population and Sample

The population consists of 608 MSMEs in Sapuran District, Wonosobo Regency (Sugiyono, 2014). A sample of 100 respondents was selected using a random sampling technique. This exceeds the minimum sample size calculated using the Slovin formula with a 10% margin of error (Priyono, 2016) and aligns with recommendations for multivariate analysis suggesting a minimum of 100 observations (Hair et al., 2017).

Data Collection and Instrument Development

Data were collected through a structured online questionnaire distributed to MSME owners. The instrument was developed based on established theories and prior empirical studies, with variables operationalized into measurable indicators using a Likert scale. Validity was assessed using corrected item-total correlation with a significance threshold of $p < 0.05$ (Sugiyono, 2019), while reliability was confirmed using Cronbach's alpha with a cut-off value of $\alpha > 0.70$ (Ghozali, 2011).

Data Analysis Technique

Data analysis was conducted using descriptive statistics and multiple linear regression with SPSS (Sugiyono, 2013). Multiple regression was selected due to its suitability in testing the partial and simultaneous effects of several independent variables on a dependent variable within a single model. Prior to hypothesis testing, classical assumption tests were performed, including normality (Kolmogorov–Smirnov), multicollinearity ($VIF < 10$; tolerance > 0.1), and heteroskedasticity (scatterplot) (Ghozali, 2006, 2011). Model fit was evaluated using the F-test and coefficient of determination (R^2), with significance set at $p < 0.05$ (Ghozali, 2011). Hypotheses were tested using t-tests to determine the partial effects of each independent variable on MSME performance.

RESULTS AND DISCUSSION

Descriptive Statistical Analysis

Table 1. Respondent Characteristics by Gender

		<i>frequency</i>	<i>percent</i>
valid	Male	68	68.0
	Female	32	32.0
	Total	100	100.0

Table 1 provides an overview of the respondents' gender. Of the 100 respondents who participated in this study, 68 were male and 32 were female. Males accounted for 68% and females for 32%, indicating that the respondents in this study were predominantly male.

Table 2. Respondent Characteristics by Age

		<i>frequency</i>	<i>percent</i>
valid	20-29	11	11.0
	30-39	47	47.0
	40-49	36	36.0
	>49	6	6.0
	Total	100	100.0

Table 2 provides an overview of the respondents' ages. Of the 100 respondents who participated in this study, 11 respondents (11%) were aged 20–29 years, 47 respondents (47%) were aged 30–39 years, 36 respondents (36%) were aged 40–49 years, and 6 respondents (6%) were over 49 years old. Thus, the respondents in this study were predominantly in the 30–39 age group.

Table 3. Respondent Characteristics by Business Type

		<i>frequency</i>	<i>percent</i>
valid	Street Vendors	41	41.0
	F&B Sector	32	32.0
	Trading Sector	17	17.0
	Service Sector	4	4.0
	Home-Based Industry	6	6.0
	Total	100	100.0

Based on Table 3, the distribution of respondents by type of business can be observed. Street vendors account for 41 respondents (41%), followed by the food and beverage sector with 32 respondents (32%), the trading sector with 17 respondents (17%), the service sector with 4 respondents (4%), and home-based industries with 6 respondents (6%).

Tabel 4. Goodness of Fit Model (F-Test)

Model		<i>Sum of squares</i>	<i>df</i>	<i>Mean square</i>	<i>F</i>	<i>Sig.</i>
1	<i>Regression</i>	922,697	4	230,0674	19,976	,000 ^b
	<i>Residual</i>	1097,035	95	11,548		
	Total	2019,732	99			

From Table 4 above, it can be concluded that the calculated F-value is 19.976, with a significance level below 0.05, specifically 0.000. Therefore, it can be concluded that the model used is appropriate and meets the criteria for goodness of fit.

Tabel 5. Data Quality Test

Variable	Correlation Coefficient	Sig	Description
MSME Performance	0,803** - 0,849**	0,000	Valid
Access to Capital	0,860** - 0,890**	0,000	Valid
Financial Literacy	0,866** - 0,932**	0,000	Valid
Product Innovation	0,927** - 0,932**	0,000	Valid
Intention to Adopt <i>E-Commerce</i>	0,848** - 0,923**	0,000	Valid

Based on Table 5, it can be concluded that all variables are valid because each statement indicator has a calculated r value greater than the critical r value (0.195) and a significance level below 0.05. The correlation values for the MSME performance variables range from 0.803 to 0.849 with a significance level of 0.000. The capital access variable has a correlation between 0.860 and 0.890 with a significance level of 0.000, while financial literacy ranges from 0.866 to 0.932 with a significance level of 0.000. Furthermore, the product innovation variable showed a correlation value of 0.927–0.932 with a significance level of 0.000, and the interest in using e-commerce variable had a correlation range of 0.848–0.923 with a significance level of 0.000. Thus, all indicators for each variable are suitable for use in this study.

Tabel 6. Reliability Test

Variabel	Cronbach Alpha Based on Standardized (α)	(α)	Description
MSME Performance	0,895	0,7	Reliabel
Access to Capital	0,897	0,7	Reliabel
Financial Literacy	0,920	0,7	Reliabel
Product Innovation	0,920	0,7	Reliabel
Intention to Adopt <i>E-Commerce</i>	0,917	0,7	Reliabel

Based on Table 6, the reliability test results in this study indicate that all variables exhibit good reliability. This is evidenced by Cronbach's Alpha values exceeding the minimum threshold of 0.7, meaning that all items within the variables of MSME performance, access to capital, financial literacy, product innovation, and interest in using e-commerce are deemed reliable and trustworthy.

Normality Test

Table 7. Normality Test

		Unstandardized Residual
N		100
Normal parameters ^{a,b}	Mean	,0000000
	Std. Deviation	3,32883783
Most Extreme Differences	Absolute	,041
	Positive	,041
	Negative	-,41
Test Statistic		,041
Asymp. Sig. (2-tailed)		,200 ^{c,d}

Table 7 above shows that the results of the normality test using the One-Sample Kolmogorov-Smirnov Test have a significance value above $\alpha = 0.05$, specifically 0.200. This indicates that the residuals in the regression model are normally distributed, making the model suitable for further testing.

Multicollinearity Test

Table 8. Multicollinearity Test

Model	Collinearity Statistics	
	Tolerance	VIF
1 (Constant)		
Access to Capital	,994	1,006
Financial Literacy	,876	1,141
Product Innovation	,823	1,215
Intention to Adopt <i>E-Commerce</i>	,761	1,315

Based on Table 8, all variables have tolerance values greater than 0.1 and VIF values less than 10; therefore, it can be concluded that there is no multicollinearity among the independent variables in the regression model.

Heteroskedasticity Test

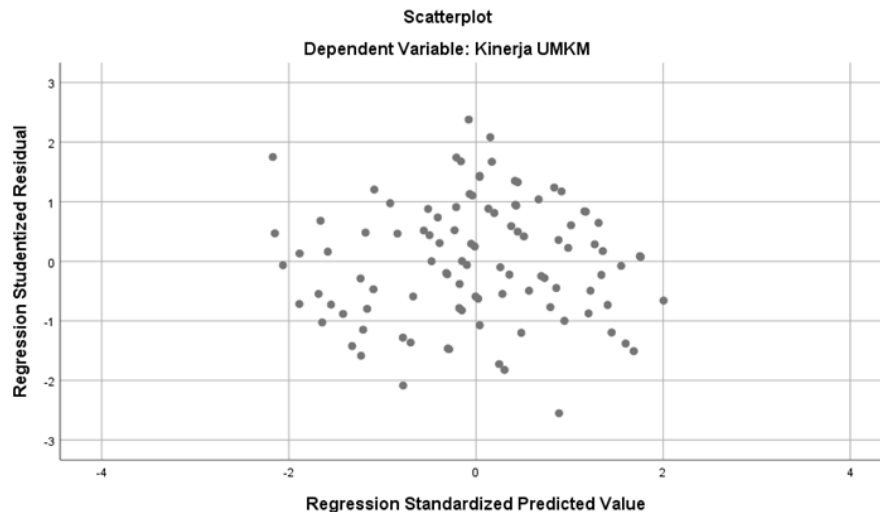


Figure 1. Scatterplot Results

Based on Figure 1, which shows the scatterplots above, it can be seen that the data points are randomly distributed and spread out both above and below the 0 mark on the Y-axis, indicating that there is no heteroscedasticity in the regression model used.

Findings

Table 9. Hypothesis Test Results

Model	<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>	<i>t</i>	<i>Sig.</i>
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>		
1 (Constant)	-,383	2,371		-,162	,872
Access to Capital	,251	,093	,205	2.698	,008
Financial Literacy	,468	,109	,346	4,285	,000
Product Innovation	,512	,128	,332	3,984	,000
Intention to Adopt E-Commerce	,244	,112	,188	2,173	,032

Based on the data analysis in SPSS, the following multiple linear regression equation was obtained:

$$Y = -0,383 + 0,251X_1 + 0,468X_2 + 0,512X_3 + 0,244X_4$$

This regression equation has the following implications:

- The regression coefficient for the MSME performance (Y) is -0.383, meaning that if the values of the other variables remain constant (0), the effect of the MSME performance variable is -0.383.
- The regression coefficient for the Access to Capital (X1) on MSME Performance is 0.251, meaning that if the Access to Capital (X1) increases by one unit, the MSME Performance (Y) will increase by 0.251. This coefficient is positive, indicating a positive relationship between the Access to Capital (X1) and MSME Performance (Y).
- The regression coefficient for the Financial Literacy (X2) on MSME Performance is 0.468, meaning that if Financial Literacy (X2) increases by one unit, the MSME Performance (Y) will increase by 0.468. This coefficient is positive, indicating a positive relationship between the Financial Literacy (X2) and MSME Performance (Y).

- d. The regression coefficient for the Product Innovation (X3) on MSME Performance is 0.512, meaning that if Product Innovation (X3) increases by one unit, the MSME Performance variable (Y) will increase by 0.512. This coefficient is positive, indicating a positive relationship between the Product Innovation (X3) and MSME Performance (Y).
- e. The regression coefficient for the Intention to Adopt E-Commerce (X4) on MSME Performance is 0.244, meaning that if Intention to Adopt E-Commerce (X4) increases by one unit, the MSME Performance variable (Y) will increase by 0.244. This coefficient is positive, indicating that there is a positive relationship between the Intention to Adopt E-Commerce (X4) and MSME Performance (Y).

Table 10. R-Square Test

Model	R	R Square	Adjusted R Square	Std. Error Of the Estimate
1	,676 ^a	,457	,434	3,398

Table 10 above shows that the calculated value of the adjusted R-squared is 0.434, meaning that 43.4% of the variation in the data can be explained by the variables Access to Capital (X1), Financial Literacy (X2), Product Innovation (X3), and Intention to Adopt E-Commerce (X4). Meanwhile, the remaining 56.6% is influenced by other variables not examined in this study.

Discussion

The Effect of Access to Capital on MSME Performance

Based on the results of the data analysis, the Access to Capital variable has a significance value of $0.008 < 0.05$ and a calculated t-value of $2.698 >$ the critical t-value of 1.98498; therefore, H_0 is rejected and H_1 is accepted. This indicates that Access to Capital has a positive and significant effect on the MSME Performance in Sapuran Subdistrict.

These results indicate that the easier it is for MSMEs to obtain access to financing, the better their ability to increase sales, expand markets, hire more workers, and increase profits. This finding is consistent with the research by Margareta & Mandasari (2025), Sinaga et al. (2025), and Wismanjaya & Werastuti (2022), which states that access to capital has a positive effect on MSME performance.

The Effect of Financial Literacy on MSME Performance

Based on the results of the data analysis, the Financial Literacy variable has a significance value of $0.000 < 0.05$ and a calculated t-value of $4.285 >$ the critical t-value of 1.98498; therefore, H_0 is rejected and H_1 is accepted. This indicates that Financial Literacy has a positive and significant effect on the MSME Performance in Sapuran Subdistrict.

These results indicate that the better the understanding of MSME actors in managing finances—such as cash flow management, fund utilization, risk management, and investment utilization—the more effective business decision-making becomes, thereby enhancing business performance and sustainability. This finding is consistent with the research by Margareta & Mandasari (2025), Wismanjaya & Werastuti (2022), and Azis & Effendy (2024), which states that financial literacy has a positive effect on MSME performance.

The Effect of Product Innovation on MSME Performance

Based on the results of the data analysis, the Product Innovation variable has a significance value of $0.000 < 0.05$ and a calculated t-value of $3.984 >$ the critical t-value of 1.98498; therefore, H_0 is rejected and H_1 is accepted. This indicates that Product Innovation has a positive and significant effect on the MSME Performance in Sapuran Subdistrict.

These results indicate that the higher the level of innovation undertaken by MSMEs—whether through expanding product variety, developing new products, or adapting to market

trends—the greater the opportunity to enhance competitiveness, attract consumers, and drive business growth. These findings are consistent with the research by Azis & Effendy (2024), Sinaga et al. (2025), and Chow & Utama (2023), which states that product innovation has a positive effect on MSME performance.

The Effect of Intention to Adopt E-Commerce on MSME Performance

Based on the results of the data analysis, the variable Intention to Adopt E-Commerce has a significance value of $0.032 < 0.05$ and a calculated t-value of $2.173 >$ the critical t-value of 1.98498; therefore, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted. This indicates that Intention to Adopt E-Commerce has a positive and significant effect on the MSME Performance in Sapuran Subdistrict.

These results indicate that the higher the interest of MSME actors in utilizing e-commerce, the greater the opportunity to increase sales, expand market reach, and improve business operational efficiency. These findings are consistent with the research by Margareta & Mandasari (2025), Wismanjaya & Werastuti (2022), and Suardana (2020), which states that interest in using e-commerce has a positive effect on MSME performance.

CONCLUSION

The results of the study indicate that the performance of MSMEs in Sapuran Subdistrict is positively and significantly impacted by all independent factors, including access to finance, financial literacy, product innovation, and interest in adopting e-commerce. This suggests that MSMEs do better when they have better access to cash, financial management skills, product innovation, and digital technology utilization.

In order to increase business competitiveness and sustainability, SME players must maximize access to finance, raise financial literacy, bolster product innovation, and fully utilize e-commerce, according to the study's practical implications. Furthermore, it is anticipated that pertinent entities, including the government and financial institutions, will offer assistance to SMEs in the form of mentoring, training, and simpler access to funding.

Limitations

This study has a number of limitations, such as a sample size of only 100 respondents in Sapuran Subdistrict, which means that the results cannot yet be widely applied; the majority of respondents come from the micro and small business sectors; and the use of a questionnaire, which may introduce subjective bias in respondents' responses.

To provide a more thorough explanation of MSME performance, further study is advised to incorporate additional factors such marketing tactics, government backing, and the caliber of human resources. To guarantee more precise results with greater generalizability, it is also advised to broaden the study area, increase the number of respondents, and use a longer study time.

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