IDSCIPUB
Indonesian Scientific Publication

The Influence of Financial Technology, Business Innovation, and E-Commerce on MSME Performance (Case Study of MSMEs Fostered by PT. Bukit Asam Tbk)

Efran Merdianto[1], Dewi Sartika[2]
Universitas Bina Darma, Indonesia [12]
Correspondent: dewi.sartika@binadarma.ac.id [2]

ABSTRACT: This study investigates the effects of financial technology, business innovation, and e-commerce on the performance of Micro, Small, and Medium Enterprises (MSMEs). The study adopts a quantitative approach using data from MSMEs fostered by PT. Bukit Asam Tbk, analyzed through the Partial Least Squares Structural Equation Modeling (PLS-SEM) method. The findings demonstrate that the utilization of financial technology, innovative business practices, and e-commerce significantly contributes to improving MSME performance. The study highlights that digital adoption and innovation are vital strategies for sustaining competitiveness in the era of digital transformation.

Keywords: Financial Technology, Business Innovation, E-Commerce, MSME Performance.

INTRODUCTION

Indonesia ranks among the most populous nations, following China, India, and the United States. The high population density in Indonesia presents various challenges, including unemployment and poverty. Numerous studies have shown that the MSME sector plays a pivotal role in reducing unemployment and alleviating poverty in Indonesia (Lutfi et al., 2022). In fact, Micro, Small, and Medium Enterprises (MSMEs) serve as one of the key driving forces behind the nation's economic growth. Statistics indicate that MSMEs constitute over 99% of the Indonesian economic sector. The MSME sector is acknowledged for its significant contribution to gross domestic product (GDP), which in turn stimulates economic growth (Lutfi et al., 2022). Micro, Small, and Medium Enterprises employ around 97% of the Indonesian workforce and account for 60% of the Gross Domestic Product (Hilmawati & Kusumaningtias, 2021).

Micro, Small, and Medium Enterprises (MSMEs) have a very important role in economic development and growth, both in developing and developed countries. In developed countries,

MSMEs not only absorb more labor compared to Large Enterprises (UB) as seen in developing countries, but also make the largest contribution to the formation or growth of Gross Domestic Product (GDP) compared to large enterprises. The role of micro, small, and medium enterprises (MSMEs) helps increase economic growth rates and is able to absorb the number of workers and the distribution of development results can be felt by the community. With a reduction in the number of unemployed, it means that the MSME sector recruits a lot of workers, which means that it will help the government in its efforts to reduce the poverty rate (Al Farisi et al., 2022).

Micro, Small, and Medium Enterprises (MSMEs) refer to business entities managed by families or community groups. As an organizational unit of business actors, even though they have a high quality of performance, this condition is due to the provision of the general public for sophisticated service capacity. MSME performance refers to the ability of MSMEs to achieve their business goals and generate profits. MSME performance is the result of the work of individuals carried out during a special period as an individual task in the industry, in accordance with the size of the company and the provisions of the ratio worked by individuals (Maysaroh & Diansyah, 2022). The performance of MSMEs can be understood as the evaluation of outcomes achieved by individuals or teams within a certain period based on predetermined standards. Wahyudiati & Isroah, (2018), contend that performance serves as an indicator of a business entity's success in attaining its objectives. Consequently, performance denotes the efficacy of a company unit in attaining its organizational objectives.

One of the State-Owned Enterprises (SOEs) engaged in the mining sector, PT. Bukit Asam Tbk, is recognized for its active role in implementing diverse development programs designed to strengthen and empower Micro, Small, and Medium Enterprises (MSMEs), including the Bukit Asam Industrial Center (SIBA) and Rumah BUMN, which offer diverse support such as capital assistance, production equipment, training, and marketing facilitation (Badri, 2023). Throughout 2024, PT. Bukit Asam Tbk has carried out 33 trainings, facilitated the participation of fostered MSMEs in 20 exhibitions and bazaars, held internship programs and site visits, and provided facilities and infrastructure assistance to a number of fostered MSMEs. As a result of this effort, as many as 48 fostered MSMEs managed to upgrade in 2024. One of the MSMEs fostered by PT. Bukit Asam Tbk that managed to upgrade was SIBA Batik Kujur. From the beginning of the formation of only 5 groups, currently there are 12 groups of SIBA Batik Kujur craftsmen. SIBA Batik Kujur has succeeded in producing new artisans who are ready to be creative to develop local batik products (Bukit Asam, 2025). Nevertheless, these supported MSMEs still face challenges in achieving independence and improving performance, especially in adopting and maximizing the use of financial technology, business innovation, and e-commerce platforms. As technology continues to advance rapidly, MSME stakeholders are encouraged to strengthen their digital capabilities and optimize technological utilization to enhance competitiveness.

MSMEs encounter obstacles such as limited access to current technology, adversely affecting their competitiveness and production (Santoso, 2020). Many MSMEs have difficulty accessing or purchasing the latest technology, so their ability to innovate and compete in the market is hampered. In addition, MSMEs often do not have enough skills to utilize technology effectively or take advantage of new opportunities that exist. This problem of lack of access to modern

technology is especially evident in low-income regions, where infrastructure and technology may be inadequate or even unavailable at all. Technology has an important role in improving the performance of MSMEs. With technology, MSMEs can improve their operational efficiency and effectiveness, improve the quality of products or services offered, and reach a wider market. Financial Technology (fintech) exemplifies technology advancements that have transformed market systems, influencing behaviors related to information access and electronic service functionalities. Research by (Rahardjo et al., 2019), indicates that fintech significantly enhances the performance of MSMEs, particularly in terms of operational efficiency and the benefits experienced by members. According to the conclusions of (Amalina et al., 2022), fintech variables significantly and positively impact financial performance.

Simultaneously, regarding transformation and innovation, it compels MSMEs to embrace technology, enabling them to generate diverse innovations in their operations (Djatnika & Gunawan, 2021). Effective innovation will assist management in attaining enhanced performance, thereby ensuring business continuity and sustainability align with the company's objectives, supported by innovative capabilities such as ideas and new products (Jeandry et al., 2024). Innovation can be interpreted as a method of technological change that is useful and departs from pre-existing ways to make a change or breakthrough (Khareskawati et al., 2023). Overall, business innovation is a key element in improving the performance of MSMEs. By continuing to innovate in products, processes, and services, as well as leveraging digital technology, MSMEs can increase their competitiveness in the global market while ensuring the sustainability of their business (Zimmermann, 2022). According to research conducted by (Mohammad et al., 2019), the ability to innovate has a positive and significant influence on company performance, both simultaneously and partially. Several previous studies that also discussed business innovation according to Fatimah & Azlina, (2021) revealed that business innovation also has a significant and positive impact on the performance of Micro, Small, and Medium Enterprises (MSMEs).

E-commerce is recognized as one of the fastest-growing global trends taking place in Indonesia. As stated by Purwaningtias et al., (2020), e-commerce functions as a platform that connects businesses, consumers, and communities through electronic transactions, facilitating the online exchange of goods, services, and information. The presence of e-commerce has made it easier for consumers to meet their daily needs. By shopping online, consumers can experience a more practical and efficient experience than having to visit shopping places in person. In addition, they also have easier access to information related to the products they need and can make transactions anywhere and anytime (Amalina et al., 2022). According to research by Suhada et al., (2021), e-commerce enhances information accessibility, boosts MSME performance, elevates service quality and speed, aligns with technical advancements, and improves cost efficiency. This shows that e-commerce has a positive influence on the performance of MSMEs. This means that the higher the level of e-commerce use, the better the performance of MSMEs produced. This is in line with research (Triandra et al., 2019) explaining that the use of e-commerce allows product marketing to various locations, both physically and digitally, and reaches national and international markets. With e-commerce, marketing becomes broad and unlimited, so that products can enter new markets faster. In addition, e-commerce also makes the communication process more effective and efficient, which has a good impact and strengthens business relationships with customers.

Thus, the performance of MSMEs can increase in terms of sales, marketing, finance, and market penetration.

PT. Bukit Asam Tbk, as a state-owned enterprise, fulfills its social obligation through the MSME development program. Nevertheless, few studies have specifically assessed the impact of the integration of financial technology, business innovation, and e-commerce on the performance of supported MSMEs. This research aims to determine the extent to which the newly implemented digital method can genuinely enhance the business performance of supported MSMEs, as well as how their financial literacy influences the efficacy of their adaption to these changes. Based on the background of the problems that have been described, the researcher is interested in conducting research on "The Influence of Financial Technology, Business Innovation and E-Commerce on MSME Performance (Case Study of MSMEs Fostered by PT. Bukit Asam Tbk)".

METHOD

Research Type

In this research, a quantitative method is utilized alongside an explanatory design to examine how financial technology, business innovation, and e-commerce affect the performance of MSMEs. Primary data were collected through questionnaires distributed to participants, while secondary data were obtained from relevant previous research articles.

Population and Sample/Informants

According to (Sugiyono, 2018) A population is a defined region of objects or persons with specific features and characteristics designated by the researcher for study, from which conclusions are subsequently drawn. The population in this study comprises all MSMEs supported by PT. Bukit Asam Tbk comprises 483 MSMEs, employing a purposive sampling technique predicated on the criterion that the MSMEs have utilized financial technology or e-commerce services for a minimum duration of one year. The sample size was determined using the Slovin formula with a 10% margin of error, resulting in 101 respondents from MSME participants.

Research Location

The focus of this research is on MSME participants supported by PT. Bukit Asam Tbk. According to company records, there are a total of 483 MSMEs under its assistance, situated at Jalan Parigi No. 1, Tanjung Enim, Lawang Kidul, Muara Enim Regency, South Sumatra.

Instrumentation or Tools

Data were collected using structured online questionnaires distributed via Google Forms to MSMEs supported by PT. Bukit Asam Tbk. This questionnaire is designed to collect the opinions of respondents who describe personal perceptions and behaviors applied in daily life. To measure respondents' opinions, a 5-level ordinal scale was used, where each statement in the questionnaire was assessed based on the respondent's level of approval, ranging from very positive to very negative. An ordinal scale was used to capture variations in respondents' attitudes and perceptions, ensuring effective quantitative analysis aligned with the research objectives.

Data Analysis

In quantitative research, data analysis is a series of steps that are carried out after the collection of research data. In general, the data that has been collected will be grouped, tabulated, and presented on a regular basis so that the data can answer each question and can be used in the development of hypotheses in the future. The data analysis method applied in this study is Structural Equation Modeling or Partial Least Square (SEM-PLS) analysis using SmartPLS software version 4. 1. 1. 2. SmartPLS is a structural equation model that can be done simultaneously using measurement and testing methods simultaneously (Abdillah 2019). In this study, several analyses were applied, namely descriptive analysis, statistical analysis, evaluation of measurement models (external models), evaluation of structural models (internal models), and hypothesis testing (Melati 2024).

RESULT AND DISCUSSION

In this study, the sample used consisted of 101 respondents from all MSME actors fostered by PT. Bukit Asam Tbk. Respondents were given a number of questions related to Financial Technology, Business Innovation, E-Commerce, and MSME Performance. Furthermore, to complete the identification of respondents, the characteristics of respondents were grouped based on gender, age, last education, business name/type, business age, payment method used and monthly sales turnover. The following is the identification of respondents involved in this study:

Table 1. Characteristics of Respondents

Category	Criteria	Frequency	Percentage
Gender	Man	55	54,5%
	Woman	46	45,5%
Age	< 20 years old	0	0%
	21-25 years old	21	20,8%
	26-30 years old	28	27,7%
	>30 years old	52	51,5%
Final Education	Elementary School	5	5%
	High School/Equivalent	61	60,4%
	D3	9	8,9%
	S1	26	25,7%
	Other	0	0%

Category	Criteria	Frequency	Percentage
Business Name/Type	Industry	9	8,9%
	Agriculture/Plantation	1	1%
	Farming/Fisheries	3	3%
	Culinary	50	49,5%
	Handicrafts	1	1%
	Service	5	5%
	Other	32	31,7%
Age of Business	<1 Year	3	3%
	1-3 Years	43	42,6%
	4-5 Years	26	25,7%
	>5 Years	29	28,7%
Payment Methods Used	Qris	41	40,6%
	Dana	16	15,8%
	Ovo	8	7,9%
	Transfer Bank	18	17,8%
	Other	18	17,8%
Monthly Sales Turnover	<1 Million	10	9,9%
	1-5 Million	44	43,6%
	5-10 Million	28	27,7%
	10-15 Million	11	10,9%
	>15 Million	8	7,9%

Source: data processed by researchers, 2025

Data Quality Test

Measurement Capital Test Results (Outer Model)

Evaluation can be done on the outer model by analyzing the results of the PLS Algorithm. Testing on the outside of the model in this study was carried out using convergent validity tests, discriminant validity tests, and reliability tests.

The Evaluation of the Measurement Model (External Model) delineates the manner in which the apparent or observed variable signifies the latent variable intended for measurement. This model analysis establishes the relationship between the latent variable and its indicators. The graphic above indicates that the results of each indicator instrument satisfy the loading factor requirements, since each instrument's value exceeds 0.70. Consequently, each indicator demonstrates acceptable reliability and meets the criteria for convergent validity in this study. The outer model is presented in the figure below :

Figure 1. Outer Model
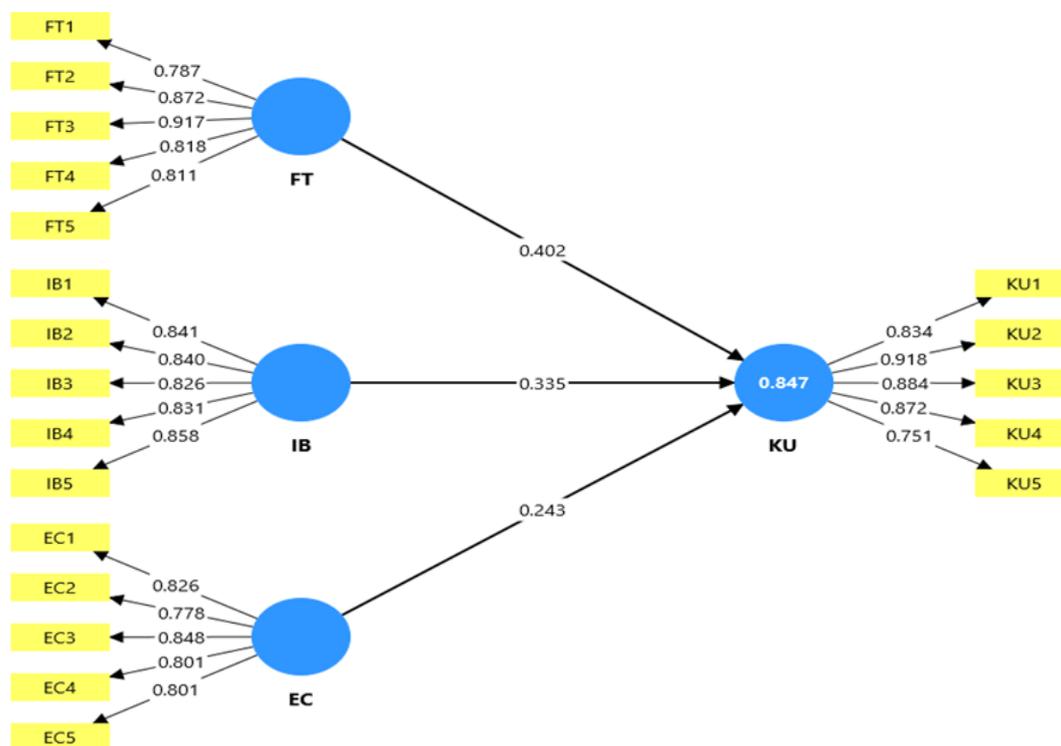
Source: SmartPls 2025 processing data 4.1.1.2

Reability Test

Reliability testing is performed by calculating the Composite Reliability and Alpha Cornbach values for each construction. In general, the value considered to meet the reliability requirements is >0.70, although values between 0.60-0.70 are still considered acceptable in the context of exploratory research. The following are the results of the Reliability Test calculation :

Table 2. Construct Reliability and Validity

|	Cronbach's Alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)	Average Variance Extracted (AVE)
E- Commerce	0.870	0.872	0.906	0.658
Business Innovation	0.895	0.896	0.923	0.704
Financial Technology	0.897	0.904	0.924	0.709
MSME Performance	0.906	0.912	0.930	0.729

Souce : SmartPls 2025 Processing Data 4.1.1.2

Based on table 2, it shows that the four constructs have an Alpha Cronbach value above 0.70. This reflects that the indicators used in construction are reliable and have a high internal consistency." Overall, the results from Composite Reliability and Cornbach's Alpha show that most of the

constructions in the model are already reliable, making them feasible for use in advanced analyses such as testing the validity and relationships between variables in structural models..

Inner Model Analysis

Evaluation at the final stage can be done on the inner model by analyzing the results of the PLS and Blindfold algorithms.

Figure 2. Inner Model
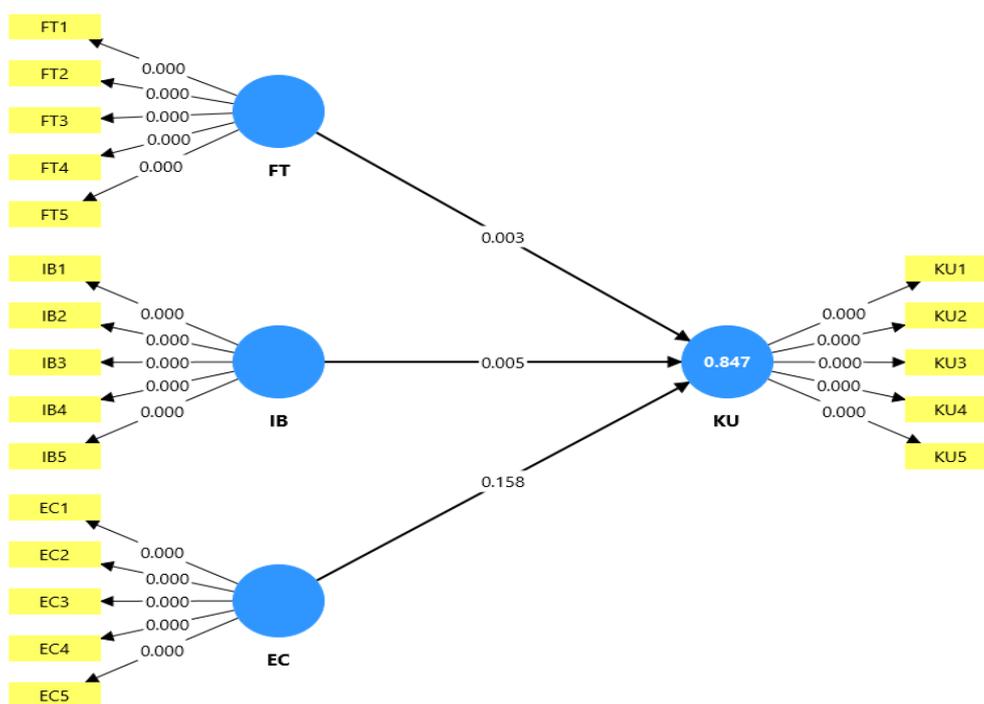
Source: SmartPls 2025 processing data 4.1.1.2

Uji R-Square (R2)

The R-Square test is performed to see the relationship between independent variables and dependent variables. The following are the results of the R-Square test:

Table 3. R-Square Value

	R-Square	R-Square Adjusted
MSME Performance	0.847	0.843

Source: SmartPls 2025 processing data 4.1.1.2

As shown in Table 3, the R-Square value illustrates the extent to which Financial Technology, Business Innovation, and E-Commerce variables contribute to MSME Performance. The results indicate that these three variables explain 84.7% (R^2 = 0.847) of the overall performance of Micro, Small, and Medium Enterprises, while the remaining 15.3% is influenced by other factors not included in this model.

Hypothesis

Hypothesis testing was performed to show the relationship between dependent and independent variables. Statistical t-values and p-values can be observed to test the hypothesis of this study. In this study, to test the hypothesis, the researchers saw that the t-statistical value should be above 1.98 and the p-value below 0.05.

Table 4. Overview of Data Analysis Result

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T statistics (IO/STDEVI)	P Values
E-Commerce -> MSME Performance	0.243	0.260	0.172	1.411	0.158
Business Innovation -> MSME Performance	0.335	0.333	0.119	2.811	0.005
Financial Technology -> MSME Performance	0.402	0.388	0.137	2.925	0.003

Source: SmartPls 2025 processing data 4.1.1.2

The Influence *of Financial Technology* on MSME Performance

The analysis results revealed a correlation coefficient of 0.402, with a p-value of 0.003 (< 0.05) and a T-statistic of 2.925 (> 1.96) between financial technology and MSME performance. This suggests that the effective application of fintech enhances MSMEs' operational efficiency, financial management, and overall business outcomes.

This indicates that increased adoption of fintech services by MSME participants correlates with enhanced performance in operations, sales, and financial management efficiency. These findings align with studies by (Purnomo, 2025) demonstrating that perceived usability and perceived ease of use significantly influence intentions and decisions to adopt fintech. Furthermore, in a global context, (Chen & Guo, 2024) discovered that fintech empirically propels innovation by providing long-term strategic incentives to enhance investment in human resource development. Theoretically, this relationship is consistent with the Technology Acceptance Model (TAM). Fintech, characterized by perceived simplicity of use and perceived utility, fosters an increase in adoption intent and active utilization in daily company operations. This elucidates how MSME participants leverage fintech to enhance transactions and financial management, hence optimizing its use to positively influence business performance. From a Resource-Based View (RBV) standpoint, fintech constitutes a significant strategic asset that is challenging for rivals to duplicate. Through the utilization of fintech, MSMEs gain competitive benefits such as cost efficiency, expedited access to funding, and enhanced financial management professionalism. This ultimately enhances corporate performance through the utilization of advanced technology as an internal resource.

The Influence of Business Innovation on MSME Performance

The analysis results demonstrated that business innovation had a significant effect on MSME performance, as reflected by a coefficient value of 0.335, a T-statistic of 2.811 (> 1.96), and a P-value of 0.005 (< 0.05). This indicates that every enhancement in the implementation of business innovation methods significantly influences the operational and financial performance of MSMEs. These findings align with the research by (Situmorang et al., 2025) which shown that business innovation capabilities positively influence performance and sustainability in MSMEs. This is pertinent as business innovation in products, processes, and services enhances organizational success when operating within a dynamic and adaptive external environment. The substantial impact of business innovation on MSME performance can be elucidated through the Technology Acceptance Model (TAM), encompassing the adoption of digital platforms, novel operational systems, or innovative marketing strategies, which offer perceived advantages and ease of use for MSME stakeholders.

MSMEs are more inclined to adopt and implement business innovations when they are viewed as facilitating distribution efficiency, cost reduction, or enhancing customer engagement. The adoption of this technology aligns with the performance outcomes of creative MSMEs demonstrating superior results. According to the Resource-Based View (RBV), corporate innovation is considered a valuable, rare, inimitable, and non-substitutable strategic resource that contributes to sustained competitive advantage (Barney, 1991). The cultivation of innovative capabilities, including a creative culture, innovation networks, and distinctive processes, constitutes the foundation of competitive advantages for MSMEs. Developing innovative products, enhancing operational efficiency, or establishing unique service models is not simply imitated by rivals, leading to sustained performance advancements.

The Influence of E-commerce on MSME Performance

The analysis results revealed that e-commerce did not have a significant effect on MSME performance. This is supported by the coefficient value of 0.243, a T-statistic of 1.411 (< 1.96), and a p-value of 0.158 (> 0.05), indicating the absence of a statistically significant relationship. This indicates that, within the parameters of this study sample, the utilization of e-commerce does not substantially enhance business performance.

These findings align with the research by (Rahmawati et al., 2025) this finding illustrates that the utilization of e-commerce continuously contributes to improving the performance of Micro, Small, and Medium Enterprises (MSMEs) in Indonesia, particularly by driving higher sales, widening market access, increasing operational efficiency, and enhancing overall financial results. Its efficacy is significantly contingent upon technology preparedness, organizational backing, and environmental stimuli, including governmental assistance and competitive forces. The substantial impact of e-commerce on MSME performance can be elucidated through the Technology Acceptance Model (TAM). The Technology Acceptance Model posits that MSME participants would only effectively adopt e-commerce if it is perceived as beneficial and user-friendly. The negligible effect may indicate that business actors have not fully perceived the benefits or still face

challenges in implementing e-commerce technology. According to the Resource-Based View (RBV), technologies like e-commerce must be valued, scarce, and difficult to copy strategic resources to enhance performance. If MSMEs lack supporting capabilities, such as digital administration, online marketing, or logistics, their utilization of e-commerce will not confer a substantial competitive advantage.

CONCLUSION

The purpose of this research is to analyze how financial technology, business innovation, and e-commerce affect the performance of MSMEs. The findings of this study lead to the following conclusions:

1. Financial technology has a significant effect on the performance of MSMEs.
2. Business innovation has a significant effect on the performance of MSMEs.
3. E-Commerce does not have a significant influence on the performance of MSMEs.

Future researchers are encouraged to broaden the scope of their studies by examining various MSME sectors in different regions, thereby allowing the findings to be more generalizable. Increasing the sample size is also advised to obtain more representative results. Moreover, incorporating additional variables such as government policy support, entrepreneurial orientation, and other external influences would enrich the analysis. Through such efforts, subsequent studies can offer a deeper and more comprehensive theoretical insight into the determinants of MSME performance in the digital age(Astari & Candraningrat, 2022).

For MSME actors, the results of this study provide important input for MSME actors to be more active in utilizing financial technology, business innovation, and e-commerce optimally. However, the use of technology needs to be balanced with increasing financial literacy so that business actors are able to manage capital, transactions, and financial statements properly. Therefore, MSME actors and related agencies are advised to organize continuous training and mentoring programs regarding financial literacy, the use of fintech, and digital business innovation strategies. This is expected to help MSMEs not only improve operational efficiency, but also expand the market and strengthen competitiveness in the midst of global competition.

For educational institutions, this research is expected to be the basis for developing curriculum, training, and mentoring programs that not only focus on entrepreneurship theory, but also emphasize the use of digital financial technology and business innovations that are relevant to the needs of MSMEs.

REFERENCE

Al Farisi, S., Iqbal Fasa, M., & Suharto. (2022). Peran Umkm (Usaha Mikro Kecil Menengah) Dalam Meningkatkan Kesejahteraan Masyarakat. *Jurnal Dinamika Ekonomi Syariah*, *9*(1), 73–84. https://doi.org/10.53429/jdes.v9ino.1.307

Amalina, N., Kurniawan, R. A., Rizkiawan, I. K., Sari, D. P., & Auliana, N. (2022). Faktor yang Mempengaruhi Minat Adopsi E-Commerce dan Pengaruhnya pada Tingkat Penjualan UMKM di Surakarta. *Jurnal Ilmu Manajemen Retail (JIMAT*, *3*(1), 1–11.

Astari, N. P. R. P., & Candraningrat, I. R. (2022). Pengaruh Fintech Terhadap Kinerja Keuangan Umkm Dengan Literasi Keuangan Sebagai Variabel Moderasi. *Jurnal Manajemen Stratejik Dan Simulasi Bisnis*, *3*(1), 68–81. https://doi.org/10.25077/mssb.3.1.68-81.2022

Badri, A. (2023). *Strategi UMKM Mitra Binaan Agar Dapat Berjalan Mandiri: Studi Pada Sentra Industri Bukit Asam (SIBA*. PT Bukit Asam.

Bukit Asam. (2025). *UMKM Berjaya, Bukit Asam Dianugerahi Penghargaan Pembina Terbaik*. https://www.ptba.co.id/berita/umkm-berjaya-bukit-asam-dianugerahi-penghargaan-pembina-terbaik-2208

Chen, S., & Guo, Q. (2024). Fintech and MSEs Innovation: an Empirical Analysis. *JLEO*, *1*.

Djatnika, T., & Gunawan, A. I. (2021). Perspektif Adopsi Media Sosial Sebagai Implementasi Teknologi Manajemen Hubungan Pelanggan (CRM) Pada UMKM. *Bhakti Persada*, *7*(2), 78–87. https://doi.org/10.31940/bp.v7i2.78-87

Fatimah, S., & Azlina, N. (2021). Pengaruh teknologi informasi dan inovasi terhadap kinerja usaha kecil dan menengah (UKM)(Studi pada UKM berbasis online di Kota Dumai. *Riset Akuntansi Dan Perbankan*, *15*(1), 444–459.

Hilmawati, M. R. N., & Kusumaningtias, R. (2021). Inklusi Keuangan Dan Literasi Keuangan Terhadap Kinerja Dan Keberlangsungan Sektor Usaha Mikro Kecil Menengah. *Nominal: Barometer Riset Akuntansi Dan Manajemen*, *10*(1), 135–152. https://doi.org/10.21831/nominal.v10i1.33881

Jeandry, G., Dara, A., & Zainuddin, Z. (2024). Memajukan UMKM di Ternate: Eksplorasi Peran Inklusi Keuangan dalam Menggabungkan Literasi dan Teknologi Finansial. *Riset & Jurnal Akuntansi*, *8*(3), 2328–2346. https://doi.org/10.33395/owner.v8i3.2185

Khareskawati, N., Gunawan, G., & Ambarwati, A. (2023). Inovasi Bisnis Dalam Bidang Pertambangan: Studi Kepustakaan. *Innovative: Journal Of*, *3*, 8372–8380. http://j-innovative.org/index.php/Innovative/article/view/6852%0Ahttps://j-innovative.org/index.php/Innovative/article/download/6852/5076

Lutfi, A., Al-Khasawneh, A. L., Almaiah, M. A., Alsyouf, A., & Alrawad, M. (2022). Business Sustainability of Small and Medium Enterprises during the COVID-19 Pandemic: The Role of AIS Implementation. *Sustainability (Switzerland*, *14*(9). https://doi.org/10.3390/su14095362

Maysaroh, S., & Diansyah, D. (2022). Pengaruh Peer To Peer Lender (P2P) Dan Payment Gateway Terhadap Kinerja UMKM Pada Masa Pandemi Covid-19 Dengan E-commerce Sebagai Variabel Moderating. *Business Management Journal*, *18*(2), 131–142.

Mohammad, I. N., Massie, J. D. D., & Tumewu, F. J. (2019). The Effect Of Entrepreneurial Orientation And Innovation Capability Towards Firm Performance. *Small And Medium Enterprises (Case Study: Grilled Restaurants In Manado). The Effect.... 1 Jurnal EMBA*, *7*(1), 1–10.

Purnomo, B. D. A. (2025). *Adopsi Fintech pada UMKM Kuliner Menggunakan Technology Acceptance Model: Efek Moderasi Digital Financial Literacy*.

Purwaningtias D., Nasihin M., & Arizona N. D. (2020). *E-Business: konsep dasar e-business di era digital*. Universitas Bina Sarana Informatika.

Rahardjo, B., Ikhwan, K., & Siharis, A. K. (2019). Pengaruh Financial Technology (Fintech) Terhadap Perkembangan UMKM di Kota Magelang. In *Prosiding Seminar Nasional Dan Call For Papers, Fakultas Ekonomi Universitas Tidar* (pp. 347–356).

Rahmawati, A., Handani, T. K., & Priatna, W. B. (2025). Ecommerce Adoption and MSME Business Performance in Indonesia: Systematic Literature Review. *Scientific of Mandalika*, *6*(9), 3512–3520.

Santoso, B. (2020). *The Role of Micro, Small, and Medium Enterprises Toward Sustainable Development Goals Through Islamic Financial Institutions* (Vol. 409, Issue SoRes 2019, pp. 585–595). https://doi.org/10.2991/assehr.k.200225.127

Situmorang, P., Purba, J. T., & Hariandja, E. S. (2025). Strategic Business Transformation and Corporate Sustainability: Examining the Role of Dynamic and Digital Capabilities. *Jurnal Manajemen*, *22*(1), 38–54. https://doi.org/10.25170/jm.v22i1.6577

Sugiyono, S. (2018). Metode penelitian kuantitatif, kualitatif, R&D. *Bandung: Alfabeta*, 1–11.

Suhada, K., Setiyani, L., & Setiadi Sukardi, D. (2021). Analysis of E-Commerce Adoption Level on Culinary Micro, Small and Medium Enterprises (Umkm) in Karawang Regency Using Smart Pls. *Buana Information Technology and Computer Sciences (BIT and CS*, *2*(2), 44–47. https://doi.org/10.36805/bit-cs.v2i2.1870

Triandra, N., Hambali, D., Nurasia, & Rosalina, N. (2019). Analisis Pengaruh E-Commerce Terhadap Peningkatan Kinerja Umkm (Studi Kasus Pada Umkm Di Kabupaten Sumbawa. *Jurnal Ekonomi Dan Bisnis Indonesia*, *4*(1), 6–10. https://doi.org/10.37673/jebi.v4i1.259

Wahyudiati, D., & Isroah. (2018). Pengaruh Aspek Keuangan Dan Kompetensi Sumber Daya Manusia (Sdm) Terhadap Kinerja Usaha Mikro Kecil Dan Menengah (Umkm) Di Desa Kasongan. *Jurnal Profita*, *2*, 1–11.

Zimmermann, D. V. (2022). *Types of SMEs in the innovation system : activities , constraints and successes* (pp. 1–12).