Journal of Business Integration Competitive
Business Transformation Through Research
JoBIC Yayasan Bina Bisnis Nusantara Medan
Volume 2 Issue 1 Year 2025 Pages 50 – 62
DOI: 10.64276/jobic.v2i1.30
E-ISSN: 3089-2120

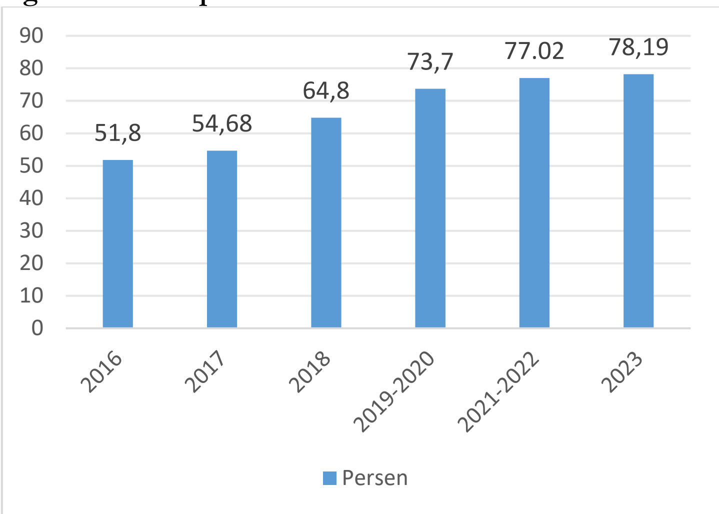
The Contribution of E-Commerce and Financial Management to Enhancing MSME Performance in Indonesia

Rafida Khairani[1], Tantri Octora Dwi Syah Putri[2]
rafidakhairani256@gmail.com[1], tantrioctoradwisyahputri@unprimdn.ac.id[2]
[1,2]Universitas Prima Indonesia, Indonesia
Corresponding Email: rafidakhairani256@gmail.com

Abstract
This study explores how e-commerce adoption and financial management jointly enhance the performance and sustainability of micro, small, and medium enterprises (MSMEs) in Indonesia. Using a qualitative literature review approach, the research identifies e-commerce as a driver of market expansion and innovation, while financial management ensures business stability and accountability. The findings show that digital transformation must be supported by financial discipline to achieve long-term growth. MSMEs that integrate both capabilities become more resilient, efficient, and competitive in the digital economy. Strengthening infrastructure, financial literacy, and collaboration among government, financial institutions, and digital platforms is essential for inclusive MSME development. Overall, the synergy between e-commerce and financial management provides a strategic foundation for building sustainable and competitive MSMEs in Indonesia's evolving digital landscape.
Keywords: e-commerce, financial management, MSME performance, digital economy, Indonesia

Introduction
According to the Indonesian Internet Service Providers Association (APJII), Indonesia ranks fourth in the world in terms of internet usage. Over the past few years, Indonesia's digital economy has experienced rapid growth. The use of digital technology continues to increase, reaching almost every corner of the country. Figure 1. Development of Internet Penetration Rate in Indonesia (2016-2023)

Figure 1. Development of Internet Penetration Rate in Indonesia.



Source : APJII: 2016-2022

Undoubtedly, the phenomenon of internet penetration should be a golden opportunity for business people to expand their wings so that they can expand their market not only to attract local interest but also globally. Sectorally, e-commerce has the largest contribution to the development of the digital economy in Indonesia. E-commerce is an application that leverages the internet as a platform for marketing transactions, purchases, and the online distribution of products, as well as a means to expand market share and achieve higher profits. (Jain et al., 2021). E-commerce that can be utilized in business operations can compete with other products. (Krisdian & Khairani, 2022). Where to get wider market access and have the opportunity to get new customers and facilitate transactions (Agung et al., 2024). However, this ranking does not seem to fully reflect business activities, especially those of small and micro enterprises.

Playing an important role in advancing the economy, most MSMEs are located in villages. Villages are the backbone of economic movement so that they can absorb labor. Villages have a diversity and superiority of products that can be introduced and can become market attractions. The contribution of MSMEs is that they can increase productivity, create jobs, and improve the quality of life of the local community. (Parluhutan Sinaga & Sitorus, 2023). The concept of creative economy can be built through the interaction of creativity and ideas, which are then realized through intellectual property rights and monetized. Starting from handicrafts, agricultural products, traditional foods, and so on, these can be turned into flagship products for village MSMEs so that the economy can grow and develop even better. Economic growth in a country is a momentum that is expected to bring about economic progress and prosperity for the country (Rosário & Raimundo, 2021).

Efforts to strengthen MSMEs can be seen in the improvement of their financial performance. Financial performance is the ability to control and manage available resources. (IAI, 2015). This means that financial performance refers to the ability of MSMEs to manage and control all resources, both in the form of capital and human resources, to generate profits. Financial performance achievements will be reflected in the financial reports prepared by MSMEs. Good financial performance can be measured by consistent profit growth each year. The growth of MSMEs is influenced by improved financial performance (Hendiarto et al., 2021).

Based on several phenomena from surveys that have been conducted, it appears that the internet network has not yet reached all villages, as internet coverage is uneven throughout Indonesia, digital literacy is low, and there are issues with bank administration and product distribution to buyers. Marketing strategies are also a common problem for home-based businesses, given their limited knowledge, information, and mastery of information technology. Another phenomenon is the low level of knowledge about financial management. The management perspective for small businesses is relatively different from that of large-scale businesses. The difference lies in the functions and tasks of managers in large companies, which are detailed according to strategy and organizational structure, while in small companies, there is often overlap between functions and tasks due to limited resources. This leads to the phenomenon where managers in small businesses are often the business owners themselves. This phenomenon often becomes an obstacle, resulting in some SMEs, particularly rural micro and small businesses, still being unable to compete with other SMEs.

Based on the phenomena described above, the purpose of this study is to determine the role of e-commerce and financial management in improving the performance of MSMEs in Indonesia. This will enable the provision of appropriate solutions to improve e-commerce and financial management in MSMEs. The rapid growth of Indonesia's digital economy presents both opportunities and challenges for MSMEs. Despite high internet penetration, many small and micro enterprises still struggle to adopt e-commerce platforms effectively due to limited digital literacy and infrastructure. According to the Resource-Based View (Barney, 1991), firms can achieve superior performance when they develop unique internal resources and capabilities. In this context, e-commerce adoption and financial management capability represent critical strategic resources that drive MSME competitiveness. Moreover, the Technology Acceptance Model (Davis, 1989) highlights that entrepreneurs' perceptions of usefulness and ease of use determine their willingness to adopt technology such as Shopee. However, many MSMEs in rural areas remain unable to optimize these resources, creating a performance gap that this study seeks to address.

Previous studies have examined e-commerce or financial management separately; however, limited research integrates both factors in explaining MSME performance, particularly within Indonesia's rural and urban digital divide. This study fills that gap by exploring how e-commerce utilization, supported by sound financial management, can enhance MSME sustainability and competitiveness in the digital economy era.

Theoretical Review

E-commerce

E-commerce is the implementation of commerce in the form of sales, purchases, and orders, payments, and promotions of goods and services carried out using computers and electronic means in digital form (Kedah, 2023). E-commerce is an application that utilizes the internet as a platform for marketing transactions, purchases, online product distribution, and a means to expand market share in order to increase profits. (Richmond, 2020). The implementation of e-commerce is one of the most effective ways to support the performance of MSMEs (Alam, 2023). According to the Financial Education and Training Agency of the Ministry of Finance, e-commerce is the distribution, sale, purchase, and marketing of products (goods and services) using the internet (Nurbayan et al., 2025). Even though consumers and sellers do not meet face-to-face, transactions still run smoothly. In other words, e-commerce offers convenience in online shopping (Nasib, 2024).

Financial Management

Financial management is the process of regulating financial activities or operations within an organization, including planning, analysis, and control of financial activities (Asandimitra & Kautsar, 2019). Financial management involves achieving predetermined objectives, which requires effective and efficient management (Hardiansyah et al., 2025). As a balancer of wealth, finances, and capital, financial management has key activities in decision-making, namely: obtaining funds, using funds, and managing assets (Silalahi et al., 2024). The types of financial statements commonly used are: balance sheets, income statements, statements of changes in equity, and cash flow statements (Tambunan et al., 2024). The perspective of small business management is relatively different from that of large-scale business management (Lev, 2018). It states that the preparation of financial statements according to applicable financial accounting standards has a significant impact on the competitiveness of MSMEs (Senjani, 2020).

Financial Performance

Financial performance is a benchmark for company management in making decisions to determine the extent to which a company and MSMEs in North Sumatra over the past 10 years with relevant titles (Pakpahan et al., 2024). The use of varied data sources can strengthen the research results by comparing the results of one journal with another. The literature reviewed was selected from Scopus- and SINTA-indexed journals published between 2018 and 2024, focusing on e-commerce, financial management, and MSME performance in Indonesia. A qualitative content analysis was applied to identify recurring patterns and themes across studies (Hou et al., 2024).

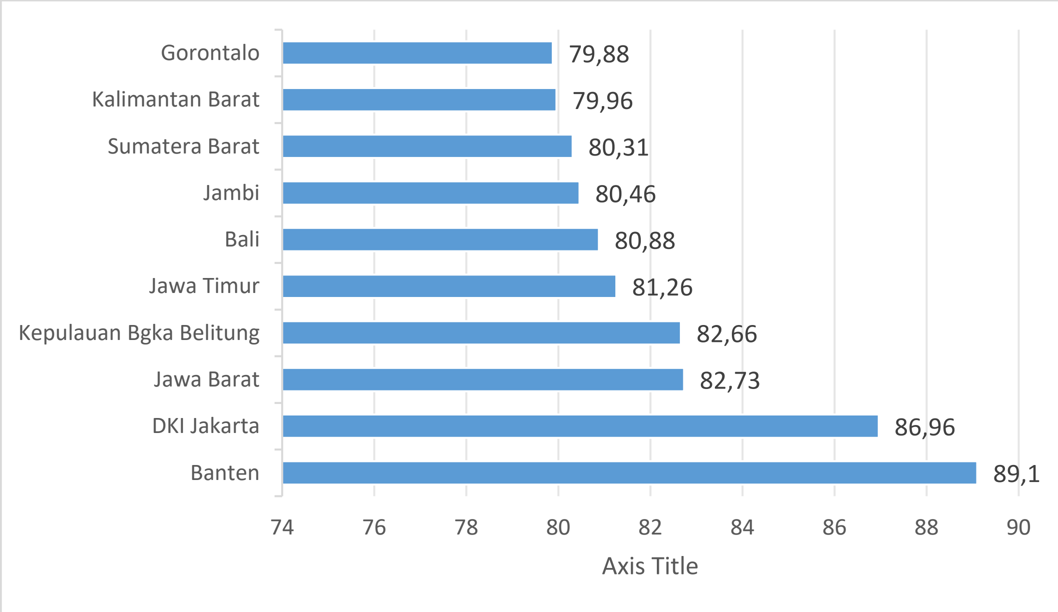
Methodology

This study utilizes a quantitative methodology with an explanatory survey technique to examine the impact of e-commerce adoption and financial management on the performance and sustainability of micro, small, and medium companies (MSMEs) in Indonesia. This method was selected to empirically elucidate causal links among variables. The demographic comprises MSME proprietors and administrators who engage with digital platforms, including online marketplaces (Shopee, Tokopedia, Lazada) and financial technology services. The sample method employed is purposive sampling, with parameters that necessitate business activity for a minimum of two years and the utilization of digital services for at least six months. The Slovin formula was used to choose 250 people, with a 5% margin of error. We used a five-point Likert scale (1 = strongly disagree to 5 = agree) to collect primary data through an online questionnaire. We used SmartPLS 4.0 software to do the Partial Least Squares–Structural Equation Modeling (PLS-SEM) technique to look at both direct and indirect correlations between latent variables. We used outer loading, Average Variance Extracted (AVE), Composite Reliability, and Cronbach's Alpha to assess the validity and reliability of the construct. We used the bootstrapping process to verify the significance of the connections.

Results and Discussions

According to a survey, Indonesia ranks fourth in the world as the country with the most internet users after China, India, the United States, and Indonesia. The Indonesian Internet Service Providers Association (APJII) 2023 reports that Indonesia's internet penetration rate in 2023 is as follows:

Figure 2. Internet Penetration Rate in Indonesia in 2023



Source: APJII 2023 (processed)

The Indonesian Internet Service Providers Association (APJII) noted that in 2023, Indonesia had reached 78.19 percent internet usage, penetrating 215,626,156 people out of a population of 275,773,901 (Asriyani & Johan, 2023). In this digital era, the country must make maximum use of technology. The increase in internet users has brought about changes in business models in Indonesia.

According to the APJII report, Internet usage by MSMEs is as follows:

Table 1. Internet Usage by Business Entities

Internet Use by Business Entities	Micro Business	Small Business	Medium Business	Large Business
√	93,40%	93,37%	99,55%	100%
×	6,60%	6,53%	0,45%	0%

Report APJII 2023 (processed)

Table 2. APJII Report 2023

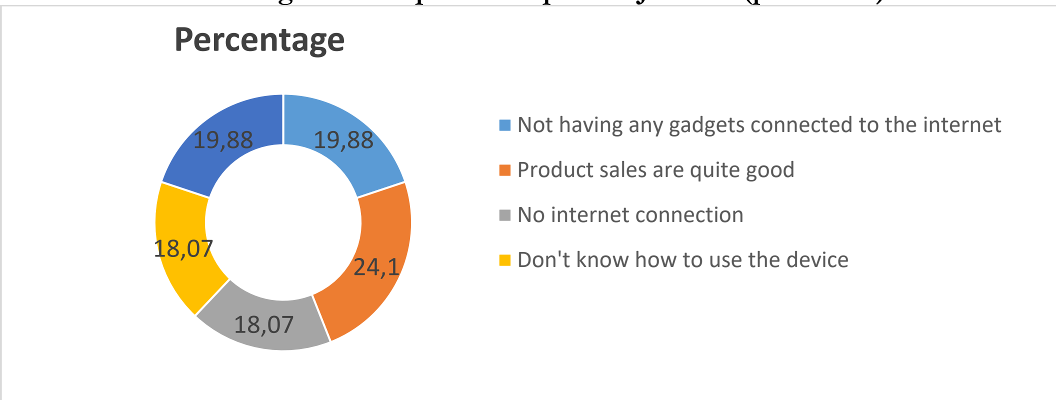
Entities that own websites	Micro Business	Small Business	Medium Business	Large Business
√	33,97%	41,98%	69,68%	94,59%
×	66,03%	58,02%	30,32%	5,41%

Table 3. Entities Conducting Sales and Promotions via the Internet by Business Size

Entities that conduct sales and promotions via the Internet	Micro Business	Small Business	Medium Business	Large Business
√	89,67%	82,10%	76,47%	59,46%
×	10,33%	17,90%	23,53%	40,54%

Reasons Entities Do Not Use the Internet

Figure 3. Graphic of Report APJII 2023 (processed)



According to the Financial Education and Training Agency (BPPK) of the Ministry of Finance in 2019, the increase in the number of online shops has led to a rise in the value of e-commerce transactions in Indonesia, reaching Rp 77.766 trillion in 2018. This figure surged by 151% and is expected to continue to rise compared to the previous year, which reached Rp 30.942 trillion. This demonstrates that e-commerce business is becoming increasingly promising. The rapid growth of the e-commerce business is driven by consumers' increasing reliance on e-commerce platforms to purchase various products, particularly those that are difficult to find in physical stores. Additionally, the rising number of internet users each year contributes to this trend.

The Role of E-Commerce in Improving MSME Performance

Indonesia currently ranks fourth globally in internet usage after China, India, and the United States. According to the Indonesian Internet Service Providers Association (APJII, 2023), internet penetration in Indonesia reached 78.19%, covering 215,626,156 users out of a total population of 275,773,901 (Asriyani & Johan, 2023)**.** This rapid digital expansion has fundamentally transformed business practices, consumer behavior, and marketing strategies. In particular, the growing prevalence of e-commerce has created new channels for micro, small, and medium enterprises (MSMEs) to enhance their market reach, efficiency, and competitiveness in the digital economy.

The e-commerce sector has become a critical pillar of Indonesia's digital economy. Platforms such as Shopee, Tokopedia, Bukalapak, and Lazada have democratized market access by enabling even micro-entrepreneurs to sell their products online with minimal entry barriers. E-commerce allows MSMEs to showcase their products beyond local markets, reducing dependence on traditional distribution channels. According to (Wahyuni et al., 2020), e-commerce utilization significantly enhances marketing efficiency and sales performance. Similarly, (Mustafa et al., 2023)emphasize that digital adoption contributes directly to productivity and income growth among Indonesian MSMEs, aligning with global evidence from (Alam, 2023) showing e-commerce's role in improving both financial and sustainability performance during and after the COVID-19 pandemic.

From the perspective of S (Barney, 1991), e-commerce represents an *intangible strategic asset* that enables firms to develop unique digital capabilities. When MSMEs possess valuable and inimitable digital skills such as the ability to manage online storefronts, engage in digital marketing, and interpret online consumer data they gain a sustainable competitive advantage. These resources allow businesses to adapt to technological change more effectively, improving overall performance. Conversely, the absence of these capabilities limits MSMEs' ability to benefit from digital transformation.

Despite these opportunities, the benefits of e-commerce are not evenly distributed. Based on APJII's 2023 report, only 33.97% of micro and 41.98% of small enterprises have websites, and the majority use the internet solely for communication purposes rather than sales and promotion. This indicates that a large proportion of MSMEs are still in the early stage of digital adoption. (Busnetty & Tambunan, 2020) highlight the structural barriers: uneven internet infrastructure, limited digital literacy, and weak motivation to adopt technology especially among rural entrepreneurs who operate traditional businesses. As a result, even though 93.4% of micro-enterprises report using the internet, few translate that usage into effective e-commerce operations.

According to the Technology Acceptance Model (TAM) (Davis, 1989), two psychological factors perceived usefulness and perceived ease of use strongly determine users' willingness to adopt technology. MSME owners who view Shopee and similar platforms as complicated, time-consuming, or less relevant are less likely to integrate them into business practices. In contrast, entrepreneurs who perceive e-commerce as beneficial and easy to operate demonstrate higher adoption rates and better performance outcomes. This theoretical perspective explains the behavioral constraints underlying Indonesia's digital divide. Even when infrastructure is available, adoption may remain low due to cognitive and skill barriers.

The findings of this study are consistent with several empirical results. (Purba, 2021) found that while e-commerce has potential, its direct impact on financial performance remains insignificant when entrepreneurs lack adequate digital competence. (Khairani et al., 2025) This suggests that technology alone does not guarantee success; managerial and human capital capabilities are equally essential. Similar patterns are observed internationally. In Malaysia, (Basar et al., 2024) identified that MSMEs leveraging e-commerce during the pandemic achieved higher business resilience compared to offline competitors. In Vietnam and the Philippines, (Phan et al., 2023; Sun & Zhang, 2024) also reported that digital adoption fosters innovation and export potential among small businesses. These findings underscore that e-commerce's effectiveness depends not only on technology availability but also on local entrepreneurs' adaptability.

Another crucial dimension is infrastructure inequality. Many rural and peripheral areas in Indonesia still face unstable internet connectivity and limited access to affordable digital devices. This limitation constrains the scalability of e-commerce initiatives. The (World Bank, 2023) estimates that digital infrastructure gaps contribute to productivity disparities of up to 30% between urban and rural MSMEs in Southeast Asia. Without policy interventions to bridge these gaps, digital transformation will continue to exacerbate inequality.

In addition to infrastructure and literacy, social and cultural factors play a role. MSMEs in rural settings often rely on trust-based networks and face-to-face transactions. Transitioning to impersonal digital marketplaces challenges traditional business norms. To overcome these barriers, community-based digital mentoring and local government facilitation are necessary. The government's role as a facilitator, regulator, and accelerator (Busnetty & Tambunan, 2020) is vital—providing training, incentives, and consumer protection frameworks. Moreover, collaboration with private e-commerce companies can amplify these efforts through targeted programs such as Shopee's *Kampus UMKM Digital* and the Ministry of Cooperatives' *Go Digital* initiatives.

In conclusion, e-commerce functions as both an economic enabler and a learning platform. When MSMEs successfully adopt e-commerce, they gain not only market expansion but also access to analytics and feedback loops that improve decision-making. Integrating e-commerce with financial management systems further enhances efficiency. Therefore, promoting e-commerce adoption is not merely about digital infrastructure it requires developing human, technological, and managerial capacities that collectively strengthen MSME competitiveness in the digital economy.

The Role of Financial Management in Improving MSME Performance

While digital transformation drives market expansion, effective financial management ensures the sustainability of that growth. Financial management refers to the planning, controlling, and monitoring of financial resources to achieve organizational goals (Asandimitra & Kautsar, 2019). In MSMEs, it covers budgeting, recordkeeping, investment, and cash flow management. Sound financial management translates operational efficiency into long-term profitability and resilience.

Financial management directly influences MSME performance through improved resource allocation, cost control, and accountability. (Hasanudin, 2023) found that MSMEs with structured budgeting and reporting systems demonstrate better profitability and growth stability. Similarly, SMEs (Rolinda et al., 2022) confirm that financial management practices significantly affect financial performance, primarily through accurate capital allocation and reduced operational waste. (Ratnawati et al., 2022). further show that financial management behavior mediates the relationship between financial literacy and business performance, indicating that knowledge must be applied systematically to yield tangible benefits.

According to Financial Management Theory (Saerang et al., 2019) , financial success depends on the firm's ability to balance risk and return through optimal financing, investment, and dividend decisions. For MSMEs, this theory implies that even small-scale owners must plan expenditures, manage debt prudently, and evaluate investment opportunities. Without structured planning, cash flow instability often disrupts daily operations and limits reinvestment capacity. Indeed, empirical evidence supports this argument: MSMEs with disciplined financial management exhibit greater liquidity and solvency compared to those relying on informal recordkeeping (Hunjra et al., 2012) (Albertini, 2013).

However, financial management challenges among MSMEs remain widespread. Many business owners mix personal and business finances, lack formal accounting systems, and underestimate the importance of cash flow control. (Usman et al., 2025)warns that financial knowledge without proper application can even harm performance. In Kenya, for instance, micro-entrepreneurs with basic training but no monitoring mechanisms experienced higher default rates and financial mismanagement. Similar problems exist in Indonesia, where many micro-enterprises record transactions manually or inconsistently, leading to difficulties in financial evaluation. Such practices hinder MSMEs' ability to access formal credit and scale their operations.

The implications of weak financial management extend beyond individual firms. Collectively, they affect national economic resilience. According to (IAI, 2015), consistent financial reporting across MSMEs improves transparency and facilitates integration with the formal financial system. When MSMEs adopt proper financial standards, they become more credible borrowers and attract investors, contributing to inclusive economic growth. Therefore, strengthening financial management literacy among MSMEs is not only a microeconomic necessity but also a macroeconomic imperative.

A compelling real-world example underscores the importance of this principle. Large corporations such as 7-Eleven (2017) and Nyonya Meneer (2018) went bankrupt due to poor financial management despite their established market presence (Kompas, 2017; Tempo, 2018).. If large enterprises with professional teams can fail from mismanagement, MSMEs with limited capacity are even more vulnerable. As (Naumenkova et al., 2019) explain, robust financial management systems can shield businesses from market volatility and external shocks by enabling timely responses based on accurate data.

From the Stewardship Theory perspective (Venkatesh & Davis, 2000), effective financial management reflects responsible and transparent stewardship of organizational resources. Entrepreneurs act as stewards rather than mere agents, motivated by collective welfare and long-term business sustainability. When MSME owners maintain accurate financial records and reinvest profits responsibly, they enhance trust among stakeholders, including customers, suppliers, and financial institutions. This behavioral integrity strengthens reputation and facilitates access to formal credit a crucial element for scaling MSMEs.

The synergy between e-commerce and financial management should not be overlooked. E-commerce generates valuable financial data such as sales volume, transaction frequency, and customer demographics that can feed directly into financial decision-making. When combined with structured accounting and analysis, this data allows MSMEs to forecast demand, plan inventory, and optimize working capital. Therefore, digitalization and financial discipline must evolve together. As (Zada et al., 2021) emphasize, financial management practices are indispensable for transforming short-term profitability into sustainable enterprise growth.

Nevertheless, challenges persist in translating financial knowledge into practice. Cultural factors, such as reluctance to record financial details due to mistrust or fear of taxation, continue to hinder adoption. Limited access to affordable accounting tools and professional guidance exacerbates the issue. To mitigate these challenges, targeted government programs and private partnerships are essential. Financial training should be embedded in entrepreneurship curricula, and digital accounting tools must be simplified for microbusiness use.

The integration of financial management with digital platforms is an emerging trend that offers potential solutions. Several Indonesian fintech startups have begun providing automated bookkeeping and payment systems for MSMEs, enabling real-time financial monitoring. This aligns with the global movement toward financial digitalization, where technology enhances transparency and decision-making accuracy. Such integration not only reduces administrative burdens but also increases financial inclusion allowing more MSMEs to access formal credit based on verified transaction histories (Hunjra et al., 2012).

Ultimately, financial management acts as the foundation upon which digital innovation can thrive. Without financial discipline, even the most sophisticated e-commerce strategies may collapse due to liquidity problems or misallocation of resources. Therefore, capacity-building efforts must treat digital and financial competencies as interconnected, not separate domains.

Synthesis of E-Commerce and Financial Management Perspectives

The findings from this study reveal that e-commerce and financial management function as complementary forces that collectively shape MSME performance. While e-commerce primarily drives market access, innovation, and operational efficiency, financial management secures stability, accountability, and long-term sustainability. Together, these two elements represent the dual dimensions of competitiveness within the Resource-Based View (RBV) framework (Barney, 1991). From this theoretical perspective, MSMEs that effectively integrate both digital and financial capabilities possess strategic resources that are valuable, rare, and difficult to imit (Alam, 2023)ate, allowing them to sustain superior performance in a competitive environment.

E-commerce contributes to performance enhancement by enabling MSMEs to expand market reach, reduce transaction costs, and gain access to customer data analytics. Studies by (Wahyuni et al., 2020) (Mustafa et al., 2023)(Alam, 2023) demonstrate that digital adoption is directly associated with increased sales, efficiency, and innovation capacity. However, the financial benefits of e-commerce can only be realized when MSMEs maintain structured financial practices, as suggested by (Hasanudin, 2023; Rolinda et al., 2022). This indicates that technological innovation must be reinforced by managerial discipline to achieve sustainable outcomes.

The Technology Acceptance Model (TAM) (Davis, 1989) further complements this synthesis by explaining how behavioral factors influence e-commerce adoption. MSMEs with strong financial management tend to be more confident in adopting digital tools because they have better control over costs and investment decisions. Thus, perceived usefulness and perceived ease of use—two core TAM constructs are shaped not only by individual attitudes but also by the enterprise's financial capacity and resource allocation strategies. A firm with strong financial discipline is more likely to perceive e-commerce adoption as a worthwhile investment rather than a risky expense.

The empirical evidence from both Indonesian and international studies reinforces this interdependence. For example, (Khairani et al., 2025) (Purba, 2021) found that in contexts where digital literacy and financial capability are low, e-commerce adoption does not significantly improve performance. Conversely, (Basar et al., 2024) in Malaysia and Nguyen (2022) in Vietnam observed that MSMEs integrating financial planning with digital innovation achieved higher levels of resilience during the pandemic. These comparative findings underscore a universal pattern across developing economies: digital transformation alone is insufficient without financial literacy and management discipline.

From the standpoint of Financial Management Theory (Gitman & Zutter, 2015), effective resource allocation is the foundation of strategic decision-making. E-commerce data provides real-time information on sales and expenses, which, when integrated into accounting systems, enhances the precision of budgeting and forecasting. This integration allows MSMEs to transform transactional data into actionable insights, supporting better capital management and reducing operational risk. As (Naumenkova et al., 2019)(Krisdian & Khairani, 2022) highlight, firms that systematically analyze financial data can anticipate liquidity issues before they escalate into crises a practice that many Indonesian MSMEs are beginning to adopt through digital bookkeeping and fintech solutions.

The synergy between e-commerce and financial management also aligns with Stewardship Theory (Venkatesh & Davis, 2000). MSME owners who maintain transparent financial practices and adopt digital tools demonstrate stewardship behavior, taking responsibility not only for profit generation but also for business continuity and community trust. This behavior strengthens stakeholder relationships particularly with suppliers, customers, and banks and increases access to formal financing. As (Zada et al., 2021) observed, when MSMEs align financial discipline with innovation, they transform from reactive entities into proactive organizations capable of long-term growth.

This synthesis highlights a crucial implication: MSME performance is not determined by digital or financial factors in isolation, but by their interaction. The digital capability derived from e-commerce adoption must be complemented by financial capability to ensure sustainability. Therefore, policymakers, educators, and entrepreneurs must view digital transformation and financial literacy as mutually reinforcing domains that form the backbone of MSME competitiveness in the 21st-century economy.

Policy and Practical Implications

The combined insights from the analysis above carry significant implications for policy, practice, and future research. The empirical and theoretical synthesis suggests that enhancing MSME performance requires a holistic strategy that simultaneously develops digital infrastructure, financial literacy, and managerial capacity. Without these three pillars working together, Indonesia's transition toward an inclusive digital economy will remain uneven and incomplete.

First, at the policy level, the government should focus on expanding digital infrastructure, particularly in rural and remote areas where most MSMEs are located. As (Busnetty & Tambunan, 2020) and APJII (2023) note, infrastructure inequality remains a structural barrier to e-commerce adoption. Broadband expansion, affordable mobile data, and community internet centers are essential investments to enable rural entrepreneurs to participate in online markets. The Ministry of Cooperatives and SMEs, in collaboration with regional governments, could introduce targeted programs combining internet access provision with digital mentoring, similar to Malaysia's *SME Digitalization Grant* or Vietnam's *Go Digital SMEs Initiative* (Agung et al., 2024)(Phan et al., 2023).

Second, at the managerial level, MSMEs must integrate financial management practices into their digital operations. This includes implementing simple bookkeeping applications, setting up financial dashboards to track online sales, and using e-commerce analytics to plan budgets and pricing strategies. Training modules developed by the Financial Education and Training Agency (BPPK) of the Ministry of Finance could be adapted to MSME needs, emphasizing practical skills such as cash flow forecasting and online payment reconciliation. (Hasanudin, 2023) and (Rolinda et al., 2022) both confirm that accurate financial reporting significantly improves business performance and credibility, thus helping MSMEs gain access to bank credit or investor funding.

Third, public-private collaboration is critical. E-commerce platforms such as Shopee, Tokopedia, and Lazada can act as ecosystem enablers by offering training and financial integration tools. For instance, Shopee's *Kampus UMKM Digital* initiative demonstrates how digital companies can empower small businesses through education and access to digital marketplaces. These collaborations should be institutionalized through partnerships with local universities, vocational centers, and cooperatives. (Alam, 2023) and (Mustafa et al., 2023) show that public-private cooperation enhances MSME resilience during crises and accelerates technology diffusion in developing economies.

Fourth, the financial sector including banks, fintech firms, and microfinance institutions—should leverage MSMEs' e-commerce transaction data to assess creditworthiness. This approach aligns with the principle of financial inclusion and can help MSMEs transition from informal to formal financial systems. As suggested by (IAI, 2015) and (Ratnawati et al., 2022) transparent financial reporting serves as a bridge between small businesses and financial institutions. Digital platforms can facilitate this process by integrating transaction histories into digital credit scoring systems, allowing banks to evaluate borrowers using objective data.

Fifth, the educational and academic community plays a crucial role in sustaining MSME development. Universities should incorporate financial management and e-commerce courses into entrepreneurship programs, emphasizing practical application. Moreover, academic research should focus on measuring the long-term impact of digital and financial capability integration. Studies by (Albertini, 2013; Hunjra et al., 2012; Zada et al., 2021) provide theoretical foundations that can be expanded using mixed-method approaches in future empirical work. Such interdisciplinary research will help identify the most effective models of digital-financial synergy for MSMEs in developing economies.

Finally, the social and community dimension of MSME empowerment should not be neglected. Many micro-entrepreneurs operate within tightly knit local networks where trust and reputation are vital. Programs aimed at improving digital and financial literacy should therefore adopt a community-based approach, involving local leaders, cooperatives, and women's groups. Evidence from Indonesia and Uganda (Turyahebwa et al., 2013) indicates that peer-based learning and mentoring significantly enhance financial behavior and technology adoption rates among small entrepreneurs.

In summary, the policy and practical implications of this study can be viewed through three levels of action:

1. Structural empowerment – investing in infrastructure and access;
2. Capacity development – strengthening human and managerial capital; and
3. Institutional collaboration – aligning policies, platforms, and financial systems.

By aligning these three dimensions, Indonesia can accelerate MSME transformation into digitally competent, financially disciplined, and globally competitive enterprises. As emphasized by (Barney, 1991) and (Venkatesh & Davis, 2000), long-term competitiveness depends on the continuous development of both tangible and intangible resources. Strengthening MSME digital and financial capabilities is therefore not merely a matter of adaptation but a strategic imperative for sustainable economic growth.

Conclusions

This study concludes that e-commerce and financial management are two interconnected pillars that jointly determine the success and sustainability of micro, small, and medium enterprises (MSMEs) in Indonesia. The integration of digital capability through e-commerce and managerial capability through financial management enables MSMEs to expand their markets, improve efficiency, and ensure long-term financial stability. These two elements complement one another—e-commerce drives growth and innovation, while financial management ensures accountability and continuity.

The findings demonstrate that digital transformation cannot stand alone without adequate financial discipline. While e-commerce facilitates wider market access and operational efficiency, strong financial management ensures that business resources are effectively controlled, cash flow remains stable, and profits are reinvested productively. MSMEs that can integrate both aspects tend to be more resilient, adaptable, and competitive in the rapidly evolving digital economy.

From a theoretical perspective, this study affirms that MSME competitiveness is built upon internal resources digital literacy, technological capability, and financial skills that are difficult for competitors to imitate. Digital technology adoption represents the capacity for innovation, while sound financial management reflects the ability to maintain order, transparency, and sustainability. When these two dimensions interact harmoniously, MSMEs are better equipped to achieve superior and sustainable performance.

In practical terms, the results underline the importance of strengthening infrastructure, human capital, and institutional collaboration. The government needs to expand digital access and provide training to enhance both digital and financial literacy among entrepreneurs, especially in rural areas. Financial institutions should develop mechanisms that recognize MSME transaction histories from e-commerce platforms as credible financial records to improve access to credit. At the same time, digital platforms and private stakeholders should play an active role in providing education, mentorship, and financial integration tools to support business growth.

In conclusion, the synergy between e-commerce and financial management forms the foundation of sustainable MSME development. Encouraging digital adoption while promoting financial accountability will not only improve business performance but also contribute to inclusive and resilient economic growth. Strengthening these two aspects is therefore essential for transforming Indonesia's MSMEs into digitally empowered, financially disciplined, and globally competitive enterprises.

References

Agung, L. P., Khairani, R., Indonesia, U. P., Agama, I., & Negeri, I. (2024). *Cashless Society Moderates The Effect Of Fintech Payment Gateway On The Financial Performance Of Msmes In The Medan Area. 7*, 7386–7397.

Alam, J. G. A. B. S. S. K. A. M. M. S. S. (2023). Impact Of E-Commerce And Digital Marketing Adoption On The Financial And Sustainability Performance Of Msmes During The COVID-19 Pandemic : An Empirical Study. *Sustainability*, *15*, 1–21.

Albertini, E. (2013). Does Environmental Management Improve Financial Performance? A Meta-Analytical Review. *Organization And Environment*, *26*(4), 431–457. Https://Doi.Org/10.1177/1086026613510301

Asandimitra, N., & Kautsar, A. (2019). The Influence Of Financial Information, Financial Self Efficacy, And Emotional Intelligence To Financial Management Behavior Of Female Lecturer. *Humanities And Social Sciences Reviews*, *7*(6), 1112–1124. Https://Doi.Org/10.18510/Hssr.2019.76160

Asriyani, L., & Johan, I. R. (2023). The Effect Of Financial Literacy And Self-Efficacy On Interest In Using Peer To Peer Lending Among Millennials. *Journal Of Child, Family, And Consumer Studies*, *2*(2), 167–178. Https://Doi.Org/10.29244/Jcfcs.2.2.167-178

Barney, J. B. (1991). *Barney (1991).Pdf*.

Basar, S. A., Ibrahim, N. A., Tamsir, F., Rahman, A. R. A., Zain, N. N. M., Poniran, H., & Ismail, R. F. (2024). I-Fintech Adoption Mediation On The Financial Literacy Elements And Sustainable Entrepreneurship Among Bumiputera Msmes In Malaysia. *International Journal Of Economics And Financial Issues*, *14*(4), 138–147. Https://Doi.Org/10.32479/Ijefi.16546

Busnetty, I., & Tambunan, T. T. H. (2020). Gap Between Regions In The Use Of E-Commerce By Mses. *Journal Of Telecommunications And The Digital Economy*, *8*(4), 37–63. Https://Doi.Org/10.18080/Jtde.V8n4.303

Davis, F. D. (1989). Perceived Usefulness, Perceived Ease Of Use, And User Acceptance Of Information Technology. *MIS Quarterly: Management Information Systems*, *13*(3), 319–339. Https://Doi.Org/10.2307/249008

Hardiansyah, H., Amelia, R., Harianto, A., & Syahlina, M. (2025). Digital Transformation And Its Impact On Production Improvement : A Case Study At PT Gajah Mada Plastik. *Journal Of Business Integration And Competitive*, *1*(2), 108–115. Https://Doi.Org/Https://Doi.Org/10.64276/Jobic.V1i2.21

Hasanudin, H. (2023). Effective Financial Management Strategies To Improve MSME Performance. *Journal Of Economics And Business (JECOMBI)*, *3*(03), 132–137. Https://Doi.Org/10.58471/Jecombi.V3i03.60

Hendiarto, R. S., Rosmayanti, S., Sanusi, I., Lingga, R., & ... (2021). The Influence Of Digital Marketing Competence And Financial Statements On Performance (Case Study On The Development Business Of The West Java Chamber Of .... *Rigeo*, *11*(3), 1324–1341. Https://Doi.Org/10.48047/Rigeo.11.3.124

Hou, A., Djohan, D., & Hastuty, W. (2024). The Influence Of Business Networks And Perception Of Product Quality On The Competitive Advantage Of SME Products In Langkat. *Journal Of Finance Integration And Business Independence*, *1*(1), 1–8.

Hunjra, A. I., Butt, B. Z., & Rehman, K. U. (2012). Financial Management Practices And Their Impact On Organizational Performance. *SSRN Electronic Journal*, *9*(9), 997–1002. Https://Doi.Org/10.2139/Ssrn.1750391

IAI, I. A. I. (2015). Ikatan Akuntansi Indonesia 2016. *Penyajian Laporan Keungan*, *1*, 24.

Jain, V., Malviya, B., & Arya, S. (2021). An Overview Of Electronic Commerce (E-Commerce). *Journal Of Contemporary Issues In Business And Government*, *27*(3). Https://Doi.Org/10.47750/Cibg.2021.27.03.090

Kedah, Z. (2023). Startupreneur Bisnis Digital (SABDA) Use Of E-Commerce In The World Of Business. *Startupreneur Bisnis Digital (SABDA)*, *2*(1), 51–60.

Khairani, R., Tantono, E. A., Anderson, R., Munthe, H., & Purba, P. Y. (2025). Unlocking The Potential Of Financial Inclusion, E-Commerce, And Fintech To Boost SME Performance.

Jurnal Ilmiah Manajemen Kesatuan, *13*(5), 3565–3576. Https://Doi.Org/10.37641/Jimkes.V13i5.3786

Krisdian, & Khairani. (2022). Analysis Of The Application Of E-Commerce Applications In Increasing Sales Revenue At PT. United Tractors Tbk. Alvin Krisdian, Shela, Jenifen, Juliani, Financial …. *Jurnal Mantik*, *6*(36), 1285–1290.

Lev, B. (2018). The Deteriorating Usefulness Of Financial Report Information And How To Reverse It. *Accounting And Business Research*, *48*(5), 465–493. Https://Doi.Org/10.1080/00014788.2018.1470138

Mustafa, F., Melinda, T. F., Yusnanto, T., Rukmana, A. Y., & Majid, J. (2023). The Role Of E-Commerce Use, Capital Availability And Business Training On Performance Of Small Medium Enterprise (Smes) In Indonesia. *MALCOM: Indonesian Journal Of Machine Learning And Computer Science*, *3*(2), 247–252. Https://Doi.Org/10.57152/Malcom.V3i2.924

Nasib. (2024). The Influence Of Ethnic Identity And Brand Trust On College Choice Decisions (Case Study At IT & B Campus). *Journal Of Business Integration And Competitive (Jobic)*, *1*(1), 10–20.

Naumenkova, S., Mishchenko, S., & Dorofeiev, D. (2019). Digital Financial Inclusion: Evidence From Ukraine. *Investment Management And Financial Innovations*, *16*(3), 194–205. Https://Doi.Org/10.21511/Imfi.16(3).2019.18

Nurbayan, K., Amelia, R., Nazah, K., Fathoni, M., & Hernawati, M. (2025). Unlocking Buyer Intent : How The Marketing Mix Shapes Purchasing Decisions At Ummah Cahaya Restaurant. *Journal Of Business Integration And Competitive*, *1*(2), 18–30.

Pakpahan, D. R., Handayani, C., & Sanjaya, M. (2024). The Effect Of Fintech Payment And Financial Literacy On Impulsive Buying Of College Students In Medan City. *Journal Of Finance Integration And Business Independence*, *1*(1), 20–29.

Parluhutan Sinaga, A. A., & Sitorus, S. A. (2023). The Role Of Micro, Small And Medium Enterprises (Msmes) Towards Community Welfare In Medan City. *Economics, Management And Sustainability*, *8*(2), 44–52. Https://Doi.Org/10.14254/Jems.2023.8-2.4

Phan, T. C., Minh, T. Le, Nguyen, T. T., & Phan, H. T. (2023). *Digital Financial Literacy And Mobile Banking Behavior: Empirical Evidence From An Emerging Market* (Vol. 2023, Issue 2018). Atlantis Press International BV. Https://Doi.Org/10.2991/978-94-6463-348-1_15

Purba, M. I. (2021). The Effect Of Digital Marketing And E-Commerce On Financial Performance And Business Sustaina- Bility Of Msmes During COVID-19 Pandemic In Indonesia. *International Journal Of Data And Network Science*, *5*, 275–282. Https://Doi.Org/10.5267/J.Ijdns.2021.6.006

Ratnawati, Sudarmiatin, Soetjipto, B. E., & Restuningdiah, N. (2022). The Role Of Financial Behavior As A Mediator Of The Influence Of Financial Literacy And Financial Attitudes On Msmes Investment Decisions In Indonesia. *Journal Of Social Economics Research*, *9*(4), 193–203. Https://Doi.Org/10.18488/35.V9i4.3231

RICHMOND, Y. (2020). Humanities And Social Sciences. *Cultural Exchange And The Cold War*, *28*(2), 77–80. Https://Doi.Org/10.5325/J.Ctv14gp21b.12

Rolinda, C., Naz'aina, N., & Khaddafi, M. (2022). Financial Performance Analysis Before And After The Implementation Of Financial Management Patterns Of Regional General Services Agency At Cut Meutia Regional General Hospital, Aceh Utara Regency. *International Journal Of Social Science, Educational, Economics, Agriculture Research And Technology (IJSET)*, *1*(6), 315–328. Https://Doi.Org/10.54443/Ijset.V1i6.34

Rosário, A., & Raimundo, R. (2021). Consumer Marketing Strategy And E-Commerce In The Last Decade: A Literature Review. *Journal Of Theoretical And Applied Electronic Commerce Research*, *16*(7), 3003–3024. Https://Doi.Org/10.3390/Jtaer16070164

Saerang, D. P. E., Wokas, H. R. N., Kumaat, R. J., & Datu, C. (2019). Effect Of Understanding Financial Management, Regional Financial Accounting Systems, Effectiveness Of Internal Control, And Commitment Towards Financial Performance Of North Sulawesi Province. *Accountability*, *8*(01), 51. Https://Doi.Org/10.32400/Ja.24282.8.01.2019.51-59

Senjani, Y. P. (2020). Msmes COMPETITIVENESS AND POTENTIAL CAPITAL IMPROVEMENT THROUGH IMPROVING THE FINANCIAL STATEMENTS

QUALITY. *Jurnal Ekonomi Dan Bisnis*, *3*(September 2020), 326–339.

Silalahi, H. K., Khairani, R., Tandean, C., Tanady, T., Andrian, & Nasib. (2024). The Impact Of Financial Literacy , Financial Technology , And Financial Inclusion On The Financial Performance Of Micro , Small , And Medium Enterprises (Msmes) In The Culinary Sector In Medan. *International Journal Of Economics Development Research*, *5*(2), 979–991.

Sun, J., & Zhang, J. (2024). Digital Financial Inclusion And Innovation Of Msmes. *Sustainability (Switzerland)*, *16*(4). Https://Doi.Org/10.3390/Su16041404

Tambunan, D., Hou, A., Nasib, Hs, W. H., & Pasaribu, D. (2024). The Role Of Financial Literacy And Self-Motivation In Fostering Entrepreneurial Interest And Self-Efficacy Among University Students. *Journal Of Logistics, Informatics And Service Science*, *11*(1), 136–145. Https://Doi.Org/10.33168/JLISS.2024.0109

Turyahebwa, A., Sunday, A., & Ssekajugo, D. (2013). Financial Management Practices And Business Performance Of Small And Medium Enterprises In Western Uganda. *African Journal Of Business Management*, *7*(38), 3875–3885. Https://Doi.Org/10.5897/AJBM2013.6899

Usman, B., Rianto, H., & Aujirapongpan, S. (2025). Digital Payment Adoption: A Revisit On The Theory Of Planned Behavior Among The Young Generation. *International Journal Of Information Management Data Insights*, *5*(1), 100319. Https://Doi.Org/10.1016/J.Jjimei.2025.100319

Venkatesh, V., & Davis, F. D. (2000). Theoretical Extension Of The Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science*, *46*(2), 186–204. Https://Doi.Org/10.1287/Mnsc.46.2.186.11926

Wahyuni, S., Widodo, J., Zulianto, M., & Islami, N. N. (2020). The Analysis Of E-Commerce Utilization In Micro, Small And Medium Enterprises (Msmes) At Jember. *IOP Conference Series: Earth And Environmental Science*, *485*(1). Https://Doi.Org/10.1088/1755-1315/485/1/012037

World Bank. (2023). The Global State Of Financial Inclusion & Consumer Protection. *Report*.

Zada, M., Yukun, C., & Zada, S. (2021). Effect Of Financial Management Practices On The Development Of Small-To-Medium Size Forest Enterprises: Insight From Pakistan. *Geojournal*, *86*(3), 1073–1088. Https://Doi.Org/10.1007/S10708-019-10111-4