



Digital Transformation of Sharia-Based MSMEs through the Utilization of E-Commerce and Information Systems

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Abstract: Study This aim for analyze digital transformation in Micro, Small and Medium Enterprises (MSMEs) based on sharia through utilization of e-commerce and systems information management. The methods used is approach qualitative with technique studies literature from various journals, books, and sources relevant scientific research results. show that digital transformation has role important in increase efficiency operational, expanding market reach, as well as increase Power competitiveness of MSMEs in the digital economy era. Utilizing e-commerce allows MSMEs reach a wider market wide with higher costs low, while system information management help in data management, recording finance, and decision making decision in a way more accurate and fast. However, the implementation digitalization in MSMEs based sharia Still face various obstacles, such as low digital literacy, limitations infrastructure, as well as lack of understanding to integration principle sharia in digital technology. In addition that aspect data security and competition business also becomes challenges that need to be overcome be noticed. Therefore that, is necessary support from various parties, including government, institutions finance, and providers technology, for push optimization digital transformation of Islamic MSMEs to remain in accordance with Islamic principles and capable develop in a way sustainable.

Keywords: Digitalization; E-Commerce; Information; Sharia; MSMEs

Introduction

The development of digital technology has brought significant changes to various economic activities, including the management and development of Micro, Small, and Medium Enterprises (MSMEs). Digitalization is now no longer just an option but a necessity for entrepreneurs to survive, adapt, and increase competitiveness amidst shifting market behavior toward digital. (Apriani et al., 2024). The use of digital technology enables MSMEs to improve operational efficiency, expand markets, speed up transactions, and create business models that are more innovative and responsive to the demands of the times. In the digital economy era, digital transformation serves as one of the main tools to encourage business sustainability and economic growth that is more affordable for all (Angraini et al., 2024).

In Indonesia, MSMEs play a vital role as the spearhead of the national economy through their contribution to gross domestic product, employment absorption, and income distribution within the community (Madani, Saputra, Silvia, Fajriani, & Yulliyanti, 2026). However, a number of MSMEs still face challenges in implementing digital technology, such as a lack of digital literacy, limited infrastructure, and inadequate human resource capabilities ([Angraini et al., 2024](#)). This situation prevents many MSMEs from maximizing the opportunities available in the digital economy. One form of increasingly rapid digital change is the use of *e-commerce* as a means for digital marketing, distribution, and transactions. *E-commerce* offers MSMEs the opportunity to access larger markets, increase efficiency in marketing costs, and strengthen relationships with customers. The use of *e-commerce* also plays a role in increasing sales and business competitiveness ([Apriani et al., 2024](#)).

In addition to online trading, information systems also function as a vital element in facilitating digital transformation for micro, small, and medium enterprises. Information systems have a role in assisting business data management, financial recording, decision-making, and improving operational efficiency ([Salsabela & Siregar, 2026](#)). Within the framework of Micro, Small, and Medium Enterprises (MSMEs) that follow sharia principles, digital change not only aims to improve economic efficiency, but also needs to be in line with sharia values such as justice, openness, and freedom from *usury, gharar, and maysir*. However, the implementation of digital transformation in Sharia-based Micro, Small, and Medium Enterprises (MSMEs) still faces a number of obstacles, such as low levels of digital literacy, inadequate infrastructure, and the integration of sharia-based digital technology that has not been running well ([Fauziah & Ardiansyah, 2025](#)).

Several previous studies have shown that online commerce has a positive impact on improving the performance and competitiveness of Micro, Small, and Medium Enterprises (MSMEs). Other research has shown that the implementation of information systems can improve business management efficiency and decision-making quality ([Salsabela & Siregar, 2026](#)). On the other hand, research on sharia-based digital transformation emphasizes the importance of integrating digital technology with sharia values to support business sustainability. However, a critical review of existing literature reveals three specific and interrelated research gaps. First, a theoretical gap exists: prior studies on e-commerce adoption in SMEs, such as ([Salah & Ayyash, 2024b](#)) published in the Scopus-indexed Journal of Open Innovation, focus predominantly on conventional SMEs without incorporating sharia compliance dimensions, leaving the theoretical framework underdeveloped for Islamic business contexts. Second, a methodological gap is apparent: most research on digital transformation in SMEs applies quantitative approaches using large-firm data, while qualitative and literature-based studies that synthesize the intersection of e-commerce, management information systems, and sharia principles within the MSME context remain scarce, as also acknowledged in the scientometric analysis by ([Parra-s & Hern, 2026](#)) in the Scopus-indexed Digital Transformation and Society journal. This quantitative dominance is similarly evident in

([Anatan & Nur, 2023](#)) published in the Scopus-indexed *Economies* journal, whose survey-based design of Indonesian MSME digital readiness, while methodologically rigorous, does not draw on qualitative or literature-based synthesis and excludes sharia compliance as a contextual variable. Third, a contextual gap is evident: research that simultaneously examines e-commerce utilization, management information system implementation, and sharia value compliance in Indonesian sharia-based MSMEs as an integrated whole has not been adequately addressed. This tripartite gap requires further investigation ([Madani, Saputra, Silvia, Fajriani, & Yuliyanti, 2026](#)). Based on this description, this study aims to analyze the digital transformation of sharia-based MSMEs through the use of e-commerce and information systems to support increased business efficiency, market competitiveness, and business sustainability.

As Micro, Small, and Medium-Sized Enterprises (MSMEs) progressively use digital technology in a complete and integrated manner, digitalization signifies a significant and fundamental revolution in the way these businesses conduct their operations. This shift goes beyond merely utilizing digital tools; it entails changing fundamental elements of corporate operations, such as internal procedures, organizational structures, and the ways in which companies engage and cultivate client relationships. Significant shifts in consumer behavior—modern customers have a strong preference for quick, easy, and accessible digital platforms—are largely responsible for the shift toward digitalization. Additionally, the increasing need for cost-cutting, operational efficiency, and competitiveness in a market that is becoming more dynamic and international forces MSMEs to embrace digital solutions.

MSMEs can greatly extend their market reach beyond regional constraints by utilizing technology like e-commerce platforms, data-driven decision-making systems, digital marketing tools, and other creative solutions. Businesses may also increase efficiency, simplify processes, and better adapt to market trends and client demands thanks to these technology. Consequently, MSMEs may secure long-term business growth, boost their competitiveness, and produce sustainable added value.

Furthermore, it is becoming more and more crucial to integrate Sharia principles with digital transformation, especially when it comes to Islamic economics. This integration makes sure that company operations respect moral principles like justice, accountability, transparency, and social responsibility in addition to profitability and efficiency. MSMEs can uphold stakeholder trust and support a more moral and sustainable economic system by coordinating digitization initiatives with Sharia regulations. Consequently, digital transformation in MSMEs is a strategic approach that promotes both corporate performance and moral integrity in line with Islamic beliefs, in addition to being a technological necessity ([Muharir, 2024](#)).

Theoretical review

a. Digital Transformation

Digital transformation is change big and important in method company operate its operations and interactions with customer with use digital technology.

Goal main transformation This is For help reach objective company and improve performance in a way overall (Masoud & Basahel, 2023). Transformation process in business micro, small and medium enterprises (MSMEs) are very difficult Because demand change big in management business. Change This No only covers implementation technology, but also change method perpetrator business think as well as increase quality source Power man so that they can utilise technology in activity digital operations and marketing. Development culture innovation and work same, training digital skills, and data utilization as base taking decision business is a number of efforts made. Digital transformation is becoming very important for MSMEs in the middle the development of the digital era is increasingly rapidly. This can increase efficiency , expanding market reach , and increase Power competition local and global ([Jewapatarakul & Ueasangkomsate, 2024](#)).

b. Sharia MSMEs

One of very important sector in push growth economy a country is Micro, Small, and Medium Enterprises (MSMEs). The MSME sector must strong For build system robust industry and distribution in economy. Therefore that , performance and development Optimal Micro, Small and Medium Enterprises (MSMEs) are very important For produce growth stable and sustainable economy ([Setyowati & Anwar, 2022](#)). Sharia MSMEs can understood as activity economy productive public in scale micro, small and medium are run in a way commercial as well as fulfil applicable provisions, with management based on principles sharia. This means that the activity business the must avoided from prohibited practices like *maisir*, *gharar*, and *riba* ([Srijani et al., 2023](#)). In implementation , financing usually done through Islamic banks or institution finance micro sharia , as well as supported by the system guarantee based insurance sharia ([Nurlaila et al., 2022](#)).

c. Platform E-Commerce

The utilization of e-commerce platforms, which enable companies to carry out purchases and sales online while accessing a much larger market at a cheaper marketing cost, is a crucial digital strategy for Sharia MSMEs (Salah & Ayyash, 2024a). This strategy is thought to be successful in broadening market access and boosting sales of halal products ([Hidayat & Hakim, 2025](#)). By decreasing direct communication between customers and sellers, e-commerce also improves the efficiency of transactions in terms of time, money, and energy. Additionally, it makes it possible for companies to draw in more clients and boost revenue. Additionally, by influencing perceptions, fostering trust, and facilitating the exchange of ideas and product information, online media like e-commerce significantly influences customer purchase decisions ([Handoyo, 2024](#)).

Methodology

In order to assess the digital transformation of Sharia-compliant MSMEs in a methodical and sequential manner, this study uses a qualitative approach. Instead of depending solely on numerical data, the qualitative approach enables the researcher to

obtain a deeper and more thorough knowledge of complex phenomena, especially those pertaining to behavior, processes, and contextual implementation. The main method used to gather data for this study was a thorough evaluation of the literature, which included scholarly books, academic journals, and pertinent earlier research. The researcher can create a comprehensive view of the digital change taking place in Sharia-compliant MSMEs by combining various sources.

Because it allows for the identification and study of technological adoption patterns while also taking into account the larger environment in which these technologies are employed, the selection of a literature-based qualitative approach is especially appropriate. This implies that in addition to examining the kinds of digital tools that are utilized, the study also looks at how and why these technologies are used, as well as the opportunities and difficulties MSMEs encounter when putting them into practice. Additionally, this method offers flexibility for evaluating different results and making significant linkages across multiple information sources.

In general, the technique is organized around four primary focal areas. First, it looks at Sharia-compliant MSMEs' current digital state, including their degree of preparedness and digital literacy. Second, it examines how e-commerce platforms are used as a major factor in market access and corporate growth. Third, it looks at how management information systems can be used to support decision-making and operational effectiveness. Lastly, it assesses the wider effects of digital transformation in terms of organizational growth and economic success.

The phases of data collecting and analysis are carried out in an iterative and complementary fashion. This implies that data are collected and evaluated concurrently, enabling the researcher to narrow the study's focus and enhance the interpretation of results over time. A more complex and comprehensive knowledge of digital transformation in Sharia-compliant MSMEs will eventually result from using such an approach, which guarantees that the study stays dynamic and receptive to new findings.

Result and Discussion

Digital Condition of Sharia MSMEs

Micro, Small, and Medium Enterprises (MSMEs) are one of the key pillars of economic growth in many countries, including Indonesia. MSMEs contribute significantly to employment creation, income generation, and the equitable distribution of economic activities across regions. In Indonesia, MSMEs contribute approximately 60.5% of Gross Domestic Product (GDP), absorb around 96.9% of the national workforce, and contribute about 15.69% of national exports. The structure of Indonesia's economy is still dominated by micro-enterprises, accounting for approximately 99% of all MSMEs, while small and medium enterprises contribute only around 1%.

Despite their significant contribution, Indonesian MSMEs have faced considerable challenges in recent years, particularly during the COVID-19 pandemic. Government policies such as mobility restrictions, limitations on business operating hours, and the implementation of hybrid work systems significantly disrupted business activities. As a

result, approximately 63.9% of affected MSMEs experienced a decline in turnover of more than 30%, although many business owners remained optimistic about their ability to survive the crisis ([Kusumaningtyas et al., 2022](#)).

In response to these challenges, digital transformation has emerged as an important strategy for MSMEs to sustain and expand their businesses. The rapid development of internet technology, smartphones, digital platforms, and electronic payment systems provides MSMEs with opportunities to improve operational efficiency, expand market reach, and maintain customer engagement. Digital technologies enable businesses to conduct transactions more efficiently, quickly, conveniently, and accurately, thereby supporting business performance and competitiveness (Riofita, 2024). Furthermore, digital transactions have become increasingly important in supporting economic activities and strengthening MSME resilience in the digital era ([Riofita, 2025](#)).

For Sharia MSMEs, however, digital transformation involves not only technological adoption but also adherence to Islamic economic principles. Digital business practices must comply with Sharia requirements to ensure that all transactions remain halal and free from prohibited elements such as *riba* (usury), *gharar* (uncertainty), and *maysir* (speculation). The implementation of digitalization in Sharia MSMEs therefore requires clear contractual arrangements, transparent product information, fair pricing mechanisms, and ethical business conduct. In addition, digital platforms should promote Islamic values such as justice, honesty, transparency, accountability, and social responsibility toward consumers and other stakeholders ([Ghoniayah et al., 2024](#)).

Although the adoption of digital technology among Sharia MSMEs has increased, its implementation remains relatively limited and has not yet been fully integrated into overall business operations. Many MSMEs primarily utilize digital technology for marketing and sales activities, while managerial functions, strategic planning, and business integration remain underdeveloped. In addition, limited digital literacy, technological capability, and understanding of Sharia-compliant digital business practices continue to hinder the effectiveness of digital transformation. Similar challenges are also reflected in the relatively low adoption of Sharia-based digital financial services compared to conventional digital financial systems. Therefore, understanding the level of digitalization and service delivery among Sharia MSMEs is essential for identifying appropriate digital solutions, business strategies, and technology implementation models. Furthermore, readiness in Sharia compliance, economic capability, and information technology infrastructure is a critical prerequisite for achieving sustainable digital transformation and enhancing the competitiveness of Sharia MSMEs in the digital economy ([Mahyarni & Okfalisa, 2024](#)).

Adoption of *e-commerce* in Sharia MSMEs

E-commerce can be understood as digital-based trading activities conducted in accordance with Islamic principles. In practice, this system emphasizes the value of justice, avoiding elements of uncertainty (*gharar*), speculation or gambling (*maysir*), and interest (*riba*), while ensuring that products and transaction processes remain halal.

Not only does it function as a means of meeting sellers and buyers online, Sharia e-commerce also ensures that every transaction is conducted based on a valid contract according to Sharia, such as a sale and purchase (*bai'*), *salam*, and *ijarah*.

The adoption of e-commerce in Sharia MSMEs is not solely reflected in the use of digital technology for buying and selling activities, but also in the ability of business actors to integrate technological innovation with Islamic values. Successful implementation requires adequate technological readiness, organizational capability, and support from the surrounding environment. These aspects are commonly explained through the Technology–Organization–Environment (TOE) framework. Within the context of Sharia MSMEs, the adoption process should also prioritize Islamic business ethics, including justice, transparency, trustworthiness, and accountability. Therefore, digital transformation is expected not only to improve business performance but also to maintain compliance with Sharia principles in every business transaction ([Munawaroh et al., 2025](#))

Meanwhile, the digitalization of halal MSMEs refers to efforts to utilize digital technology by Micro, Small, and Medium Enterprises (MSMEs) operating in the halal product or service sector. This utilization aims to improve operational efficiency, expand marketing reach, accelerate services, and strengthen competitiveness in the digital economy era. This is increasingly relevant given that the global halal market is estimated to exceed USD 3 trillion, thus offering significant potential for development through digital approaches.

E-commerce plays a strategic role in accelerating the digital transformation process for halal MSMEs. Through various sharia-compliant platforms, such as Salaam Gateway, Souq Al Mal, and Tokopedia Halal Corner, MSMEs can market their products internationally without compromising on sharia principles. Furthermore, funding platforms like Ethis and Kapital Boost help MSMEs access capital through sharia-compliant crowdfunding schemes, thereby avoiding usury. Clarity and transparency of contracts in online transactions are key differences between sharia-compliant e-commerce and conventional systems. By upholding the principles of fairness, transparency, and Islamic business ethics, sharia-compliant e-commerce can increase consumer trust, particularly among Muslims, while simultaneously expanding market share.

With the increasing use of the internet and mobile devices, Sharia-compliant e-commerce has become a crucial tool in driving the growth of halal MSMEs. Various digital business models continue to develop, from Sharia-compliant marketplaces and halal crowdfunding to the use of technologies like blockchain in the form of smart contracts, further strengthening the halal industry ecosystem.

Through the use of sharia e-commerce, halal MSMEs obtain various benefits, including expanding market access both domestically and internationally, accelerating the transaction process with a transparent system, increasing consumer confidence in the halal nature of products, and reducing distribution and transaction costs which are generally higher with conventional methods. In this case, the sharia marketplace acts as

a transaction platform based on fair and sharia-compliant contracts, while sharia crowdfunding becomes an alternative solution in providing halal business capital for MSMEs ([Fauziah & Ardiansyah, 2025](#)).

E-commerce can be defined as transaction activities involving the purchase, sale, or exchange of goods, services, and information conducted through computer networks, particularly the internet (Turban et al., 2018). In the context of MSMEs, the implementation of e-commerce is not limited to having an account on a marketplace platform, but also encompasses the extent to which the technology is used and integrated into business operations, such as payment systems, logistics management, inventory management, and marketing strategies.

To analyze the technology adoption process, the Technology-Organization-Environment (TOE) framework introduced by Louis G. Tornatzky and Mitchell Fleischer is often used. This model explains that technology adoption is influenced by technological, organizational, and external environmental factors (Kumala & Khalidy, 2026). Empirical studies indicate that the level of e-commerce adoption among Indonesian MSMEs remains relatively moderate. Many businesses have begun utilizing digital technologies such as e-mail and websites; however, only a limited number have progressed to more advanced stages where e-commerce is fully integrated into daily business operations. This condition suggests that digital adoption among MSMEs is still developing and requires continuous improvement to maximize the benefits offered by digital technology ([Rahayu & Day, 2017](#)).

Previous studies have shown that the adoption of e-commerce among SMEs is influenced by several interrelated factors, including technological readiness, organizational support, managerial characteristics, competitive pressure, and government assistance. These factors determine whether businesses are capable of implementing digital technologies effectively. Therefore, strengthening organizational capability and improving digital competence are important prerequisites for accelerating e-commerce adoption, particularly among Sharia MSMEs that seek to maintain both competitiveness and compliance with Islamic business values ([Alam et al., 2011](#)).

E-commerce is experiencing rapid growth, and this is understandable. With the ease of online shopping, the ability to shop from the comfort of home, and the ease of making payments, it's easy to see why e-commerce has become so popular. E-commerce, also known as digital commerce, involves the buying and selling of goods and services over the internet. It encompasses a wide range of activities, such as online shopping, online auctions, and online banking. Through e-commerce, companies can reach a wider audience, expand their customer base, and provide better service to consumers. Companies looking to enter the world of e-commerce need to understand the fundamentals. E-commerce offers a new shopping experience by eliminating the need for face-to-face meetings between buyers and sellers, saving time, money, and effort while increasing customer growth and sales. This is because online media, such as e-commerce, helps users convey ideas, influence views, build trust, increase purchase propensity, and change purchasing intentions.

Recent studies indicate that successful e-commerce adoption is influenced not only by technological, organizational, and environmental factors but also by organizational innovation culture, artificial intelligence integration, and customer digital capability. These factors significantly improve marketing performance and strengthen business competitiveness. Therefore, Sharia MSMEs should enhance innovation capability alongside maintaining Sharia compliance to maximize digital transformation outcomes ([Anatan & Nur, 2023](#)).

Empirical evidence suggests that technological, individual, organizational, and environmental factors influence the performance of SMEs through the adoption of e-commerce. Businesses with stronger digital capabilities and organizational support are more likely to achieve higher operational efficiency and business performance. However, limited digital literacy and inadequate technological resources remain major barriers to successful e-commerce implementation. These findings indicate that strengthening digital competence is essential for supporting sustainable digital transformation among Sharia MSMEs ([Maslichah & Diana, 2022](#)).

Sharia-based MSMEs are productive economic activities run by communities on a micro, small, and medium scale, managed commercially and in accordance with established regulations. In practice, these MSMEs are based on Sharia principles, which exclude prohibited elements such as *maisir* (gambling), *gharar* (uncertainty), and *riba* (interest). Examples include the use of financing through Sharia banks or Sharia microfinance institutions, as well as business protection through Sharia insurance. ([Madani, Saputra, Silvia, Fajriani, & Yuliyanti, 2026](#)).

Despite having promising prospects, the implementation of e-commerce in sharia MSMEs still faces various obstacles, including:

- a. Limited digital literacy and understanding of sharia: Many MSMEs have not yet mastered the optimal use of e-commerce, especially in integrating it with sharia principles.
- b. Digital infrastructure inequality: MSMEs in rural areas still experience difficulties in accessing internet networks and other supporting technologies.
- c. Competitive pressure from large businesses: Limited business scale causes MSMEs to be less competitive, both in terms of price, service quality, and the breadth of the market they can reach.
- d. Suboptimal digital sharia regulations and standards: The absence of clear guidelines regarding the implementation of sharia contracts in digital systems can create uncertainty for business actors.

In order for the implementation of sharia e-commerce in MSMEs to run effectively, collaboration from various parties is required, namely:

- a. Government: Develop policies that support the digitalization of Islamic MSMEs, provide training, and expand digital infrastructure development.
- b. Sharia financial institutions: Provide easy access to financing and assistance in implementing sharia contracts for business actors.

- c. Technology providers: Creating platforms that are easy to use, in accordance with Sharia principles, and provide educational features for users.
- d. Educational institutions: Improving digital and sharia understanding through curriculum and practical training for prospective Muslim entrepreneurs (Hijjah & Utami, 2025).

In summary, sharia-compliant e-commerce is a revolutionary and moral approach to online commerce that facilitates the long-term expansion of halal MSMEs in the contemporary economy while also being consistent with Islamic values. This system offers a reliable platform for companies and customers by fusing technology with principles like justice, openness, and the prohibition of *riba*, *gharar*, and *maysir*. Despite ongoing obstacles such as low digital literacy, infrastructure deficiencies, and regulatory uncertainty, the growing worldwide halal market presents significant opportunity. To maximize the adoption of sharia e-commerce, governments, financial institutions, technological companies, and educational institutions must work closely together. Halal MSMEs may increase their competitiveness, broaden their market reach, and make a substantial contribution to equitable and sustainable economic growth with the correct assistance and ongoing innovation.

Implementation of Management Information System

The digital transformation that has reshaped Islamic MSMEs through the adoption of e-commerce and various digital platforms cannot operate optimally without an adequate information system. As transactions increasingly occur online, orders arrive simultaneously from multiple platforms, and customers are scattered across regions, an integrated information system becomes indispensable for sustaining operational continuity (Kilay et al., 2022). Such a system functions as the operational backbone of digital business activity, a role that is frequently underestimated by MSME actors. Far from being sophisticated technology reserved only for large corporations, an integrated information system is essentially a management control mechanism embedded within a firm's internal governance. Working alongside budgeting and control tools, it supports decision-making, sustains business continuity, and strengthens organizational resilience amid the pressures of digital disruption (Roffia & Dabić, 2023). This means that no matter how small the scale of the business, as long as there are data management and decision-making activities within it, a Management Information System (MIS) is relevant to implement, including in Islamic MSMEs that operate with the principles of honesty, transparency, and accountability.

This relevance becomes even more pronounced when linked to the e-commerce conditions already adopted by Islamic MSMEs, as discussed earlier (Kilay et al., 2022). Beyond merely processing data, such a system equips management with the capacity to plan, monitor, and direct operations, while coordinating tasks across related departments and providing clearer direction for decision-making at every level of the organization (Roffia & Dabić, 2023). When a Islamic MSME actor must decide how much stock needs to be prepared for Ramadan, which products are most in demand by buyers on a

particular platform, or when is the best time to run a promotion, all of this requires structured data, not just intuition.

At the operational level, the impact of an integrated information system is felt directly in the daily running of a business. When digital and cloud-based technologies are embedded into such a system, MSMEs gain the ability to manage business data with greater accuracy, speed, and structure. Tasks once carried out manually and prone to delay, from tracking inventory and recording financial transactions to generating reports and serving customers, can instead be automated and processed in real time, which in turn reduces errors and lifts overall productivity (Zhang, 2025). For sharia MSMEs, the ability to record transactions accurately and transparently is not only a matter of business efficiency, but also part of fulfilling the principle of trust in transactions.

Another equally important dimension concerns how an integrated information system shapes the quality of strategic decision-making itself. By weaving real-time data into automated business processes, MSMEs can cut down on manual errors, lower operating costs, and lift overall productivity. Faster, more reliable workflows give small business owners a clearer basis for allocating resources and adjusting their operational strategy as conditions shift (Önden, 2026). This condition is very much in line with the spirit of digital transformation that Islamic MSMEs are currently pursuing, not just selling online, but truly building a well-managed business ecosystem.

However, the journey toward implementing an effective integrated information system rarely unfolds without friction. Limitations in digital literacy among business owners, gaps in workforce training, and uneven access to technological infrastructure remain decisive factors that shape whether such a system can be optimized in the digital era (Kahveci, 2025). These three factors are actually real challenges faced by many Islamic MSMEs, especially those operating in Islamic boarding school communities or areas with limited access to technology. This does not mean that implementing a Management Information System is impossible, but rather shows that a gradual and contextual approach is needed, starting with simple solutions such as digital cashier applications or spreadsheet-based record keeping before moving on to more complex systems.

Field-level evidence supports these broader arguments quite compellingly. Studies indicate that the adoption of information systems positively and significantly influences SME organizational performance, and that their integration alongside existing business strategies produces a stronger collective effect than either operating in isolation. Accounting information systems, in particular, have been shown to reduce manual errors, generate cost and time savings, and support more timely internal decision-making – benefits that neither strategic intent nor technology use alone can fully deliver (Kareem et al., 2024). These findings confirm that investment in Management Information Systems (MIS) is not simply a technological expenditure, but rather a long-term investment that supports business sustainability. For sharia-compliant MSMEs that want to not only survive but truly grow amidst increasingly fierce digital competition, building a robust information system is a step that can no longer be postponed.

The Impact of Digital Transformation

The impact of digital business transformation is evident in the adoption of digital platforms that are significantly transforming MSMEs, particularly in marketing, operational efficiency, and competitiveness—as investment in digital technology has become a crucial step for MSMEs to ensure operational efficiency, increase customer engagement, and maintain a competitive edge in today's market (Sharabati et al., 2024). Digitalization serves as a key driver for MSMEs to adapt and grow amidst rapid technological advancements and competition in the digital economy era. In terms of marketing, digitalization provides a great opportunity for MSMEs to utilize social media platforms such as Instagram, TikTok, and Facebook. These social media are not only a means of promotion, but also a bridge to interact directly with customers personally. Marketplaces such as Shopee and Tokopedia also provide opportunities for MSMEs to sell goods more easily and in a structured manner, reaching consumers at the national and global levels. Marketing that used to be high-cost and limited is now more effective and focused thanks to the presence of digital technology (Morisson & Fikri, 2025).

In terms of operational efficiency, digital transformation has had a significant positive impact on the financial management of MSMEs. One of the main advantages is the ease of recording financial transactions directly (Nugraheni et al., 2025). Digital technology has a significant impact on accelerating and simplifying business processes. Electronic payment systems, such as QRIS and digital wallets, enable transactions to be carried out more quickly and accurately (Hamzah Muchtar et al., 2024), which has helped MSMEs reduce operational costs and increase efficiency (Sitompul et al., 2025). Through the application of digital technology, MSMEs can utilize digital payment systems and big data analysis that enable more efficient and accurate transaction recording (Chaidir et al., 2025). Financial management applications such as BukuWarung and MokaPOS support MSMEs in recording and analyzing financial data directly. In addition, the application of technology in the supply chain, such as logistics software, makes the shipping and distribution process more structured. This efficiency allows MSMEs to prepare more timely and accurate financial reports and reduce costs, which ultimately supports strategic decision-making, so they can focus more on business development (Morisson & Fikri, 2025). In addition, digitalization also increases the transparency and accuracy of financial reports (Chaidir et al., 2025).

Digital transformation has had a significant impact on MSME financial management, including negative effects that need to be watched out for. One significant negative consequence is the threat to data security and privacy. Through the implementation of digital technology, MSMEs are more susceptible to cybersecurity threats, which can lead to critical data leaks and privacy breaches. This poses a significant challenge for MSMEs that may not have sufficient resources or knowledge to protect their data from cyberattacks. In addition, digitalization expands MSME access to financial services, including fintech-based loans. Through digitalization, MSMEs can more easily access various financial services that were previously difficult to obtain, such as online loans from fintech platforms—a relationship evidenced by the significant positive impact

of P2P lending on access to bank credit among Indonesian MSMEs, particularly in regions outside Java, during the post-pandemic period ([Kohardinata et al., 2024](#)).

Therefore, digital transformation is a vital tool for MSMEs to improve their financial performance and competitiveness through access to digital markets, particularly through the use of increasingly sophisticated digital platforms, as evidenced by sharing economy platforms that have significantly improved the financial performance of MSMEs ([Zuhroh et al., 2025](#)). With the existence of e-commerce platforms and social media, MSMEs can reach new customers, both local and international, so that the opportunity to increase sales and expand business networks becomes greater ([Sitompul et al., 2025](#)). In addition, the ability to use analytical data helps business actors to identify market trends, consumer tastes, and develop products that are more suited to market needs. Digitalization also strengthens MSME brands, building a professional image that is important to attract consumer attention. However, the process towards digitalization is not without challenges. The gap in digital literacy among business actors, limited funds, and increasingly fierce competition are the main obstacles. Therefore, cooperation between the government, business actors, and various related parties is very important to ensure that the digitalization process runs smoothly ([Morisson & Fikri, 2025](#)).

In addition, technological differences due to low digital literacy among MSMEs are also a significant issue. Many MSMEs do not fully understand or are unable to utilize digital technology effectively, which can hinder their ability to compete in an increasingly digitally driven market. This low digital literacy can result in an inability to manage finances digitally, which in turn can impact the overall financial performance of MSMEs. Therefore, it is crucial for MSMEs to improve their digital literacy to maximize the benefits of digital transformation and mitigate any potential negative impacts ([Chaidir et al., 2025](#)). With all the opportunities available, digital transformation is a crucial strategy for MSMEs to not only survive but also thrive in the digital economy. With innovation and the use of technology, MSMEs have a significant opportunity to become the main driving force of the local and national economy in the future ([Morisson & Fikri, 2025](#)).

Conclusion

The findings of this study indicate that digital transformation plays a strategic role in enhancing the competitiveness and sustainability of Sharia MSMEs through improved operational efficiency, expanded market access, enhanced decision-making quality, and better business performance. These findings imply that digital transformation should be adopted as a key strategy for the development of Sharia MSMEs while remaining aligned with Islamic principles. Therefore, governments, Islamic financial institutions, technology providers, and other stakeholders need to develop integrated support programs, including the improvement of digital literacy, the provision of adequate technological infrastructure, and the development of digital platforms that comply with Sharia values. Nevertheless, the implementation of digital transformation continues to face several challenges, including low levels of digital literacy among business actors,

limited technological infrastructure, and the suboptimal integration of Sharia principles into digital systems. Therefore, sustained collaboration among stakeholders is required to ensure that the digitalization process is effective, inclusive, and sustainable. Future research is recommended to employ empirical approaches, such as surveys or case studies, to examine the impact of digital transformation on the performance, competitiveness, and sustainability of Sharia MSMEs, as well as to explore the factors influencing the successful implementation of digital transformation across different business sectors and regions.

References

- Alam, S. S., Ali, M. Y., & Jani, M. F. M. (2011). An empirical study of factors affecting electronic commerce adoption among SMEs in Malaysia. *Journal of Business Economics and Management*, 12(2), 375–399. <https://doi.org/10.3846/16111699.2011.576749>
- Anatan, L., & Nur. (2023). Micro, Small, and Medium Enterprises' Readiness for Digital Transformation in Indonesia. *Economies*, 11.
- Angraini, D., Riady, Y., Putimasurai, Pratama, A., Sadria, A., & Rosmiati, R. (2024). Transformasi Digital dalam Meningkatkan Daya Saing Usaha Mikro, Kecil, dan Menengah (UMKM) Indonesia: Sebuah Tinjauan Sistematis. *Eklektik: Jurnal Pendidikan Ekonomi dan Kewirausahaan*, 7(2), 132–142. <https://doi.org/10.24014/ekl.v7i2.33958>
- Apriani, T. T., Pertiwi, R. D., Sari, R. P., Maharani, S., Meirisha, P. J., Rosalina, F., Zelvia, M., & Choiriyah. (2024). Transformasi Digital Berbasis E-Commerce Dalam Mendukung Pertumbuhan Ekonomi Syariah Yang Inklusif Dan Berkelanjutan. *JURBISMAN: Jurnal Bisnis Manajemen*, 2(4), 1333–1346.
- Chaidir, M., Irawan, D., Tinggi, S., Ekonomi, I., & Bangsa, K. (2025). Transformasi Digital dalam Manajemen Keuangan (Studi Kasus pada UMKM Indonesia di Era Ekonomi Digital). April.
- Fauziah, Z., & Ardiansyah, H. (2025). Optimalisasi E-Commerce Syariah dalam Mendukung Digitalisasi UMKM Halal: Tinjauan Literatur. *Jurnal Pendidikan Tambusai*, 9(2), 14809–14816.
- Ghonyah, N., Amilahaq, F., & Hartono, S. (2024). Business sustainability performance through sustainability awareness and business work ethics in Islamic institutions. *Cogent Business and Management*, 11(1), 1–23. <https://doi.org/10.1080/23311975.2024.2303789>

- Hamzah Muchtar, E., Trianto, B., Maulana, I., Alim, M. N., Marasabessy, R. H., Hidayat, W., Junaedi, E., & Masrizal. (2024). Quick Response Code Indonesia Standard (QRIS) E-payment adoption: Customers perspective. *Cogent Business and Management*, 11(1). <https://doi.org/10.1080/23311975.2024.2316044>
- Handoyo, S. (2024). Purchasing in the digital age: A meta-analytical perspective on trust, risk, security, and e-WOM in e-commerce. *Heliyon*, 10(8), 2405–8440. <https://doi.org/10.1016/j.heliyon.2024.e29714>
- Hidayat, M. R., & Hakim, T. (2025). Strategi Komunikasi Syariah dalam Transformasi Digital UMKM: Analisis Literatur Tentang Integrasi Nilai Islami pada Platform E-Commerce. *Gunung Djati Conference Series*, 56, 688–693.
- Hijjah, H. D., & Utami, A. T. (2025). Inovasi Teknologi Berbasis E-Commerce untuk Mendorong UMKM dalam Transformasi dengan Prinsip Bisnis Syariah. *MRBIMA: Media Riset Bisnis Manajemen Akuntansi*, 1(2), 89–96. <https://doi.org/10.71312/mrbima.v1i2.448>
- Jewapatarakul, D., & Ueasangkomsate, P. (2024). Digital Organizational Culture, Organizational Readiness, and Knowledge Acquisition Affecting Digital Transformation in SMEs from Food Manufacturing Sector. *SAGE Open*, 14(4), 1–15. <https://doi.org/10.1177/21582440241297405>
- Kahveci, E. (2025). Digital Transformation in SMEs: Enablers, Interconnections, and a Framework for Sustainable Competitive Advantage. *Administrative Sciences*, 15(3), 107. <https://doi.org/10.3390/admsci15030107>
- Kareem, H. M., Alsheikh, A. H., Alsheikh, W. H., Dauwed, M., & Meri, A. (2024). The mediating role of accounting information systems in small and medium enterprise strategies and organizational performance in Iraq. *Humanities and Social Sciences Communications*, 11(1), 745. <https://doi.org/10.1057/s41599-024-03273-1>
- Kilay, A. L., Simamora, B. H., & Putra, D. P. (2022). The Influence of E-Payment and E-Commerce Services on Supply Chain Performance: Implications of Open Innovation and Solutions for the Digitalization of Micro, Small, and Medium Enterprises (MSMEs) in Indonesia. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(3), 119. <https://doi.org/10.3390/joitmc8030119>
- Kohardinata, C., Widianingsih, L. P., Stanley, N., Junianto, Y., Ismawati, A. F., & Sari, E. T. (2024). P2P lending and banking credit for MSMEs and Non-MSMEs post COVID-19 pandemic: Does it matter? *Decision Science Letters*, 13(1), 225–236. <https://doi.org/10.5267/j.dsl.2023.9.004>

- Kumala, I., & Khalidy, F. (2026). Pengaruh Adopsi E-Commerce terhadap Kinerja Penjualan Usaha Mikro, Kecil, dan Menengah (UMKM) di Indonesia. *Jurnal Manajemen Bisnis Digital Terkini*, 3(1), 343–348. <https://doi.org/10.61132/jumbidter.v3i1.1238>
- Kusumaningtyas, R. O., Subekti, R., Jaelani, A. K., Orsantinutsakul, A., & Mishra, U. K. (2022). Reduction of Digitalization Policy in Indonesian MSMEs and Implications for Sharia Economic Development. *Juris: Jurnal Ilmiah Syariah*, 21(2), 157–171. <https://doi.org/10.31958/juris.v21i2.6855>
- Madani, A. A., Saputra, M. R., Silvia, M., Fajriani, N., & Yuliyanti. (2026). Peran E-Commerce dalam Transformasi Digital UMKM Berbasis Syariah untuk Meningkatkan Daya Saing Pasar. *Jurnal Ilmiah Ekonomi dan Manajemen (JIEM)*, 4(2), 83–93. <https://doi.org/10.61722/jiem.v4i2.8620>
- Mahyarni, M., & Okfalisa, O. (2024). SMEs Digitalization Readiness: Sharia Fintech Framework Using Quadruple Helix Perceives. *Serbian Journal of Management*, 19(1), 71–97. <https://doi.org/10.5937/sjm19-44971>
- Maslichah, & Diana, N. (2022). Connecting the dots: Linking technological, individual, organizational and environmental factors towards SMEs performance with the mediation role of e-commerce adoption. *JEMA: Jurnal Ilmiah Bidang Akuntansi dan Manajemen*, 19(2), 175–198. <https://doi.org/10.31106/jema.v19i2.18962>
- Masoud, R., & Basahel, S. (2023). The Effects of Digital Transformation on Firm Performance: The Role of Customer Experience and IT Innovation. *Journal Digital*, 3(2), 109–126. <https://doi.org/10.3390/digital3020008>
- Morisson, B., & Fikri, A. A. H. S. (2025). Digitalisasi UMKM sebagai Strategi Meningkatkan Daya Saing di Era Ekonomi Digital. *EBISNIS (Jurnal Ilmiah Ekonomi dan Bisnis)*, 18(1), 289–299.
- Muharir. (2024). Transformasi Digital: Implikasi Usaha Mikro Kecil Menengah (UMKM) di Era Teknologi. *Mabsya: Jurnal Manajemen Bisnis Syariah*, 6(2), 251–266. <https://doi.org/10.24090/mabsya.v6i2.10445>
- Munawaroh, N. A., Sudarmiati, Djatmika, E. T., Hermawan, A., & Munir, M. (2025). Digital Empowerment and E-Commerce Adoption among Handicraft SMEs: A Contemporary Islamic Economic Law Study Using the TOE Framework. *MILRev: Metro Islamic Law Review*, 4(2), 1427–1448. <https://doi.org/10.32332/milrev.v4i2.11731>
- Nugraheni, P., Darma, E. S., & Muhammad, R. (2025). Adoption of Digital Technology and Financial Knowledge: Strategies for Achieving Sustainable Performance of

- MSMEs. *Journal of Risk and Financial Management*, 18(11), 1–15. <https://doi.org/10.3390/jrfm18110646>
- Nurlaila, Nasution, Y. S. J., Hermain, H., & Silalahi, P. R. (2022). Pengembangan UMKM Kuliner Berbasis Syariah: Studi Kasus di Sumatera Barat. *JIEI: Jurnal Ilmiah Ekonomi Islam*, 8(03), 3728–3736. <https://doi.org/10.29040/jiei.v8i3.6822>
- Önden, A. (2026). A Systemic Approach to Decision Support and Automation: The Role of Big Data Analytics and Real-Time Processing in Management Information Systems. *Systems*, 14(2), 216. <https://doi.org/10.3390/systems14020216>
- Parra-s, D. T., & Hern, L. (2026). Digital transformation in small and medium enterprises: A scientometric analysis. *Digital Transformation and Society*, 3(3), 257–276. <https://doi.org/10.1108/DTS-06-2023-0048>
- Rahayu, R., & Day, J. (2017). E-commerce adoption by SMEs in developing countries: Evidence from Indonesia. *Eurasian Business Review*, 7(1), 25–41. <https://doi.org/10.1007/s40821-016-0044-6>
- Riofita, H. (2024). Augmenting Islamic Digital Payment Effect on Muslim Customer Purchase Decision on Micro, Small and Medium Enterprises' (MSMEs) Products. *Journal of Islamic Monetary Economics and Finance*, 10(4), 735–758. <https://doi.org/10.21098/jimf.v10i4.1991>
- Riofita, H. (2025). How Shariah-compliant Digital Payments Influence Muslim Customer's Purchase Decision for Micro, Small and Medium Enterprises (MSMEs) Products Through Sharia Entrepreneurship Principles. *Journal of Islamic Accounting and Business Research*. <https://doi.org/10.1108/JIABR-06-2024-0202>
- Roffia, P., & Dabić, M. (2023). The role of management control and integrated information systems for the resilience of SMEs. *Review of Managerial Science*, 18(5), 1353–1375. <https://doi.org/10.1007/s11846-023-00657-6>
- Salah, O. H., & Ayyash, M. M. (2024a). E-commerce adoption by SMEs and its effect on marketing performance: An extended TOE framework with AI integration, innovation culture, and customer tech-savviness. *Journal of Open Innovation: Technology, Market, and Complexity*, 10(1), 100183. <https://doi.org/10.1016/j.joitmc.2023.100183>
- Salah, O. H., & Ayyash, M. M. (2024b). Journal of Open Innovation: Technology, Market, and Complexity E-commerce adoption by SMEs and its effect on marketing performance: An extended TOE framework with AI integration, innovation culture, and customer tech-savviness. *Journal of Open Innovation: Technology, Market, and Complexity*, 10(1), 100183. <https://doi.org/10.1016/j.joitmc.2023.100183>

- Salsabela, N., & Siregar, S. A. (2026). Pengaruh E-Commerce dan Penggunaan Sistem Informasi Akuntansi Terhadap Efektivitas Kinerja UMKM di Kota Medan. *Jurnal AKMAMI (Akuntansi, Manajemen, Ekonomi)*, 7(1), 1–10.
- Setyowati, A., & Anwar, M. K. (2022). Pengaruh Literasi Halal dan Religiusitas terhadap Minat Konsumsi Produk Halal Masyarakat Kabupaten Madiun. *Lisan Al-Hal: Jurnal Pengembangan Pemikiran dan Kebudayaan*, 16(1), 108–124. <https://doi.org/10.35316/lisanalhal>
- Sharabati, A. A. A., Ali, A. A. A., Allahham, M. I., Hussein, A. A., Alheet, A. F., & Mohammad, A. S. (2024). The Impact of Digital Marketing on the Performance of SMEs: An Analytical Study in Light of Modern Digital Transformations. *Sustainability*, 16(19), 1–25. <https://doi.org/10.3390/su16198667>
- Sitompul, P. S., Sari, M. M., Miranda, C., & Lumban, B. (2025). Transformasi Digital UMKM Indonesia: Tantangan dan Strategi Adaptasi di Era Ekonomi Digital. April.
- Srijani, N., Aisyah, S., Kadeni, & Hariani, L. S. (2023). The Sustainability of Sharia MSMEs in the Halal Industry of Indonesia: Funding, Protection, and Sharia Principles. *FUTURITY: Economics & Law*, 3(4), 32–47. <https://doi.org/10.57125/FEL.2023.12.25.03>
- Zhang, G. (2025). Cloud computing convergence: Integrating computer applications and information management for enhanced efficiency. *Frontiers in Big Data*. <https://doi.org/10.3389/fdata.2025.1508087>
- Zuhroh, D., Jermias, J., Ratnasari, S. L., Sriyono, Nurjanah, E., & Fahlevi, M. (2025). The impact of sharing economy platforms, management accounting systems, and demographic factors on financial performance: Exploring the role of formal and informal education in MSMEs. *Journal of Open Innovation: Technology, Market, and Complexity*, 11(1), 100447. <https://doi.org/10.1016/j.joitmc.2024.100447>