

The Role of Digitalization in Enhancing the Competitiveness of Halal MSMEs in Indonesia

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ABSTRACT

This study aims to analyze the level of digital technology utilization among halal MSMEs in Indonesia and the factors that influence the low adoption of certain digital platforms. This study uses a literature review method to analyze the role of digitalization in enhancing the competitiveness of halal MSMEs in Indonesia. The literature review process was carried out by exploring various scholarly sources such as national and international journals, conference proceedings, research articles, and official reports from government institutions. Based on survey findings, the use of digital technology among halal MSMEs shows considerable variation. Digital payment is the most widely used technology, with an adoption rate of 93%. This indicates that MSME actors have become increasingly accustomed to cashless transactions, in line with the digitalization programs promoted by Bank Indonesia and the Ministry of Cooperatives and SMEs in the post-pandemic period. Meanwhile, the utilization of marketplaces and social media shows the same percentage, namely 34%. These two channels serve as primary platforms for marketing halal products due to their ease of use, low cost, and broad market reach. On the other hand, the use of personal websites remains below 10%, and the utilization of the BPJPH SIHALAL system reaches only 5%. These low figures indicate that the digital literacy of MSMEs is still uneven, particularly for technologies that require higher technical skills or involve more complex administrative processes. These findings also reinforce government reports that highlight the need for enhanced digital assistance, particularly in the aspect of halal legality through the SIHALAL system. Overall, this study emphasizes the importance of more targeted assistance strategies so that halal MSMEs can optimally utilize digital technology to improve competitiveness and market access.

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1. INTRODUCTION

The current digital era has brought significant changes to almost all aspects of human life, including the world of business and entrepreneurship (Saladin & Faoziyah, 2024). The rapid development of information and communication technology has opened new opportunities for business actors, particularly micro, small, and medium enterprises (MSMEs), to enhance their competitiveness through digitalization (Amalia et al. 2023). The adoption of digital technologies such as e-commerce, social media, fintech services, and cloud-based applications enables MSMEs to reach wider markets, improve operational efficiency, and foster innovation in their business models. Nevertheless, the level of digital technology adoption among MSMEs still shows considerable variation, depending on their level of digital literacy, financial readiness, and the availability of supporting infrastructure in each region.

Technological advancements have profoundly influenced the dynamics of modern business. Business actors are now required to be more creative and innovative in order to survive in an increasingly competitive market, while also reducing operational costs without compromising business performance (Sundari, 2024). In this context, marketing strategies have become one of the key determinants of business success. Social media has emerged as a highly effective and efficient digital marketing tool, as it enables direct interaction between producers and consumers while offering wide market reach (Junita, 2024). The understanding and utilization of information technology therefore become essential for achieving business objectives optimally (Cavalcante et al., 2025).

From a macroeconomic perspective, Indonesia has shown considerable progress in its efforts to achieve equitable economic growth. Based on (Federatio, 2017) Released by the World Economic Forum (WEF), Indonesia ranks 22nd in the Inclusive Growth and Development Index. This achievement is driven by a declining poverty rate and an increase in national labor productivity. This improvement also reinforces the role of the MSME sector as the backbone of Indonesia's economy, particularly in promoting inclusive and sustainable economic growth.

Furthermore, in the context of the global economy, the halal industry has become a strategic sector with significant potential for national economic development. Countries such as Malaysia, Saudi Arabia, and the United Arab Emirates occupy the top positions in the Global Islamic Economy (GIE) Index, while Indonesia ranks fourth in the world (Iman Ali Liaqat., 2023). Indonesia's potential as a country with the largest Muslim population reaching 236.5 million people or 86.87% of the total population has become a strong foundation for the development of the national halal industry. This demographic condition also opens up wide market opportunities to strengthen the sharia-based economic ecosystem in Indonesia (Firdaus, 2025).

MSMEs have a strategic role in the development of the halal industry, because in addition to contributing significantly to the Gross Domestic Product (GDP), this sector also plays an important role in employment absorption. Based on data from the Ministry of Cooperatives and MSMEs in 2022, the number of MSMEs in Indonesia reached 64.2 million units with a contribution to GDP of 61.07%, equivalent to 8,573.89 trillion rupiah. In addition, MSMEs account for around 99.9% of the total business actors in Indonesi (Kementerian Koordinator Bidang Perekonomian Republik Indonesia, 2021). Therefore, strengthening digitally based MSMEs and halal products becomes a strategic step in realizing a resilient, inclusive, and globally competitive national economy.

2. LITERATURE REVIEW

2.1 Digital Transformation in the Halal MSME Sector

Digitalization has become one of the key determinants in the transformation of the MSME sector in various countries, including Indonesia. Various studies indicate that the utilization of digital technology can enhance business competitiveness, efficiency, and sustainability. In Indonesia, research (Adinugraha et al., 2024) explains that the digital economy offers significant opportunities for halal MSMEs to expand market access and improve supply chain efficiency through e-commerce platforms and digital financial services. Similar findings are also reinforced by (Riani et al., 2025), which emphasizes that the integration of technological innovation in the halal industry can improve the halal certification process and increase consumer trust through greater transparency. Digitalization has a positive impact on the effectiveness of the halal supply chain, particularly through the adoption of technologies such as blockchain and artificial intelligence (AI).

The digitalization of the halal MSME sector in Indonesia has become a strategic policy focus due to its significant economic potential. The government, through the Coordinating Ministry for Economic Affairs, has officially launched the 'UMKM Halal Go-Digital' program to enhance digital inclusion and strengthen the national halal value chain (ekon.go.id, 2021). In this program, training in digital marketing and halal product management is provided to thousands of MSMEs, in collaboration with government ministries/agencies, digital platforms (such as Tokopedia, Blibli, Bukalapak), and Halal Product Assurance Organizing Agency (BPJPH) to expand access to the halal digital ecosystem (ekon.go.id, 2021).

The adoption of technology is further strengthened through the integration of Islamic fintech into the halal value chain. The National Committee for Islamic Economy and Finance (KNEKS, 2022) states that Islamic fintech and digital payment systems can strengthen the halal ecosystem because they are able to provide digital financing and logistics for halal MSME players. For instance, the digitalization of the value chain using fintech technology will enable halal MSMEs to record transactions, inventory, and sales directly in digital form, thereby improving operational efficiency and business transparency (KNEKS, 2022).

From the perspective of halal supply chain technology, academic research highlights the adoption of blockchain and AI as key drivers of transformation. A study by (Kusuma et al., 2026) explains that the integration of blockchain and AI in the halal supply chain will enhance traceability, strengthen halal assurance, and accelerate the certification process. In addition, a systematic analysis of AI applications in halal product supply chain management found that AI can be used for predictive analytics, anomaly detection, and operational optimization, thereby strengthening consumer trust and the efficiency of halal certification (Julianti & Fatwanto, 2025).

The analysis results indicate that Indonesia has a very large halal economic potential, particularly due to its more than 60 million MSMEs and its position as the world's largest Muslim population, which provides a vast domestic market. Although Indonesia's digital halal ecosystem is not yet as structured as Malaysia's, various government initiatives such as the Halal Information System (SIHALAL), the digitalization of BPJPH services, and the acceleration of halal certification through the SEHATI program serve as initial steps toward building a national digital halal ecosystem (BPJPH, 2022). The main challenges for Indonesia still lie in the low digital literacy of some MSME actors, limited technology adoption, and the suboptimal integration of centralized halal digital platforms. Nevertheless, with consistent policy support, improved digital capacity among MSMEs, and strengthened collaboration between the

government, certification bodies, and halal e-commerce platforms, Indonesia has a strong opportunity to become a global leader in the digital halal industry. This potential will be even greater if digital transformation is carried out evenly across regional MSMEs, allowing the resulting economic impact to far exceed that of other countries with smaller halal markets.

From an international perspective, the global literature also highlights the role of digitalization strengthening the halal industry as a rapidly growing economic sector. Reports (Jiao et al., 2025) published reports (Jiao et al., 2025) show that the adoption of digital technologies such as big data analytics and the Internet of Things (IoT) plays an important role in enhancing the global traceability of halal products. (Rahman et al., 2024) also emphasize that the concept of halal is now increasingly accepted universally because it is associated with food safety, product quality, and ethical production processes. On the other hand, a global study by (Abdullah, 2020) notes that the growth of the halal industry is strongly influenced by the increasing demand from young Muslim consumers, who tend to be active in digital spaces and prioritize technology-based transactions.

Other literature also shows that digitalization not only supports increased competitiveness but also strengthens economic inclusion. According to (Federatio, 2017). The inclusive growth of a country is greatly influenced by the ability of the small business sector to leverage technology. In this regard, halal MSMEs are seen as having significant potential to expand their contribution to national economic development if they can optimally integrate digital technology. In Indonesia, several studies such as (Fauziah & Ardiansyah, 2025) as well as (Islam et al., 2024) emphasize that the use of social media, digital marketing, and Islamic financial platforms can enhance market access, strengthen branding, and enable halal MSMEs to compete globally. Thus, existing literature consistently shows that digitalization is a crucial pillar in developing a competitive halal MSME ecosystem, both in Indonesia and in the context of the global economy.

1.2 Growing Muslim Population

The global Muslim population continues to grow, becoming one of the main drivers of the expansion of the halal industry. According to a DinarStandard report, by 2023 the Muslim world had surpassed 2 billion people, equivalent to more than 25% of the global population (DinarStandard, 2023). This demographic growth creates a large and continuously expanding consumer base for halal products across various sectors such as food, fashion, and finance (ISEF, 2022). Moreover, according to (Hackett & Lipka, 2018), the Muslim population is also projected to reach 3 billion by 2060, reinforcing the long-term outlook for the halal market potential.

This large and continuously growing population presents significant opportunities for halal producers to increase production capacity, expand distribution, and create new Sharia-compliant products. Since Muslim consumers tend to pay attention to halal and ethical aspects, this population growth can also drive product innovation.

The growth of the global Muslim population has become a key driver of the halal market expansion. With digital technology, halal producers can reach Muslim consumers from various countries through Sharia-compliant e-commerce platforms and other digital services. Some literature notes that Sharia-based digital platforms not only facilitate transactions but also help educate Muslim consumers about halal products, which is important for a continuously growing market (Oktaviana, 2025).

The growth of the global Muslim population has become a major driver of the halal market expansion. With digital technology, halal producers can reach Muslim consumers across different countries through Sharia-compliant e-commerce platforms and other digital services. Some literature notes that Sharia-based digital platforms not only facilitate transactions but also help educate Muslim consumers about halal products, which is crucial for a continuously growing market (Fauziah & Ardiansyah, 2025). Furthermore, the digitalization of the Sharia economy also includes financial facilities such as QRIS and Sharia fintech, which make it easier for halal MSMEs to conduct transactions and manage financial records. For example, the digitalization of payments and ZISWAF (*zakat, infak, sadaqah, waqf*) through the QRIS system strengthens the digital halal economic ecosystem while also promoting Sharia financial inclusion (BI, 2023).

1.3 GDP Growth in Muslim-Majority Countries

Economic growth in Muslim-majority countries is another important factor. With rising per capita income, the purchasing power of Muslim consumers also increases, enabling them to consume beyond basic needs. In a study by (Abdullah, 2020), it is mentioned that the average per capita income in several Muslim countries has increased significantly, which directly boosts consumer spending on halal products.

At the national level in Indonesia, the Directorate General of Economic and Fiscal Strategy (Ministry of Finance) considers the halal economy as a source of inclusive and sustainable growth. They note that Indonesia's halal economic potential from exports and investment could strengthen the national GDP (Direktorat Jenderal Strategi Ekonomi Dan Fiskal - Ekonomi Halal Sebagai Sumber Pertumbuhan Inklusif Dan Berkelanjutan, 2023). Economic growth (GDP) in these Muslim countries not only opens up large domestic markets but also drives foreign investment into the halal industry, as global companies recognize the long-term economic value of a prosperous Muslim consumer base.

Digital transformation within the halal ecosystem not only expands the scale of MSME businesses but also contributes to the economic growth of Muslim countries through increased productivity and exports. In Indonesia, efforts to digitalize halal MSMEs are considered a strategic part of strengthening the national GDP by leveraging demographic advantages and the export potential of halal products (Kusuma et al., 2026). (KNEKS, 2022) Actively promoting financing for the halal industry through Sharia fintech to support the development of halal clusters in regions. This support can increase the production capacity of local halal MSMEs and the halal value chain ecosystem, strengthening the contribution of the halal economy to national growth. The availability of easily accessible digital financing for halal MSMEs can accelerate expansion and create a multiplier effect in the economy.

Furthermore, digital transformation in Indonesia's halal industrial zones demonstrates how technologies such as IoT, AI, and blockchain can strengthen the halal supply chain while improving production efficiency and transparency. A study in (Amalia & Maksum, 2025) highlights the importance of using IoT for real-time tracking and AI for data-driven decision-making, which can strengthen the competitiveness of the national halal industry.

1.4 Emergence of Halal Markets and Players

Halal market is also growing rapidly in non-Muslim countries (Hakim, 2024). IJIBE mentions that the halal market is no longer limited to Muslim-majority countries, but also attracts non-Muslim consumers who view halal as a symbol of quality, safety, and ethics in products (Abdullah, 2020). Not only consumers,

but major industry players have also become active: food giants such as Nestlé and Unilever have developed halal product lines to serve the global market (Widya Herminingsih, 2023).

According to a report by MarkNtel Advisors, the global halal food market is projected to grow rapidly to USD 5.24 trillion by 2030, driven by factors including the increasing Muslim population and consumer awareness of health and e-commerce (MarkNtel Advisors LLP, 2025). In addition, the emergence of Sharia fintech companies, halal tourism ecosystems, and halal lifestyle providers is further enriching the players in the global halal ecosystem, creating dynamic competition and innovation.

Digitalization creates a new base for halal players, both local and global. In Indonesia, halal MSMEs increasingly utilize Sharia-compliant e-commerce as their main marketing channel. Literature research by (Fauziah & Ardiansyah, 2025) Digitalization creates a new base for halal players, both local and global. In Indonesia, halal MSMEs increasingly utilize Sharia-compliant e-commerce as their main marketing channel. Literature research by.

Blockchain technology has also become an important tool for building trust within the halal ecosystem. Literature studies by (Rahmah, 2026) find that blockchain can provide immutable transaction records, verify the halal status of products, and enhance communication of halal product quality to consumers. In addition, blockchain-AI combined systems, as proposed by research (Julian et al., 2025) present a conceptual framework for a secure and transparent halal supply chain, which can attract the interest of both large and small players in the halal industry.

Collaboration between regulators, industry players, and digital technology is increasingly strengthened through educational and digital mentoring programs. A community service program conducted with halal MSMEs in Banjarnegara showed that e-commerce workshops (Shopee), digital business practices, and mentoring are highly effective in improving the digital skills of halal business actors.

1.5 Muslim Lifestyle Offerings

The concept of halal has now expanded significantly into the Muslim lifestyle: not only food and finance, but also modest fashion, halal tourism, cosmetics, Islamic media, and recreation. According to (DinarStandard, 2023), These sectors are an important part of the modern Islamic economy, with Muslim consumer spending being very significant in travel, fashion, and entertainment. Studies (Mejova et al., 2017) also show how halal identity is evolving on social media: halal-related posts on Instagram, covering food, beauty, and lifestyle, indicate that halal consumption has become embedded in the cultural and social expression of the younger generation. In Indonesia itself, awareness of the halal lifestyle is increasing, and various local sectors are beginning to respond: for example, halal cosmetics producers, Muslim fashion, and halal tourism are developing rapidly.

The halal lifestyle now goes beyond the food and finance sectors, extending to fashion, cosmetics, tourism, and Islamic media. In the digital context, Sharia-compliant e-commerce platforms have become an important channel for halal lifestyle products. For example, research in the journal (Fauziah & Ardiansyah, 2025) shows that halal MSMEs can expand their consumer reach through Sharia-compliant e-commerce applications, and highlights the importance of digital literacy so that business actors can utilize technologies such as AI and digital record-keeping.

Operationally, the integration of blockchain technology can enhance consumer trust in halal lifestyle products. A literature analysis in the journal (Kuncorosidi, Kuncorosidi, Maya Aditya, 2024) reveals that

blockchain in the halal supply chain can ensure the quality and authenticity of halal products, making consumers feel more secure when purchasing halal lifestyle products online.

At the local level, a case study of Shopee Barokah (a halal e-commerce platform) shows that digital methods are highly effective in expanding the market for halal lifestyle products. Research by (Oktaviana, 2025) states that halal e-commerce platforms like Shopee Barokah promote halal awareness while also providing broader market access, although religiosity and price remain key considerations for consumers.

3. METHODOLOGY

This study uses a literature review method to analyze the role of digitalization in enhancing the competitiveness of halal MSMEs in Indonesia. This method was chosen because it can compile, evaluate, and integrate various empirical findings and theories from previous research, providing a comprehensive overview of the development of digitalization and the halal MSME sector in Indonesia. This approach is highly relevant given the growing number of studies discussing digital transformation, halal certification, and strategies to improve MSME competitiveness within the national halal economic ecosystem. A literature review is also appropriate because the topics of digitalization and halal MSMEs have been widely explored in various studies, allowing the researcher to compare findings and draw stronger conclusions.

The literature review process was carried out by exploring various scholarly sources such as national and international journals, conference proceedings, research articles, and official reports from government institutions. The main literature sources came from publications by the Ministry of Cooperatives and MSMEs, Bank Indonesia, the Central Bureau of Statistics (BPS), the Ministry of Tourism and Creative Economy, as well as various scientific database platforms. In addition, supplementary references were obtained through platforms such as Google Scholar, DOAJ, and ScienceDirect.

The literature used generally spans the years 2020–2025 to ensure that the analysis remains relevant to the latest developments in digitalization and the halal industry in Indonesia. By using this time frame, the study can capture recent technological changes such as developments in e-commerce, social media, Sharia fintech, and the digitalization of government halal services. This literature review approach not only summarizes previous research findings but also critically synthesizes them to understand how digitalization contributes to strengthening the competitiveness of halal MSMEs in Indonesia. Thus, this study is able to provide a deeper understanding of the position of halal MSMEs in facing increasingly competitive halal industry competition at both the national and global levels.

4. RESULT AND DISCUSSION

4.1 Digitalization as the Main Factor of Competitiveness of Halal MSMEs

The research findings indicate that digitalization plays a highly significant role in enhancing the competitiveness of halal MSMEs in Indonesia. The use of digital technologies such as e-commerce, social media, Sharia fintech, and digital-based halal certification platforms can expand markets, improve operational efficiency, and strengthen the brand image of halal MSMEs. The study (Adinugraha et al., 2024) finds that halal MSMEs that have adopted digital platforms have broader market access, especially among urban Muslim consumers who actively use technology in their consumption process. Digitalization

has also been proven to improve supply chain efficiency through the implementation of information systems and cloud-based applications that support inventory management, financial record-keeping, and more structured production processes.

The following discussion reveals that digitalization plays an important role in strengthening the traceability aspect of halal products. Technologies such as blockchain and the Internet of Things (IoT) are beginning to be used in the halal supply chain to ensure the halal status of raw materials, production processes, and distribution. These findings are in line with global reports released by (ISEF, 2022), which emphasizes that digital technology has the potential to accelerate the halal certification process and enhance consumer trust through product information transparency. In Indonesia, efforts to harmonize halal standards through BPJPH are also being accelerated via a digital-based halal certification system, making it easier for MSMEs to apply for and renew halal certificates.

From a competitive perspective, digitalization also opens up significant opportunities for halal MSMEs to compete globally. The use of social media has been proven to have a significant impact on enhancing branding and marketing. (Fauziah & Ardiansyah, 2025) From a competitive perspective, digitalization also opens up significant opportunities for halal MSMEs to compete globally. The use of social media has been proven to have a significant impact on enhancing branding and marketing.

Overall, the results and discussion indicate that digitalization is a key element in strengthening the competitiveness of halal MSMEs through market expansion, supply chain efficiency, enhanced transparency of halal certification, and accelerated access to Sharia financing. The adoption of integrated digital technologies not only benefits the scale of MSME businesses but also supports the development of the national halal industry ecosystem more comprehensively.

One important aspect highlighted in various recent studies is the role of digital literacy as the foundation for the successful digital transformation of halal MSMEs. Although the adoption of digital technology continues to increase, many halal MSME actors still face challenges in understanding the use of more complex technologies, such as managing digital stores, marketing analytics, and using halal certification platforms. Reports (Kinerja & Komdigi, 2024) show that more than 60% of MSMEs do not possess intermediate-level digital literacy, causing them to tend to use digital platforms only at a basic level.

The development of digital technology has provided significant opportunities for halal MSMEs to increase business visibility, expand markets, and strengthen consumer trust. To understand the patterns of digital technology adoption by halal MSMEs, this study presents estimated data on the use of various relevant digital platforms, namely marketplaces, social media, digital payments, BPJPH's SIHALAL, and personal websites. This data is compiled based on national trends, government reports, MSME surveys, and recent literature from the 2020–2025 period.

The following diagram illustrates the percentage of usage for each category of digital platform by halal MSMEs in Indonesia:

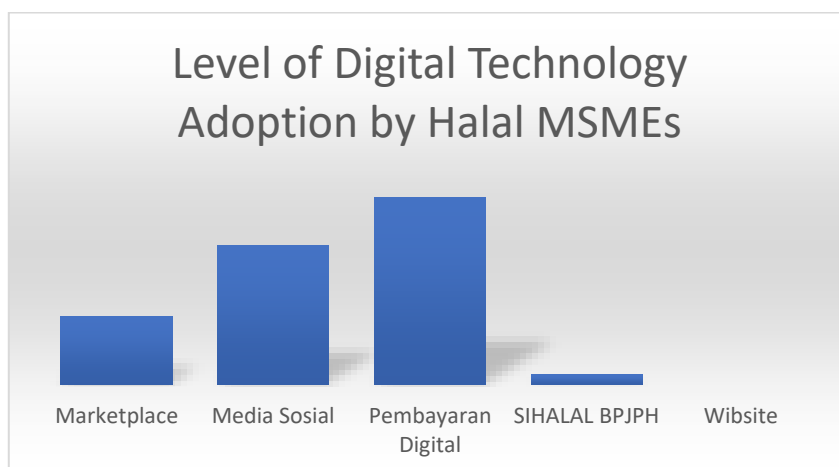


Fig.1. Level of Digital Technology adoption by Halal MSMEs

Source: Developed by Author

The figure 1 show that social media is the most widely used digital platform by halal MSMEs. This aligns with digital marketing trends that increasingly rely on visual content, interactive promotions, and community-based branding strategies. Platforms such as Instagram and TikTok are the primary choices because they are easy to use and have a wide audience reach.

Meanwhile, marketplaces such as Tokopedia and Shopee also show high adoption rates. This indicates that MSMEs are increasingly aware of the importance of sales channels that offer more stable logistics systems, transaction record-keeping, and security.

The use of digital payments reaches 65%, indicating that halal MSMEs have begun transitioning to faster, more efficient, and secure cashless transaction models. The high adoption of QRIS also aligns with Bank Indonesia's policy on accelerating national payment digitalization.

On the other hand, the usage level of BPJPH's SIHALAL remains moderate (40%). Although the halal certification system has been digitalized, many MSMEs have not fully understood its process flow or face challenges in accessing information.

The category with the lowest adoption is personal websites (25%). Halal MSMEs generally prefer platforms that are easier to use rather than building their own websites, which require additional costs, technical skills, and regular maintenance.

These findings align with (Riani et al., 2025) indicating that social media and marketplaces are the main digital channels driving the transformation of halal MSMEs in Indonesia. In addition, national literature also emphasizes that the adoption of digital payments has increased rapidly post-pandemic, in line with the MSME digitalization programs by Bank Indonesia and the Ministry of Cooperatives and SMEs.

The digitalization of halal MSMEs in Indonesia has shown a significant impact on financial capacity empowerment through Sharia fintech. A study by (Syaifullah et al., 2026) shows that Sharia fintech not only functions as a source of financing compliant with Islamic principles but also serves as a platform for education and mentoring within the halal ecosystem. They found that the dimensions of digital Sharia financing, ecosystem collaboration, and Sharia-related financial literacy directly support the

competitiveness of halal MSMEs in both local and global markets. The implementation of financial inclusion through digital means is also supported by national policies: (Rofik & Huda, 2025) states that the digitalization of the Sharia economy (“eksyar”) in various regions will strengthen the halal value chain and expand access to financing and cashless transactions through QRIS.

In addition, digital transformation not only improves access to capital but also contributes to the sustainability performance of halal MSMEs. Research (Widiarto & Indra, 2026) on Indonesian halal culinary MSMEs using the PLS-SEM model finds that halal literacy and understanding of the circular economy greatly influence the digital intentions and behaviors of MSME actors. These factors then have a positive impact on business performance, measured through the triple bottom line aspects (economic, social, environmental). These findings indicate that digitalization is not merely a tool for market expansion but also for building sustainable business practices, in line with Sharia principles that emphasize balance and social responsibility.

From the operational perspective of the halal supply chain, technology transformation in halal industrial zones is highly crucial. An exploratory study by (Amalia & Maksum, 2025) reveals several challenges such as infrastructure gaps between industrial zones, resistance to technology adoption, and lack of digital literacy. To address these issues, they recommend establishing public-private partnerships, providing digital training for halal MSMEs, and creating halal technology incubators that can support the integration of blockchain, IoT, and AI in the halal supply chain. These recommendations align with the need to create a halal ecosystem that is transparent, efficient, and innovative.

Furthermore, multi-stakeholder participation also strengthens the halal ecosystem through the triple helix synergy (government, industry, and academia). Research (Hariani et al., 2024) finds that the use of the triple-helix model in developing halal MSMEs can overcome barriers such as capital, halal certification, and technology adoption. This collaboration promotes halal product innovation, accelerates supply chain digitalization, and strengthens policies that support halal MSMEs in competing globally.

Finally, from a marketing and branding perspective, digital marketing has proven to be highly effective in building consumer awareness and trust in halal MSME products. Research by (Islam et al., 2024) using SWOT analysis shows that halal industry MSMEs have significant potential in digital marketing, particularly through social media and e-commerce platforms. However, they also identify weaknesses such as low understanding of digital strategies and threats from regulations that are not yet fully adaptive to digital innovation.

5. CONCLUSION

This study concludes that digitalization plays a very important role in enhancing the competitiveness of halal MSMEs in Indonesia. The utilization of digital technologies from e-commerce, social media, and Sharia fintech to supply chain technologies such as blockchain and IoT significantly improves market access, operational efficiency, and consumer trust in halal products. Digitalization helps MSMEs enter global markets, strengthen branding, and reduce production costs through more effective digital management systems.

Various studies show that the main obstacles in the digital transformation of halal MSMEs are low digital literacy, limited infrastructure, and suboptimal integration between halal platforms. Nevertheless, government efforts through digital halal certification systems, the strengthening of the Sharia economy, and triple-helix collaboration have proven capable of accelerating technology adoption and enhancing the competitiveness of halal MSMEs.

In addition, digitalization supports the acceleration of halal certification, enhances product traceability, and strengthens Sharia-compliant business governance. Comparisons with Malaysia show that Indonesia's digital halal ecosystem still needs to be strengthened, particularly in terms of digital literacy, infrastructure, and cross-sector policy integration. However, the large number of MSMEs and the dominance of the Muslim population give Indonesia great potential to become a global halal industry hub if the digitalization process can be optimized more evenly and sustainably.

Thus, digitalization is not merely a supporting tool but has become a key strategy in developing resilient and competitive halal MSMEs that can make a significant contribution to the national economy. With strong collaboration between the government, MSMEs, academia, and the private sector, Indonesia has great potential to become a global leader in the digital halal industry. Further research is recommended to empirically analyze the effectiveness of government digitalization programs and to evaluate the digital readiness of halal MSMEs across various regions in Indonesia.

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7. CONFLICT OF INTEREST STATEMENT

The authors agree that this research was conducted in the absence of any self-benefits, commercial or financial conflicts and declare the absence of conflicting interests with the funders.

8. AUTHORS' CONTRIBUTIONS

Nurul Hidayah conducted the research and wrote the article, conceptualised the main research idea, and developed the theoretical framework. Zulfikar conducted supervision, writing- review and validation.

9. DECLARATION OF GENERATIVE AI IN THE WRITING PROCESS

During the preparation of this work, the author(s) used Grammarly to improve the grammar, clarity, and readability of the manuscript. After using this service, the author(s) reviewed and edited the content as needed and take full responsibility for the content of the publication

10. DATA AVAILABILITY/SUPPLEMENTARY MATERIALS

All data generated or analysed during this study are included in this published article.

11. ETHICS STATEMENT

I testify that our submitted article followed ethical principle and obtained Research ethic approval from the Research Ethics Committee.

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