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## **CONTEMPORARY ISLAMIC ECONOMIC TRENDS: THE HALAL INDUSTRY AMIDST THE DIGITALIZATION WAVE IN INDONESIA**

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### **Abstract**

This study explores the intersection of digitalization and the rapid expansion of the halal industry in Indonesia, a country with the largest Muslim population globally. The main problem addressed is how digital transformation reshapes market dynamics, consumer behavior, and operational strategies within the halal sector. The objective is to analyze the impact of digital technologies, such as e-commerce, blockchain, artificial intelligence, and fintech, on the halal industry's development, efficiency, and competitiveness. Using a qualitative approach through library research, this study draws from academic literature, global reports, and Indonesian regulatory frameworks. The findings reveal that digitalization significantly enhances the reach, transparency, and innovation capacity of the halal industry, but also presents challenges, particularly for small and medium-sized enterprises (SMEs) in terms of cost, technology adoption, and human resource readiness. This research contributes valuable insights into how the halal industry can strategically leverage technology to maintain Sharia compliance while meeting modern consumer expectations in an increasingly digital global economy.

**Keywords:** Contemporary, Islamic economic, halal industry, digitalization, Indonesia.

### **1. INTRODUCTION**

The Islamic economy has grown rapidly in recent decades, becoming an important sector in many countries, both Muslim and non-Muslim (Jaelani et al., 2021). A critical aspect of the Islamic economy is the halal industry, which covers various sectors, from food and beverages, cosmetics, and pharmaceuticals to tourism and finance. With the increasing awareness of global Muslim consumers of the importance of products and services that comply with Sharia principles, the demand for halal products continues to grow (Nugroho et al., 2023).

The growth of the halal industry is getting stronger along with the emergence of globalization and digitalization trends. Digital technology, such as e-commerce, social media platforms, and digital payments, has made it easier for consumers to access halal products and encouraged businesses to expand their markets (Nugroho et al., 2023). This trend is reinforced by the

increasing number of consumers who use technology to purchase products, search for information about halal status, and compare products available in the market. Amid this digital transformation, companies in the halal industry must continue to innovate to remain relevant and competitive in the global market (Adinugraha & Shulthoni, 2024).

The halal industry is not just a matter of religious compliance, but also reflects broader principles such as ethics, sustainability, and social welfare. In various parts of the world, halal products are starting to be adopted by non-Muslim consumers as they see these products as healthier, ethical, and safer options. Thus, the halal industry has excellent potential to grow further, not only as a regional phenomenon, but also as an integral part of the global market. This underlines the relevance of research on how digitalization trends influence the development of the halal industry in this modern era (Afendi, 2020).

While there is a wealth of literature discussing Islamic economics and the halal industry, there are still some research gaps, especially regarding the impact of digital transformation on the sector. Most existing studies focus on halal regulatory aspects, market challenges, and consumer preferences. However, in-depth studies on how digitalization explicitly influences the halal market dynamics, including changes in consumer behavior, technological innovations in the halal supply chain, and the opportunities and challenges faced by small and medium enterprises (SMEs) in the sector are still limited (Lin & Xu, 2024).

Existing literature often focuses on Muslim-majority countries, while the halal market is also growing rapidly in non-Muslim countries, such as Japan, South Korea, the United States, and European countries (Rachmiate et al., 2022). Amidst the digitalization that makes halal products more accessible to global consumers, research exploring the halal industry's development in non-Muslim countries and its impact on the global economy is also urgently needed (Putra Pratama, 2022). This gap provides space for research to explore further how digitalization plays a role in expanding the halal market globally, and how the industry can leverage technology to increase efficiency and competitiveness.

Amidst the rapid flow of global digitalization, the halal industry faces various new challenges that must be identified and answered through research (Yuspin & Fauzie, 2023). One of the main issues that emerges is how halal industry players, especially SMEs, can adapt quickly to the ever-evolving digital technology. These changes include digitalizing the sales process through e-commerce, integrating technology in the supply chain, such as blockchain for halal certification tracking, and using artificial intelligence for consumer preference analysis (Khan & Callanan, 2017).

The halal industry has faced challenges related to consumer trust in the halal status of a product in the digital era. While technology can help improve transparency and accountability, concerns remain regarding the validity of halal certification and the authenticity of products sold online (Yuli & Wojtyla, 2020). This raises the need to develop a more modern and reliable certification system that can adapt to the digital environment. Another issue that has emerged is how non-Muslim countries, which are now beginning to see the economic potential of the halal market, can build an ecosystem that supports the growth of the halal industry. This includes challenges in regulation, cultural understanding, and adapting technology to suit the needs of global Muslim consumers. Therefore, this study seeks to identify these challenges and offer relevant solutions through an in-depth analysis of digitalization trends in the halal industry (Sulistiawati et al., 2024).

This study uses several theoretical frameworks to support its analysis, including Islamic economics, innovation, and technology diffusion theories. Islamic economic theory will be the basis for understanding the principles underlying the halal industry, such as the concepts of halal and haram and the ethical values that industry players must adhere to. These principles

will be combined with the theory of innovation and technology diffusion, which can explain how digital technology is adopted and applied in the halal industry.

Everett Rogers's theory of technology diffusion explains how society accepts innovation. In the context of the halal industry, this theory will analyze how business actors in this sector, both in Muslim and non-Muslim countries, adopt digital technology in their operations. Using this approach, the study can provide a clearer picture of the dynamics of technology adoption in the halal industry and the factors that drive or hinder the process (Fulk et al., 1988).

Previous studies have explored specific aspects of the halal industry and digitalization. A study by Jaelani et al. (2021) highlighted the potential of the halal industry in the global market, emphasizing the importance of innovation and technology to maximize this potential. Meanwhile, a study by George (2021) discussed the dynamics of the halal industry in non-Muslim countries, focusing on the cultural and regulatory challenges faced in marketing halal products. Another relevant study is the study by Windasari et al. (2024) which explored the factors influencing consumer preferences for halal products, including aspects of trust and security. This study emphasized the importance of trusted halal certification and the role of digitalization in increasing transparency in the halal product production and distribution process. However, these studies have not specifically discussed digital integration in the halal industry and its impact on market competitiveness.

The urgency of this research lies in the rapid development of digital technology that has changed the global economic landscape, including the halal industry. With digitalization spreading to various aspects of the economy, from production to distribution, companies in the halal sector must be able to adapt to these changes to remain competitive. In addition, developing the halal industry in non-Muslim countries also requires a deeper understanding of digitalization's role in supporting this market's growth (Yaqin et al., 2021). This research is fundamental to provide new insights into how digital technology can be utilized to overcome the challenges faced by the halal industry, both in terms of operational efficiency and consumer trust. This research also seeks to provide practical recommendations for industry players and policymakers to develop the right strategies to support the growth of the halal industry in the digital era.

This study aims to fill the gap in the existing literature by examining the impact of digitalization on the halal industry and offering solutions to the sector's challenges in adopting new technologies. Using Islamic economic and technology diffusion theories, it will analyze how digitalization affects the halal industry's supply chain, consumer behavior, and market dynamics. This study's results are expected to contribute significantly to the development of the global halal industry, especially in the context of rapidly growing digitalization.

## 2. METHOD

This study uses a qualitative approach with a library research method to analyze contemporary Islamic economic trends, especially the halal industry in the digitalization flow in Indonesia. Library studies were chosen to explore relevant literature, including scientific journals, books, halal industry reports, and regulations related to digitalization and the Sharia economy. The data sources used came from academic publications, global halal industry reports such as the State of the Global Islamic Economy Report, and Indonesian government policies related to the halal sector and digital economy. Data were analyzed using content analysis techniques to identify patterns, relationships, and implications of digitalization on the development of the halal industry.

The approach of Islamic economic theory and innovation diffusion theory is used as a conceptual framework. Islamic economic theory provides a basis for understanding the halal

principle in Islamic economics. In contrast, innovation diffusion theory helps explain the adoption of digital technology in the halal industry, including e-commerce, Islamic fintech, and blockchain in halal certification. This study aims to provide a comprehensive understanding of the transformation of the halal industry in the digital era and the challenges and opportunities faced. The study results are expected to be a reference for academics, regulators, and business actors in optimizing Indonesia's digitalization of the halal industry.

### 3. RESULT AND DISCUSSION

#### Islamic Economics in the Digital Age

Islamic economics is an economic system based on Islamic values, focusing on Sharia principles in all aspects of economic activity, whether in production, distribution, or consumption. Islamic economics prioritizes social justice, the common good, and the prohibition of harmful practices such as usury (interest), gharar (uncertainty), and maysir (gambling). The basic principles of Islamic economics include: a) Justice (al-'adl): All aspects of the economy must run fairly, where no party is harmed or benefited excessively. This justice is reflected in the prohibition of usury and speculative transactions; b) Cooperation and Brotherhood (ta'awun wa ukhuwah): Every individual in the Islamic economy is expected to help and support each other in business and social relations. This can be seen in applying zakat, infaq, and waqf as a form of wealth redistribution for common welfare; c) Social Responsibility (maslahah): Every economic activity should benefit society and the environment. This emphasizes that business is not just for profit but also plays a role in creating public welfare; d) Prohibition of Usury: Usury is the additional amount withdrawn from a money loan or credit transaction, and in Islamic economics, this practice is strictly prohibited as it is considered as exploitation and harms the weaker party; e) Conditional Ownership (milkiyah mutlaqah wa muqayyadah): In Islam, all property belongs to Allah and humans are only given the mandate to manage the wealth by the provisions of Sharia (Disemadi et al., 2024).

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These principles are designed to balance society's economic life and avoid exploitation that could harm one party. In addition, Islamic economics also emphasizes the principles of social justice and collective responsibility to ensure that wealth is not concentrated in the hands of a few, but rather spread evenly. In the context of the digital era, these principles remain relevant and have even undergone various transformations to adapt to the times. Technology has opened up new opportunities for the development of Islamic economics, especially regarding transparency, accountability, and efficiency in managing economic resources. However, the challenges in maintaining compliance with Sharia principles are also increasingly complex, especially with the emergence of modern financial instruments and digital innovations that are not yet fully regulated under the existing Sharia framework (Yusuf et al., 2021).

Digitalization poses new challenges for applying Islamic economic principles, but it also opens up great opportunities for expanding its reach globally. The development of adaptive Sharia regulations and institutions plays an essential role in maintaining the integrity of the Islamic economic system in the digital era (Vărzaru et al., 2022).

Indonesia, as the country with the largest Muslim population in the world, has taken significant steps in leveraging digitalization to drive the growth of the Islamic economy (Santoso et al., 2021). One of the initiatives taken is the development of an Islamic fintech ecosystem through collaboration between the government, Islamic financial institutions, and technology startups. Digital platforms such as halal e-commerce and Sharia fintech have now become the first choice for many Muslims in Indonesia. The Financial Services Authority (OJK) and Bank Indonesia have also issued various regulations to support the growth of this industry, including

supervision of Sharia compliance and consumer protection. Indonesia's success in leveraging digitalization to develop the Islamic economy can serve as a model for other countries looking to integrate technology into their Islamic economic systems (Reza & Tinggogoy, 2023).

Digitalization in the Islamic economy is a journey filled with opportunities and challenges. With proper management, digital technology can effectively expand the Islamic economy's reach and ensure that Sharia principles remain relevant in the modern era (Sulistiawati et al., 2024).

### **The Global Halal Industry and Its Development**

The halal industry is a sector that focuses on the production and distribution of goods and services that meet Islamic Sharia standards (Syahlani et al., 2024). Halal comes from the Arabic word meaning "permissible" or "justified", and in the context of the industry, the term is used to refer to products or services that comply with Sharia provisions, specifically related to food, beverages, cosmetics, pharmaceuticals, tourism, and other sectors. The halal industry is concerned with the ritual aspects of religion, quality, hygiene, and ethics in production and distribution. Halal principles encourage using clean, safe, and beneficial raw materials and production processes that pay attention to environmental and animal welfare (Supriyatno et al., 2021).

The halal industry has several standards to ensure that the production and distribution process complies with Sharia law. Some essential principles in the halal industry standards are: a) Cleanliness (thoyyib): Halal products must be produced under clean conditions and not contaminated with haram (prohibited) ingredients; b) Halal Raw Materials: All ingredients used in products, especially food and cosmetics, must come from halal sources, such as animals slaughtered according to Sharia or harmless plants; c) Halal Production Process: The methods and tools used in production must also be free from contamination of haram elements, such as pork or alcohol; d) Halal Certification: Halal certification agencies in various countries are responsible for ensuring that products on the market comply with halal standards. In Indonesia, halal certification is issued by the Food, Drug, and Cosmetic Assessment Institute of the Indonesian Ulema Council (LPPOM MUI), while in other countries, there are institutions such as JAKIM in Malaysia and the Halal Monitoring Committee in the UK (Hasan, 2021).

Halal industry standards are recognized in Muslim countries and adopted by some non-Muslim countries with significant Muslim populations. Many multinational companies now produce halal products to penetrate a broader global market (Waarden & Dalen, 2010). In the era of globalization, halal standards play an essential role in the international industry, as Muslim consumers around the world are increasingly demanding products that comply with Sharia principles. In addition, non-Muslim consumers are also beginning to recognize the benefits of halal products, such as higher hygiene standards and better production ethics. Diverse global markets, especially in non-Muslim countries, increasingly recognize that halal standards are not just a religious issue, but also standards that ensure product safety, quality, and sustainability. In this sense, halal products are seen as a symbol of integrity and high ethics in business (Mofokeng, 2021).

The growth of the global halal market has been rapid in recent decades. The halal industry is no longer limited to Muslim-majority countries, but has become a global phenomenon spanning a wide range of sectors. Here are some key trends that illustrate the growth of the halal industry in the international market. According to the State of the Global Islamic Economy report published by Thomson Reuters and DinarStandard, the world's Muslim population in 2023 is expected to reach around 1.9 billion people, or about 24% of the global population. This Muslim population is predicted to continue to grow, and in line with the increase in purchasing power, the need for halal products and services will also increase significantly. In 2020, Muslims'



global spending on food products, cosmetics, pharmaceuticals, tourism, and other sectors is estimated to reach USD 2.02 trillion. This figure is predicted to increase to USD 3.2 trillion by 2024, reflecting the high demand for halal products in the global market (Badi'ah et al., 2024).

Food and beverages are among the most dominant sectors in the halal industry. According to the Global Islamic Economy Report, the halal food sector alone was worth around USD 1.3 trillion in 2021 and is expected to grow significantly in the next few years. The demand for halal food comes not only from Muslim-majority countries but also from non-Muslim countries such as the United States, China, and European countries, where the Muslim population continues to grow (Afifi, 2024).

The growth of the global halal market reflects the changing preferences of Muslim consumers who are increasingly paying attention to religious values in choosing products and services. With the support of digital technology, the halal industry has excellent potential to continue to grow and reach a broader market worldwide (Asfia et al., 2022).

The social and technological changes taking place in the modern world have had a significant impact on the halal industry. With the increasing number of Muslim middle class in various countries, Muslim lifestyles are undergoing substantial changes. Muslim consumers are now more aware of the importance of halal products in food, cosmetics, clothing, and other services. This has created a new demand for high-quality and innovative halal products. Digital technology has changed the way Muslim consumers shop and access halal products. E-commerce is becoming one of the leading platforms for Muslim consumers to purchase halal products, especially in countries that do not have direct access to the halal market. It also makes it easier for halal producers to reach the global market without geographical restrictions. With blockchain technology, halal certification has become more transparent and accountable. Blockchain allows every step in the supply chain of halal products to be recorded and verified, so consumers can rest assured that their products are truly halal. In addition, this technology also helps prevent falsification of halal certifications. Modern consumers, including Muslims, are increasingly aware of the importance of environmentally friendly and ethical products. Halal products produced sustainably, paying attention to environmental aspects, are becoming increasingly desirable (Tatsuya Fujiwara, 2022). This encourages halal manufacturers to focus on Sharia, sustainability, and social responsibility.

### Digitalization in Halal Industry Development

The Industrial Revolution 4.0 has significantly transformed various economic sectors, including the halal industry. The term refers to applying advanced technologies such as the Internet of Things (IoT), artificial intelligence (AI), big data, robotics, and blockchain in production, distribution, and consumption processes. For the halal industry, applying these technologies has great potential to accelerate growth, expand markets, and increase transparency and consumer confidence (Reza & Tinggogoy, 2023).

The Internet of Things (IoT) enables better connections between devices throughout the supply chain of the halal industry, from the production of raw materials to the distribution of final products to the hands of consumers. In the context of the halal food industry, for example, IoT technology can monitor the quality of raw materials in real-time, ensuring that products continue to meet halal standards throughout the production and distribution process. For example, temperature and storage conditions can be digitally monitored to ensure that halal food products are not contaminated. Artificial intelligence (AI) is also increasingly vital in the halal industry. In Islamic banking, AI is used for more accurate data analysis and automating financial processes according to Sharia principles. For example, AI applications in Islamic

financial services can assist in faster and more precise risk analysis and decision-making based on consumer data, allowing Islamic banks to offer more personalized and efficient products and services (Sulistiawati et al., 2024).

Blockchain has been touted as one of the most promising technologies in improving transparency and integrity in the halal industry, especially regarding halal certification. Using blockchain, every halal product production and distribution step can be securely recorded and tracked. This allows consumers to verify that the products they buy are truly halal, as the entire supply chain of such products is transparent and verifiable. In terms of halal certification, blockchain technology can help address the issue of certificate forgery and speed up the audit process. For example, a company that produces halal food can store information about the origin of raw materials, production processes, and distribution in an immutable blockchain network. This gives consumers more confidence that the products they buy have gone through all stages according to Islamic law (Bisht et al., 2022).

Big data technology allows companies in the halal industry to analyze consumer behavior more deeply. With accurate data analysis, companies can determine consumer preferences, market trends, and emerging consumption patterns. This is especially important for halal companies looking to expand their market to a global level (Suyanto, 2023). For example, big data analysis can provide insights into countries with growing demand for halal products so that companies can target their marketing more precisely. In addition, big data also helps understand the specific needs of particular consumer segments, such as millennial Muslims or generation Z, who have different preferences regarding the halal products they consume.

In the manufacturing sector, automation and robotics technologies offer higher efficiency in the halal production process. Robotics can replace human labor in some aspects of production, thus ensuring a more precise and consistent process (Mukred et al., 2024). For example, in the halal food industry, robotics can assist in the process of slaughtering animals that must be done by Shariah, using systems that have been programmed to adhere strictly to halal procedures. Automation can also help increase production capacity more quickly and efficiently, allowing manufacturers to meet the growing demand from the global halal market. This is important as the demand for halal products grows significantly, especially in countries with large Muslim populations.

While Industry 4.0 technologies offer many opportunities for the halal industry, some challenges must be overcome. One of them is the investment required to adopt these new technologies (Ali et al., 2021). Many small and medium-sized companies may find it difficult to allocate funds to adopt technologies such as IoT, blockchain, or AI, due to the high costs and lack of understanding of the long-term benefits. Technology adoption also requires human resources to be skilled in using the technology. Many companies in the halal industry still do not have a sufficiently trained workforce in using advanced technologies, so they may face difficulties in harnessing the full potential of Industry 4.0 technologies (Harsanto et al., 2024).

The era of digitalization has opened up new opportunities for the halal industry to develop faster and broadly (Sunardi et al., 2021). Digital technology allows the halal sector to more easily reach consumers in different parts of the world, improve production efficiency, and offer products and services that align with modern consumers' needs. Digitalization allows halal companies to expand their market to countries that may have previously been difficult to reach. Through global e-commerce platforms, companies can offer halal products to consumers in different countries without opening physical branches. This opens up great opportunities for halal producers from developing countries to compete in the global market. Technology also enables innovation in the development of more diverse halal products. For example, biotechnology can be used in the food industry to create more sustainable halal meat

alternatives, such as plant-based meat. Such innovations not only meet the demands of Muslim consumers but also attract non-Muslim consumers who are concerned about environmental and sustainability issues.

Islamic fintech has the potential to make Islamic financial services more inclusive and accessible to more people. By using digital financial applications, people who do not have access to conventional banking can easily access Islamic financing, investment, and savings services. This helps improve financial inclusion in Muslim countries and enables Islamic financial services to reach Muslim communities in non-Muslim countries. In the future, regulators and governments in various countries should play a more proactive role in supporting the digitalization of the halal industry. This includes developing regulations supporting technological innovation in halal production and certification, as well as consumer protection in the digital ecosystem (Shuib et al., 2024).

Innovation in the halal sector is not limited to digitizing services but also to developing new products that comply with Sharia and Islamic values. This innovation is increasingly important in response to the evolving needs of consumers, especially among the younger generation, who are looking for products that are not only halal but also ethical, environmentally friendly, and of high quality (Trimulato et al., 2022).

The halal industry is currently in the midst of an innovation revolution, not only limited to Sharia-based product development but also to creating new products that blend halal principles with trends in health, sustainability and modern lifestyles. This innovation occurs across key sectors, including food, pharmaceuticals and cosmetics. Modern technology, higher consumer awareness of quality, as well as changing consumer preferences have encouraged companies to continue to innovate in creating halal products that are better and more in line with market needs.

#### 4. CONCLUSION

The study confirms that digitalization transforms the halal industry, enhancing operational transparency, expanding market access, and driving innovation across sectors such as food, finance, tourism, and cosmetics. Technologies like blockchain and AI improve consumer trust and operational efficiency, while e-commerce and Islamic fintech increase the inclusivity and accessibility of halal products and services. However, challenges remain, especially for SMEs in adopting and integrating these technologies due to limited resources and skills.

Recommendations include the need for: a) Stronger government and institutional support to facilitate technological adoption; b) Development of digital infrastructure and training for halal industry stakeholders; c) Regulatory frameworks that adapt to technological innovations while ensuring Sharia compliance; d) International collaboration to harmonize global halal standards in a digital context. This research emphasizes the urgency for a proactive and innovative approach in shaping a robust digital halal ecosystem capable of competing globally while staying rooted in Islamic economic values.

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