

## Research Article

# Challenges of the Halal Food Industry in Era 5.0 Perspective of Science and Islamic Law

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**Abstract.**

The halal industry continues to grow in various parts of the world, including Indonesia. It is currently one of the most potential economic sectors. However, despite having very good prospects, the halal industry also faces several challenges in the 5.0 era, especially in the fields of science and Islamic laws. For this reason, this research was conducted to reveal the challenges of the halal industry in Indonesia. The research method used is library research whose sources are from the Quran, hadiths, books, laws and regulations, and scientific articles. The research reveals that in terms of science, the challenges include the supply chain, and raw materials used in the production process. In addition, raw materials that were originally halal but due to a lack of public understanding, the final product becomes haram, either due to the slaughtering process or other processes. The next challenge is the use of food and beverage names, equipment, storage tools, and digital business processes. Meanwhile, from the Islamic law perspective, all processes in the halal industry must be by Islamic values found in the Quran, hadith, and the opinions of scholars. In addition, the next challenge is to develop modern halal fiqh that reaches aspects of artificial intelligence 5.0.

**Keywords:** halal food industry, science, Islamic law, Era 5.0

## 1. Introduction

The halal industry has huge prospects as well as challenges in the 5.0 era. This is because the halal industry is currently being loved by countries around the world. The large number of the world's Muslim population which reaches one-third of the world's population and the growing needs of the millennial Muslim generation are the reasons countries in the world are starting to expand into the halal industry market. Not only countries with a majority Muslim population, but Muslim minority countries have also taken part in the development of this industry.

This development is a sign that the halal industry market has great potential in supporting increased world economic growth. Likewise, Indonesia is a country with the largest Muslim population in the world. This can be a good potential for Indonesia

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in developing halal-based industries. Halal, he said, is not only limited to the food and beverage sector, but can also be developed in the fields of services, products, and health. Products with clear halal certification not only provide a sense of security for the Muslim population but also the non-Muslim population. Unfortunately, this good potential has not been utilized by the Indonesian people, so currently there is more halal product monitoring consultants from other countries. However, the government then has several quick steps in responding to the halal industry by giving birth to new regulations and bodies to promote the country's halal industry.

The halal industry is a term used to describe activities that start from obtaining raw materials and managing, to producing halal products using resources and methods permitted by Islamic law. Law Number 33 of 2014 concerning halal product guarantees explained products are defined as goods and or services related to food, beverages, drugs, cosmetics, chemical products, biological products, genetically modified products, as well as goods used, used, or utilized by the public. As for halal ingredients, ingredients derived from animals are halal except those that are forbidden according to Sharia, including carrion, blood, pork, and or animals slaughtered not by Sharia.

While materials derived from plants are halal, except those that are intoxicating and or endanger the health of people who consume them. Materials derived from microbes and materials produced through (chemical processes, biological processes, or genetic engineering processes are prohibited if the growth and/or manufacturing process is mixed, contained, and/or contaminated with prohibited materials. In the halal certification process, LPPOM MUI and other accredited Halal Examining Institutions (LPH) have the authority to carry out the checking process. While the Ministry of Religion has the administration, supervision, and enforcement.

Meanwhile, the Halal Product Guarantee Organization or BPJPH carries out halal registration, certification, and halal inspection, as well as fostering and supervising the halalness of a product and cooperation with all relevant stakeholders and setting halal standards for a product. Meanwhile, the Indonesian Ulema Council (MUI) ultimately determines the halalness of the product by issuing a decision to determine the halalness of a product. However, there are still many obstacles faced by the Indonesian people in developing the halal industry, especially in the fields of science and Islamic law, such as the supply chain of halal materials. Because in industrial activities the problem that must be considered is the raw material used in the production process.

The next challenge is that the product names used must not use the names of haraam food or drink. In addition, the process of processing halal beverage or food products also pays attention to the place of storage, the tools used and contamination of unclean

or haram objects is also one of the specific criteria that must be considered by business activities and others. All processes in the halal industry in Indonesia era 5.0 must comply with Islamic law.

## 2. Methods

This type of research is literature. Library research is a method of collecting various library data. Data collection techniques are carried out using secondary data, namely the Koran, hadiths, books, laws and regulations, and scientific articles.

## 3. Results and Discussion

### 3.1. Concept and Prospects of the Indonesian Halal Industry

The word halal comes from Arabic, namely halla, hillan, yahillu, and wahalalan which means allowed or permitted by sharia law. With this meaning, the halal industry has the concept of production of industrial products that must comply with Sharia law (permitted in Islam). Based on the concept of sharia, anything consumed by Muslims, both food and non-food, must come from halal sources. In Indonesia, the purpose of the halal industry is that the State must provide protection and guarantees about the halal status of a product (Mohammad & Backhouse, 2014).

Halal labeling of industrial products has an important role in seeing the quality of a product, because halal reflects the goodness of the intrinsic value, both of the process and the result of the goods or services produced. The context of halal is not only limited to consumption but also the entire production process and services, which are connected to the supply chain. The halal industry should cover all lines of operations, including packaging, marketing, manufacturing, logistics, supply, maintenance, slaughter, and various activities.

The halal industry has tremendous business prospects today. This is because halal is a necessity for Muslim communities in the world and can be a contributor and catalyst for various value propositions in global economic recovery. The development of the global market for halal products with the number of halal MSME players has contributed to the national halal economic GDP which reaches US \$ 3.8 billion / year. Opportunities for increased demand for the halal industry in the world due to the increase in the world's Muslim population. It is projected that the total world Muslim population will increase from 1.6 billion people in 2010 to 2.2 people in 2030.

Halal consumption has become a lifestyle and culture of Muslim communities in various parts of the world. This is done because it fulfills the demands of religious law which sees the aspect of hygiene as the fulfillment of Islamic law. Muslims will not only finish with fulfilling their primary needs. But will continue to look for ways to meet other needs, namely the need for expression and the need to fulfill spirituality. The halal lifestyle is characterized by the increasing halal awareness of the community (not just Muslims). The phenomenon of consumers choosing halal food, wearing Muslimah clothes, recreating to Muslim-friendly destinations, or transacting using sharia products is unavoidable. The halal lifestyle is based on the realization that halal is not only because of religious orders but is good and useful for life.

The development of the halal industry in Indonesia is inseparable from the structural shift from the agrarian to the industrial sector where this sector is believed to be able to significantly improve the country's economy. Indonesia is also a country that has abundant natural resources, so the supply of food ingredients tends to be very easy and cheap to obtain. In addition, the high Muslim population makes this country a high demand for food. The high Muslim population is also accompanied by an increasing awareness of consuming halal food

### **3.2. Ecosystem Strengthening the Halal Industry in Indonesia**

The halal industry in Indonesia has a fairly good ecosystem. The ecosystem is a comprehensive and intact order of unity that mutually influences all elements of the environment [1]. The halal industry ecosystem can be interpreted as an environmental condition that affects the dynamics of the development and growth rate of the halal industry, which includes guidelines, controls, arrangements, governance procedures, stakeholder character, and regulations. The halal industry ecosystem is also interpreted as a set of institutional and organizational arrangements, policies, processes, procedures, regulations, and laws that direct organizations or companies in the halal industry towards sharia compliance [1]

In addition to these several components, the halal industry ecosystem is influenced by the demographic development of Muslims, the lifestyle of people who are driven by Sharia principles that prioritize goodness and avoid ugliness, the growth of Sharia-based trade, the development of halal industry players, regulatory developments that can provide strong opportunities for the growth of supply and demand for the halal industry and the development of information technology, including Financial Technology or Fintech.

The halal industrial ecosystem is said to be a logistical instrument so that the environment that determines the success of the halal industry can increase its competitiveness. A good ecosystem must be able to change comparative advantage to competitive advantage. Comparative advantage is an advantage that is only based on resource ownership (for example, Muslim demographic bonuses and natural resource wealth), but lacks innovation and increased value added. Meanwhile, competitive advantage is an advantage that can increase added value based on innovation and technology, as well as human resource excellence. In this context, the halal industry ecosystem is said to be an institutional arrangement and hierarchical arrangement to ensure that there is proper autonomous supervision over the consistency of the principles of Sharia compliance oriented toward competitive advantage [2].

The halal industry ecosystem covers all aspects, but two aspects are most important to note, namely the ecosystem in the financing or funding environment, the ecosystem in the production process environment; and the ecosystem in the regulatory environment. In creating a halal industry, a halal ecosystem is needed, where halal criteria are not only measured in terms of raw materials and production but also include financial aspects, which include regulatory strength, so that Islamic finance has a crucial role in shaping the halal industry ecosystem. From the manufacturing process, halal legitimacy is needed which is marked by certification.

Halal certification illustrates industry convention, which is one mechanism to see quality and coordination that can be used as an indicator of the quality of industrial products. Industry convention refers to compliance with standards, which indicates that halal-certified products are by sharia standards [3]. In addition, it also emphasizes a solid corporate administrative structure, accountability, transparency, and compliance with Sharia principles. This mechanism can be used to determine and recognize product quality and to solve problems with uncertainty in the quality of industrial products and services.

Apart from the ecosystem, Indonesia also continues to strengthen the halal industry with various policies. To maximize the function of halal product guarantee in Indonesia, Law Number 33 of 2014 concerning Halal Product Guarantee (JPH) has been formed. With this JPH Law, it is expected that all products that enter, circulate, and are traded in the territory of Indonesia must be halal certified. Therefore, with the existence of this JPH Law, halal certification is no longer voluntary (voluntary) but becomes mandatory (obligation). With this law, there are several policies regarding halal product guarantees that have been changed before. Indonesia must be able to take advantage of the potential of the global halal industry market to accelerate economic competitiveness,

especially in the regions. For this reason, a policy agenda is needed to minimize challenges and strengthen the halal industry ecosystem to capture the potential of the global market.

There are at least three implications that can be felt if it can increase the growth rate of the halal industry, namely from the aspect of economic added value, the development of the halal industry is expected to accelerate the increase in added value of the local economy. Then, from the aspect of welfare, the development of the halal industry is expected to be able to accelerate the rate of decline in poverty and unemployment rates, and then from the aspect of equity, the development of the halal industry is expected to be able to accelerate the equitable distribution of welfare, to reduce inequality.

The development of the halal industry has an important role in supporting the implementation of national development. As an illustration, a well-developed halal industry can contribute to the added value of the economy by fulfilling domestic halal market demand which is currently dominated by global players. This is in line with the momentum of the development of high domestic demand for halal products. In addition, domestic production of halal products can also contribute to strengthening the balance of payments, especially if it can meet the global demand for halal products [4]

Indonesia has a National Sharia Finance Committee (KNKS) which has established six strategies for developing the halal industry [5]. First, the global hub of world halal product trade aims to create Indonesia as an international hub in world halal trade and production. Second, competitive MSMEs, which aim to create superior quality MSMEs that can produce international standard halal products and business continuity with Islamic finance.

Third, the industrialization of halal products, which aims to create a halal industrial area with sustainability in quality, quantity, and continuity as well as improving the quality of superior human resources. Fourth, halal research that supports industry, namely developing research on non-halal substitutes and increasing halal awareness to the public. Fifth, halal preferences, namely the social approach as a strategy to increase halal preferences with a social approach and social engineering. Sixth, regulatory and policy support, namely the strategy of strengthening regulations and policies for the development of Islamic economics and the halal industry.

To strengthen the national policy strategy, various studies propose the importance of institutional effectiveness as a driving force in integrating between increasing regional competitiveness and the halal industry (Noordin, et.al, 2009). Institutional effectiveness must involve various stakeholders, such as business associations, Islamic boarding schools, the social sector, and international cooperation initiatives needed to strengthen

institutions and maintain synergies between institutions. The goal is to achieve the advancement of the halal industry that is able to encourage the inclusiveness of its supporting institutions.

### **3.3. Challenges of the Halal Food Industry from the Perspective of Science and Islamic Law**

The halal industry ecosystem in Indonesia continues to increase, but the development of the halal industry is still faced with various challenges. This is in line with various cases in various countries in facing the challenges of developing a very diverse halal industry [6]. The challenges that exist in Indonesia can be different from the challenges faced by the halal industry in other countries. In Indonesia, from a scientific aspect, these challenges include the following:

First, the challenges of the halal industry are related to the halal material supply chain, in industrial activities the things that must be considered are the raw materials used in the production process. The production process that produces halal products is supported by halal raw materials. The lack of public understanding of the halal product process in production activities makes it difficult for people to apply the concept of the halal product process.

Two, raw materials that were originally halal but due to the lack of understanding of the community in the product process so that the final product becomes haram such as chicken which is a halal animal but in the slaughter process does not use the correct sharia in the cutting process. The slaughtering of animals that are halal to eat is not only that the three channels must be cut perfectly but there are specific things that must be fulfilled and sometimes ignored such as cutting the chicken starting from the middle or by stabbing from the inside out this process often occurs in traditional markets where people who carry out slaughtering activities are limited so that the process is carried out only paying attention to the speed of cutting not the correct way of cutting. This is poorly understood by the public as customers, many of whom think that halal animals will remain halal for consumption until the end.

Third, the halal product process specifically is also not only related to raw materials but the product names used must not use the names of haram food or drink such as beer, whisky and so on. Currently, the public's view regarding halal products is mostly the content contained in them so that in business activities this is not a consideration. Specific provisions related to halal criteria are considered to complicate the halal product process.

Fourth, the procedure for processing halal beverage or food products also pays attention to the storage area, the equipment used and contamination of unclean or haram objects, this is also one of the specific criteria that must be considered by business activities. Medium and small business activities that have limited storage space are difficult to avoid contamination of things that contain unclean things such as lizard feces, birds and so on. Industries whose initial raw materials are halal materials such as corn, rice, cassava and other agricultural products that are widely consumed as food. The storage place is open so that it is easy for contamination of unclean things such as livestock feces, the difficulty of preparing a storage place that is clean from contamination due to limited production costs.

Four, equipment containing haram elements such as pigs are still sold freely in the market such as brushes containing pig bristles. This has not been widely realized by the public so that the brush becomes one of the equipment that contaminates food / beverage products in the production process. The use of brushes is more in demand because it is considered more durable, especially against heat, than silicon brushes.

Sixth, the difficulty of products with halal certification being sold in the market is not only due to their high cost but the lack of public understanding of the halal product process. As large companies certainly use guaranteed technology, certified people and of course have implemented good manufacturing products (GMP) in every activity of the product production process. This is sometimes difficult for the community to accept due to a lack of understanding of this. For example, halal chicken from the company is more often sold in frozen form, because the cutting process uses a cutting machine in large quantities and to keep it so that there is no product damage and contamination. This is difficult to accept because people prefer fresh and cheap.

Meanwhile, from the perspective of Islamic law, the halal industry must also pay attention to the aspect of thayyib. Ensuring the lawfulness of food and beverages to be consumed also basically aims to achieve *maslahah* (welfare). Where, one of the *maslahahs* that is very important to fulfill is the *dharuriyyat maslahah* [7]. This *maslahah* is primary or main which is closely related to one's survival. This aspect seems to emphasize that in consuming something, halal is not enough. However, the halal food industry is currently still too focused on the halal aspect alone. Meanwhile, as is known, the aspect of thayyib actually cannot be separated from halal itself.

The importance of the thayyib aspect in the halal food industry can actually be an explanation and can expand the scope of halal assurance itself. At the very least, there are several categories that can be formulated regarding the standards of thayyib in food. For example, seen from the nutritional content of food and beverages. Demirci



and friends provide an example of applying the aspect of tayyib in the halal food industry in the form of using the definition of “Halal” for products that meet the main halal requirements and “Halal &Toyyiban” for products that meet halal and health requirements, [8].

So far, the government has applied the aspect of tayyib in the guidelines of the Good Processed Food Production Method (CPPOB). This is regulated in Law No. 18/2012 and Government Regulation No. 28/2004. The existence of a procedure for tayyib aspects that have been implemented in Indonesia shows that the government also pays attention to tayyib aspects. However, the aspect of tayyib in this case is the guarantee of safety, quality, and nutrition. However, the review of tayyib food is still not able to represent this aspect perfectly. This is because BPPOM's attention, as its implementation, still focuses on the producers only. The aspect of tayyib also needs to be emphasized to consumers as those who consume food products directly.

In addition to halal and tayyib aspects, Islamic law must also be able to reach the times that are currently entering era 5.0. Because, nowadays, the development of technology cannot be denied. Various new tools are created to facilitate human affairs. The field of food technology is no exception. Not only about food processing tools but nowadays many accuracy tools have been developed to detect halalness in food ingredients. LPPOM MUI as one of the halal guarantee institutions, must be able to answer the challenges of the times. The complexity of halal-haram issues in the food industry is a common challenge.

Until now, it is known that detection tools are still limited to the detection of pork DNA. One of them is PCR (Polymerase Chain Reaction) which is one of the accurate methods of detecting meat contamination. However, as is known that haram ingredients do not only come from pigs, such as food containing animal blood, carrion, and the like. Thus, halal guarantor institutions in Indonesia must strive for a comprehensive halal guarantee with the current rapid development of technology. Detection tools that are accurate, environmentally friendly, and do not require a long time are needed. So it is hoped that the halal quality of Indonesian products can be truly guaranteed halal, has global competitiveness, and is able to be accepted by the international market.

## 4. Conclusion

The challenges of the halal food industry in Indonesia from a scientific aspect include the supply chain, namely raw materials, then the food production process, slaughtering, equipment, the use of food and beverage names, and digitization in the 5.0 era.

Meanwhile, from the perspective of Islamic law, all processes in the halal industry must remain by Islamic values in the Koran, hadiths, and scholarly opinions. In addition, the next challenge is to develop modern halal fiqh that reaches artificial intelligence 5.0. Because Islamic law is dynamic, flexible, and develops along with the rapid progress of the times and technology.

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