



# Application of the Halal Concept in the Era Industrial Revolution 4.0 in Indonesia

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**Abstract:** This study aims to determine the application of the halal concept in the era of the industrial revolution 4.0 in Indonesia. The basis of this research was carried out because Indonesia was ranked 2nd as the country with the highest number of Muslim tourists based on data released by the OIC in 2019. The research method used is descriptive, which tries to answer the existing problems based on the data. The theory used refers to the marketing concept with Islamic teachings proposed by Bin Ya'qub al-Tahir and Sharif Murad, namely product, price, place and promotion. The results of the study show that the halal industry has a fairly good development potential, but it is unfortunate that the Muslim community still lacks awareness of the benefits and importance of consuming halal food, through the marketing strategy of halal food in the industrial era 4.0. The industrial revolution 4.0 presents great challenges and opportunities for the advancement of the halal industry in Indonesia and the world. Thus, the readiness of sharia economic stakeholders is needed in solving the complex problems of digitalization. Sharia economic actors are required to continue to innovate in product and market research, and it is a mandate to advance the halal industry as a superior product in boosting the popularity of the sharia economy.

**Keywords:** Halal Concept; Industrial Revolution 4.0

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## 1. Introduction

Indonesia is one of the countries where the majority of the population embraces Islam and is the country with the largest number of Muslims in the world, which is above 75% of the total population in Indonesia. Referring to this, tourism facilitators must create a scope in which to present halal tourism (Halal Tourism). Which adds to its own image of tourist places. services for Muslim tourists who want to travel in accordance with Islamic principles, so that Muslim tourists feel more comfortable and safe in enjoying travel, and can carry out their obligations as a Muslim in accordance with Islamic teachings such as being obliged to consume halal food and drinks, carry out fardu prayer in a representative place, and a place to stay that is protected from immorality with the existence of a sharia hotel. Based on data released by the OIC (Organization of Islamic Cooperation) in 2019,

Indonesia was ranked 2nd as the country with the highest number of Muslim tourists [1]. Halal Tourism in Indonesia itself has been regulated in several existing regulations:

- Regulation of the Minister of Tourism and Creative Economy Number 2 of 2014 concerning Guidelines for the Implementation of Sharia Hotel Business [2]
- Regulation of the Minister of Tourism Number 1 of 2016 concerning the Implementation of Tourism Business Certification [3].
- Regulation of the Minister of Tourism Number 12 of 2016 concerning Amendments to Regulation of the Minister of Tourism Number 1 of 2016 concerning the Implementation of Tourism Business Certification [4]

The scope of the halal industry in the midst of the current

global economy covers several aspects, including: the financial service industry, the food and beverage industry, the pharmaceutical and drug industry, the cosmetic beauty industry, the hospital and tourism industry, and the fashion and lifestyles industry [5]. The halal industry has become a growing trend today in Muslim-majority countries. Entering the era of the industrial revolution 4.0 has an impact on the development of halal products in the world and Indonesia. With the opening of new markets in the era of the industrial revolution 4.0, it is an opportunity and challenge for producers, especially in the halal industry sector to develop their production to meet domestic needs and global market demands. Halal industry development model by maximizing the use of the Internet, Blockchain technology, Artificial Intelligence, cellular technology and big data in the distribution and distribution of halal products.

The era of the fourth generation of the Industrial Revolution was marked by the emergence of automation and digitalization in various human activities, resulting in the threat of hundreds of millions of human workers in various work sectors. In this case, halal is also included as part of global development which is very important for humans. The lack of technological skills and systems that support the halal industry business has led many manufacturers to be advised to migrate to Industry 4.0 which is full of the use of the latest technology. In addition, harmonization is needed for rules and policies and this problem has not been resolved by the Indonesian government. Based on the opportunities and challenges above, a special model is needed in the development of the halal industry, especially in facing the era of the industrial revolution 4.0. The Halal Industry Development Chain in the Industrial Revolution Era 4.0 includes: Internet and Halal Industry, Blockchain Technology, Smart-Logistics, Artificial Intelligence (Artificial Intelligence), Cellular Technology and big data in the distribution and distribution of halal products.

The halal industry, which is an industry that is in accordance with Islamic values, such as Islamic education, sharia finance, halal cosmetics and medicine, halal travel, the halal food industry, to sharia fashion, is currently developing. The development of the halal industry sector is supported by data showing that the amount spent by global Muslims for all sectors reached \$2 trillion in 2016, while the Islamic finance sector has \$2.2 trillion in total assets. Beverages and food became the most sought after category by Muslim consumers with US\$ 1.24 trillion in 2016, followed by Islamic fashion with \$254 billion, Islamic media and recreation with \$198 billion, halal travel with \$169 billion and finally medicine and cosmetics. halal by \$83 billion and \$57.4 billion [6].

The Fourth Industrial Revolution has the potential to increase global income levels and improve the quality of life of the world's population. One of the technologies from the industrial revolution 4.0 that has the opportunity to overcome various challenges faced by the halal industry is IoT (INTERNET OF THING). This technology can solve problems such as product quality, on time delivery, waste, spoilage, and recalls. Utilizing sensor technology and

real-time data analysis has enabled manufacturers to precisely monitor incoming materials. In addition, it can also improve Hajj services as is being pursued by the Ministry of Hajj and Umrah of Saudi Arabia. In addition, blockchain technology also has the opportunity to affect the halal industry. Blockchain, the technology behind bitcoin and other digital currencies, can be used to ensure the halal integrity of the global food safety distribution chain. If this technology is implemented, the halal authority can issue a halal certificate which includes records of production and distribution by halal producers. These blockchain-based halal certificates are non-falsifiable and allow halal producers and regulators to quickly trace products to their source. Another technology from the 4.0 industrial revolution that can benefit halal operations is smart logistics. The main goal of smart logistics is to ensure halal products are stored and moved safely and efficiently. With the right combination of technologies, smart logistics can improve halal traceability, efficient route planning, and better connectivity, helping to ensure that halal retailers and consumers are confident in the safety and quality of their products.

In addition, artificial intelligence also affects the halal industry. One of the areas of application of AI in the halal industry is object and pattern recognition where a researcher at Universiti Teknologi Malaysia (UTM) succeeded in developing a sharia-compliant automated chicken processing system (Sycut). This system is built to ensure that the chicken's trachea and esophagus are completely cut and halal to eat. This system uses high-speed cameras and was developed by the Center for Intelligence and Artificial Intelligence (CAIRO), UTM. This high-speed camera will record the sheets of the slaughtered chicken before the image is processed by the software whether the chicken is slaughtered or not.

The world's halal industry continues to experience rapid development. Competition occurs between countries, both Muslim countries and countries where the majority of the population is non-Muslim. Various levels of business ranging from large businesses to micro businesses participate in the development of this halal industry. The halal industry itself has many sectors, such as food and beverages, travel and tourism, fashion, cosmetics, media and so on. Facing this increasingly fierce competition, these halal industry players need to prepare the right strategy. Marketing is one of the most crucial functions in running a business. In the midst of the development of digital technology (industrial revolution 4.0), digital marketing is also important for halal industry players. The halal industry needs to take advantage of this opportunity to expand its market share both domestically and globally. The development of digital marketing will encourage the halal industry to be better known by the public because digital media is increasingly being used by the public. Especially in the current pandemic era which 'forces' everyone to shift their activities into digital format.

A big opportunity in the development of digital marketing for the halal industry today is the growing number of internet users around the world, which shows that in 2020 internet

users in the world will increase by more than 298 million users [7]. Moreover, in this industrial era 4.0, there are many things that can be used to support digital marketing such as the Internet of Things (IoT), Big Data, Cloud Computing and so on. Thus, many aspects of marketing will be helped, such as increasing a deeper understanding of customers, improving customer experience, to strengthening and maintaining good relationships with customers. However, on the other hand, this is also a challenge that must be faced by the halal industry players. Industry competition will be fiercer and industry players must try as optimally as possible in studying and applying this in their business.

Halal industry players need to implement some of these important things so that marketing can run optimally. Business actors need to plan well in their marketing strategy, set targets and goals, choose the marketing channel to be used, design the type of content and media to be used, plan time and choose the best partner for their business. All of these things can be done easily by business actors with the help of the data they already have. That is why digital technology has a vital role in marketing in today's era. The most important part in the digital marketing concept, even whatever the marketing concept, is the quality of the product (goods or services) that will be sold itself. The best quality of the products offered is one of the main keys in the marketing concept. A halal industry player will be able to compete in the global realm with quality products, and of course halal and have value. As long as the products offered are of good quality and value, the next marketing strategy will be easier to implement as a supporter. Thus, a good system collaboration in digital marketing will be able to realize that businesses in the halal industry can have strong competitiveness in the domestic and global markets and lead to a better direction.

The halal industry has become a growing trend today in Muslim-majority countries. According to the 2019 Global Islamic Economy Report [8], the halal industry has developed further into a lifestyle including halal travel services and fashion. This development was triggered by a revolutionary change in the mindset of Muslim consumers as well as ethical consumer trends around the world. There are three reasons underlying the change, including: First, the halal industry has now expanded beyond the traditionally recognized scope such as the food sector. Halal products currently include cosmetics, pharmaceuticals, toiletries, and penetrate the service industry, such as sharia financing, logistics, tourism, marketing, travel agents, and mass media. Second, the Muslim market share is very large, with a total following of about 2.2 billion people. However, the halal market is not exclusive to Muslims. Halal products require a set of rules that must be met because they must uphold ethical values, social responsibility, economic and social justice, animal protection, and so on. It is necessary to promote ethical consumerism as the demand for halal-certified products from non-Muslim consumers continues to increase. Third, the competitiveness of the halal industry's products and services in the international market. Entering the era of the industrial revolution 4.0 has an impact

on the development of halal products in the world and Indonesia. With the opening of new markets in the era of the industrial revolution 4.0, it is an opportunity and challenge for producers, especially in the halal industry sector to develop their production to meet domestic needs and global market demands. Indonesia has great potential as a provider of halal products in the world by being part of the top ten countries with Largest issuance of halal products. Some of the main challenges for companies working in Industry 4.0 include capability issues, funding problems, lack of digital technology/infrastructure to support suppliers as well as overlapping government regulations and policies that require further synchronization.

## 2. Method

The research method used is descriptive research method, in which this descriptive research seeks to answer existing problems based on data [9]. With data obtained from various literatures that discuss the application of the halal concept in the Industrial Revolution Era 4.0. Sources of data in this study are primary and secondary sources both in the form of books and journals. The data collection technique is carried out by means of a literature study, the analysis of the data needed in the literature study is obtained from a number of references (books, journals, encyclopedias, documents, etc.) The data obtained were analyzed using qualitative data analysis techniques

## 3. Result and Discussion

The mandate of Law No. 33 of 2014 concerning Halal Product Guarantee [10] is implemented starting on October 17, 2019, Halal Product Guarantee will be implemented by the government through the Ministry of Religion's BPJPH. The implementation of the mandatory halal certification starting October 17, 2019 will be carried out in stages. In the first stage, this obligation will be applied to food and beverage products, as well as service products related to both. The certification process will take place from October 17, 2019 to October 17, 2024. The second stage, certification obligations will apply to other than food and beverage products. This second stage begins October 17, 2021 in a different timeframe. Some are 7 years, 10 years, some are 15 years.

In Indonesia, the institution that screens halal products is BPJPH (Halal Product Guarantee Agency). The Ministry of Religion BPJPH was formed in 2017 and will work on the Implementation of Halal Certification Services (PLSH). BPJPH is developing a halal information system or (SIHalal). Applications for halal certification from various regions can be done online and connected with other stakeholders. The application for a halal certificate must be accompanied by the following documents: data on business actors, name and type of product, list of products and materials used, product processing process. The application for a halal certificate is also accompanied by a document of the halal assurance

system.

BPJPH as a certificate issuing institution for halal products, needs to apply standards that a product has met the standards. The activity of determining conformity with these standards is carried out through a conformity assessment system. BPJPH as a third party that certifies the conformity of the product with the said halal standard must have the competence to certify the product by applying SNI ISO/IEC 17065:2012, namely in the form of conformity assessment for the Accreditation Requirements of the Product, Goods and Services Certification Agency and SNI ISO/IEC [11]. Prof. Statement. Sukoso, who at that time was still the Head of BPJPH [11] stated that the halal concept originating from Islam has become a global trend, and has even become a policy priority in economic activities in various countries.

In this context, the importance of mastering languages and technologies such as practical information systems. In addition to English, there are 5 required languages, namely Arabic, German, Spanish, Chinese, and French. Meanwhile, Information System technology is also an inevitable need in this era. In addition, when talking about halal, then it is no longer a statement but a standard. If someone is aware/cares about the halal concept, the halal concept will become his standard of living.

Strategic role in growing public awareness of the importance of Halal Product Guarantee (JPH). Law Number 33 of 2014 concerning JPH regulates that the implementation of halal product guarantees has a fundamental purpose for people's lives, namely to provide comfort, security, safety, and certainty of the availability of halal products for the public in consuming and using them. In addition, to increase added value for business actors to produce and sell halal products. Halal qualification is a product quality standard, so if a product is qualified to be halal, it also maintains its quality. Halal qualifications are very strict and even exceed product quality standards. Second, once halal becomes a product standard, the halal standard policy is a policy that maintains and favors local products. Halal is clearly regulated in Islam and is something that must be obeyed by Muslims. Halal and Haram are something that means a lot to us. With us being able to choose halal products. When we shop, we have to be careful in choosing products. Hopefully we can do what religion really dictates to eat halal food and the things we use.

With the existence of the JPH Law and the establishment of BPJPH under the Ministry of Religion as the implementing agency, the state is present in order to ensure that the implementation of halal product guarantees in Indonesia can run well. With the implementation of the obligation to be certified halal based on the JPH Law since October 17, 2019, then products that enter, circulate, and trade in Indonesian territory must be certified halal. The regulation also mandates that the government and/or the community can establish LPH. In this case, universities or Islamic religious foundations are included. LPH formed, must meet a number of requirements in accordance with the provisions of the regulation. Article 13 of Law Number 33 of

2014 concerning Halal Product Guarantee states that in order to establish an LPH, there are a number of requirements that must be met including:

- Have own office and equipment;
- Has accreditation from BPJPH;
- Have at least 3 (three) Halal Auditors; and
- Have a laboratory or cooperation agreement with other institutions that have laboratories. In the event that the LPH is established by the community, the LPH must be submitted by a legal Islamic religious institution

Halal Food Concept in Sharia Perspective and Product Responsibility for Halal Industry. That the Sharia provisions regarding halal and haram food, drink, and goods are an integral part of Islamic teachings. Halal and haram food has also become a necessity related to the comfort and safety of Muslims as the largest consumers in Indonesia. This need must be enforced by the halal industry. Every halal food producer must have the understanding and awareness to ensure the halalness of their products by implementing the Halal Assurance System as the application of the concept of halal and sharia haram in food and beverages. Violation of the Halal Assurance System by the manufacturer will result in product liability, both legally and morally.

Ahyani et al [12] provide an explanation that Islam is a religion that regulates all lines/human aspects. Muslims in Indonesia generally focus on discussing the fiqh of worship, but pay less attention to the muamalah aspects of fiqh. If not properly understood, dubious doubtful goods and services that lead to haram can be consumed by Muslims and affect their spiritual development. In terms of consuming halal food, it affects the food that will be consumed by humans. This can affect the psychological aspect, for example being quick to emotion. The habit of consuming without considering "halal and haram", or anything that is "materialistic" will only lead to temporary satisfaction. This means not only in the realm of "food". But everything that humans want to develop, whether from science and technology, or creativity, even innovation, will bring damage or danger to human life, society, and the natural surroundings in this world. Halal and haram are important issues for Muslims, especially when it comes to food that concerns the needs of the community. In an effort to protect the public against food products, joint efforts are needed, especially those produced to certify the halal label through LPPOM which is legalized by the MUI (Indonesian Ulama Council).

Indonesia has become famous in parts of the world where it is said that Indonesia has the largest Muslim population in the world. So that in this case the demand for "halal certificated products" always experiences a significant increase in public awareness when it comes to the issue of "halal products". Regarding awareness in terms of consumption of "halal food" for students at the junior high school level, as well as in the realm of "student behavior" in choosing halal and healthy food by paying attention to halal aspects such as halal logos and food ingredients composition.

Based on the concept of Islamic marketing through the integration of modern marketing and Islamic teachings by

Bin Ya'qub al-Tahir and Sharif Murad [13], formulating a marketing concept by integrating the 4P marketing concepts, namely Product, Price, Place and Promotion with Islamic teachings.

### 3.1. Product

Companies must pay attention to aspects of lawfulness (allowed by sharia), halal, and there are no forbidden elements in providing food offered to consumers. This halal category must at least include two things, namely the halalness of the food itself and the halalness of the delivery process to consumers. In the era of the industrial revolution 4.0, the condition of society that is instantaneous with the habit of consuming fast food poses a threat related to local products, companies must try to maintain the integrity of local products by releasing local products that are innovated with the times. In addition, in the era of the industrial revolution 4.0, halal certificates are the main thing in world competition because with a halal certificate marked with a halal stamp, the food ingredients used must be halal and will greatly affect the purchase value in all corners of the world, halal food grows rapidly because not only Muslims are tempted by halal food but also non-Muslims due to the fact that halal food is more secure in terms of hygiene and health.

### 3.2. Price

When marketing halal food, there are several things that must be considered. First, the determination of prices must be based on the principle of consensual, in the sense that the determination of prices must be in accordance with a logical and fair profit. Second, healthy competition in determining the price of the food offered, offering food of good quality and at an appropriate price. Rafiq Yunus al-Mashriy stated that the scholars forbade taking excessive profits by committing fraud or covering up damage to the commodities traded. Third, do not hoard or monopolize (ihtikar) the market to raise prices from the normal price.

### 3.3. Place

Distribution activities carry out a common interest mission by distributing goods to customers to fulfill their needs, help their difficulties and facilitate their needs. In the early days of Industry 4.0, companies used more accessible data networks around the world in their operations, what used to be only selling halal food in affordable areas is now able to penetrate all corners of the world, and collaboration around the world is more possible than ever. By using a digital connection whose expertise can offer halal food from long distances quickly to reach consumers, so businesses can get maximum results.

### 3.4. Promotion

In promoting all information submitted to consumers related to halal food, it must be in accordance with the facts. Honesty is the main capital in transactions so that no party is harmed. In the era of the industrial revolution 4.0, the use of

social media is very necessary, by utilizing testimonials and endorsements from customers, that way, customers can influence other customers, the most important thing is advocacy related to halal products offered by targeting religious consumers who have spiritual values, Religiosity becomes a mindset key in decision making..

## 4. Conclusion

The halal industry has a fairly good development potential, but it is unfortunate that the Muslim community still lacks awareness of the benefits and importance of consuming halal food, through the marketing strategy of halal food in the industrial era 4.0. It is hoped that halal industrial companies will be able to contribute through marketing activities in order to increase awareness of the Muslim community on the importance of consuming halal food so that it can increase the economy and interest in people's purchasing power. The industrial revolution 4.0 presents great challenges and opportunities for the advancement of the halal industry in Indonesia and the world. Thus, the readiness of sharia economic stakeholders is needed in solving the complex problems of digitalization. Sharia economic actors are required to continue to innovate in product and market research, and it is a mandate to advance the halal industry as a superior product in boosting the popularity of the sharia economy.

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