# Halal Products: Industrial Revolution Era 4.0 and Society 5.0

Ida Musofiana, Hartiwiningsih, Muhammad Rustamaji

Universitas Islam Sultan Agung Universitas Sebelas Maret ida.musofiana@unissula.ac.id

### Abstrack

Revolution society 5.0 is the fifth wave. The term human-centered society 5.0 is expected to balance economic progress with solving social problems using a system that integrates the virtual and physical worlds. Previously there was the era of the industrial revolution 4.0 which was marked by a blend of technology that blurred the lines between the physical, digital, and biological fields. In the current era of society 5.0, halal products are becoming a trend throughout the world, in Muslim countries and even in non-Muslim countries. Muslims as the consumer segment with the fastest growing economy in the world. Any company that doesn't consider how to serve Muslims is missing out on a significant opportunity. Indonesia, with a majority Muslim population, shows the need of its citizens in consuming halal products, including the implementation of halal guarantees for the products consumed. Digital transformation is recognized as a solution in order to improve the halal industry in Indonesia. The purpose of this study is to analyze the views of several interested parties on how halal products can continue to grow, especially in the era of digitalization. This is done in order to support sustainable development. The method used is a normative juridical literature study approach with descriptive data processing, analysis of national and international journals, as well as books and other literature related to the implementation of the business sector and halal products. The findings of this study indicate that the business and the halal product sector are the dominant sectors in the industrial and society 5.0 era. With the market potential dominated by halal products, development is needed in the implementation of the halal product industry in the era of the industrial revolution 4.0 and society 5.0. It takes harmony of halal products to follow and adapt to developments and progress in each era.

Keywords : digitalization; government; halal products; society.

## A. INTRODUCTION

For Muslims themselves, consuming halal food is an obligation to fulfill Allah's commands, which is stated in the Qur'an Surah Al-Maidah verse 88 which means "Eat halal food and it is good." However, in the era of globalization, determining the halalness of a food product is not as easy as when the technology was not yet developed. Thus, there is a need for a guarantee and certainty of the halalness of food products consumed by Muslims. Halal assurance of a food product can be realized in the form of a halal certificate that accompanies a food product so that producers can include a halal logo on the packaging. Manufacturers must have a halal assurance system and be more careful. This system is identical to the quality assurance system implemented by the ISO standard.<sup>1</sup>

The halal industry has become growing trend today in Muslima majority countries. According 2019 Global to the Islamic Economy Report<sup>2</sup>. In 2018, global Muslim consumers spent US\$2.2 trillion in the food, pharmaceutical, and lifestyle sectors. By 2024 this number is expected to increase to 3.2 trillion, Islamic financial assets. The name of the country Iran, Saudi Arabia, Malaysia, United Arab Emirates, Qatar, Kuwait, Indonesia, Bahrain

<sup>1</sup> Nidya Waras Sayekti, Jaminan Produk Halal Dalam Perspektif Kelembagaan, Journal Ekonomi and Kebijakan Publik, Vol. 5 No. 2, December

<sup>2014</sup> page 193 - 209

<sup>2</sup> Dinar Standard, T. R. And R. And, & Thomson Reuters And Dinarstandard. (2018). State Of The Global Islamic Economy Report 2018/19. Dubai International Financial Centre

can make Indonesia proud to be included in the 8 countries with the largest Islamic financial assets<sup>3</sup>.

The global halal industry in the last five years has shown positive developments even though it had contracted due to the Covid-19 pandemic. This is reflected in the expenditure of global Muslim consumers in every sector of the global halal industry including halal food, Muslim-friendly tourism, Muslim fashion, media/entertainment, cosmetics, and pharmaceuticals. The halal food and Muslim fashion sector have the largest share of expenditure with an average of more than 74% among all sectors. However, the development of global Muslim consumer spending has decreased by 9% since the start of the pandemic. One of the causes is the disruption of the fabric manufacturing supply chain in the fashion sector due to mobility restrictions.

The food and fashion sectors are still the leading sectors of the global halal industry. Based on the State of Global Islamic Economy Report (SGIE) 2020/2021, in 2024 the halal food sector is forecasted to grow 3.5%, worth 1.38 trillion US dollars, while Muslim fashion will grow 2.4% or 311 billion dollars. The US. The potential of the global halal market is growing along with the increase in demand for halal products. This is in line with the increase in the global Muslim population which reached 1.9 billion in 2019 and is predicted to grow twice as fast as the world's population as a whole<sup>4</sup>.

Muslim population will reach 3 billion by 2060 The or a 70% increase 2015 from which will represent 31.1% the population 5 of total global The Pew Research Center predicts that by 2050 the Muslim population will also remain dominated by young people, with 60% aged 15-59 years while 24% are under the age of 15.6

The increase in the number of wealthy Muslims, the halal industry has developed further into a lifestyle including halal travel services as well as 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 basic reasons (Manurung, 2019) for the change, including First, the halal industry has now grown beyond the traditionally known scope such as the food sector. Halal products currently include cosmetics, pharmaceuticals, and 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, is 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 in 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 products to meet domestic needs and global market demands<sup>7</sup>.

Indonesia has great potential as a provider of halal products<sup>8</sup> in the world by being part of the top ten countries with the largest production 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.

 $<sup>\</sup>label{eq:2.1} 3 \quad Https://Dataindonesia.Id/Bursa-Keuangan/Detail/Ri-Masuk-Daftar-Negara-Dengan-Aset-Keuangan-Syariah-Terbesar$ 

<sup>4</sup> Jeff Diamant. The Countries With The 10 Largest Christian Populations And The 10 Largest Muslim Populations. Pew Research Center. April 1, 2019

<sup>5</sup> Michael Lipka And Conrad Hackett. Why Muslims Are The World's Fastest-Growing Religious Group. Pew Research Center. April 6, 2017.

<sup>6</sup> The Future Of World Religions: Population Growth Projections, 2010-2050. Pew Research Center. April 2, 2015.

<sup>7</sup> Elasrag, H. (2016). Halal Industry: Key Challenges And Opportunities. Available At Ssrn 2735417.

<sup>8</sup> Ahmad, A., Tangngareng, T., Harun, A., & Masri, M. (2019). Halal Product: New Market Opportunity In Challenging The Industrial Revolution 4.0. Https://Doi.Org/10.4108/Eai.2-5-2019.2284751

Furthermore, the issue of funding and the capability of the manufacturing sector not only requires large amounts of fresh funds, but the implementation of Industry 4.0 also requires foreign talent and technology to help improve the capabilities and quality of the domestic industry. 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 loaded with 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 use of digitalization and sustainable trends plays an important role in the business activities of the global halal industry. Mobility restrictions have prompted changes in the behavior of global Muslim consumers that lead to ethical consumerism and the use of digital technology. Internet connectivity has expanded domestic and international e-commerce and m-commerce networks. Various innovative ideas were launched in various business sectors to adapt and survive, including virtual fittings (fashion), meal kits (food), and virtual tours (travel). Meanwhile, the demand for ethical and organic products is also increasing because the universal Islamic economic values are in line with the trend of sustainability and balance.

#### **B. RESEARCH METHOD**

Legal research is closely related to the concept of law used that according to Soetondyo Wigyosoebroto of the five legal concepts, these legal concepts are as follows:

- a. Law is the principle of truth and justice that applies naturally and applies universally;
- b. Law is positive norms in the statutory system;
- c. Law is what is decided by the judge (in concreto) and is systemized as a judge-made law;
- d. Laws are institutionalized social behavior patterns that exist as empirical social variables; and
- e. Law is a manifestation of symbolic meanings of social behavior as seen in their interactions<sup>9</sup>.

This study uses a descriptive-analytical literature method. Analytical descriptive research can be done without using a basic supposition or proposition, but it has begun with an outline of the thoughts and problems to be studied.<sup>10</sup>The literature method is one of the data collection methods used in social research methodology to trace event record data<sup>11</sup>. The literature used in this research is sourced from journals, books, and other online literature contains the concept of halal product, digital era, industrial revolution 4.0 and 5.0 in general as data in this paper.

## C. DISCUSSION

## 1. Industrial Revolution 4.0

Islamic Economy and Halal Industry, which are enlivening the industrial revolution 4.0 era, are components that are expected to drive this advanced phase of human civilization including fast production, low costs attached to the production, reduced dependence on human resources, innovative products, and services, a market that learns consumer trends and seamlessly offer producers big data, new energy resources, innovative production trends, and new consumption culture. While the Fourth Industrial Revolution may shape all of these aspects as economists and researchers point out, further analysis is needed as to whether the industrial revolution can provide solutions to human needs in general and the challenges that

<sup>9</sup> Setiono, Understanding Of Legal Research Methodology Postgraduate Law Studies Of Sebelas Maret University, 2010, Page 20 In Ida Musofiana, Legal Protection For Victims Of Cybercrime In The Digital Era In Strengthening Cyber Democracy In Indonesia Post 2019 General Election, On Proceeding Democracy In Digital Era : Law, Governance, Sosial And Economic Perspective In Asia, Australia And Dutch

<sup>10</sup> Anis Mashdurohatun, Ferry Susanto Limbong, Legal Protection Of Trademarks Based On The Justice Value, International Journal Of Innovation, Creativity And Change. Volume 12, Issue 12, 2020. Page 1213

<sup>11</sup> Anis Mashdurohatun, Hayyan Ul Haq, Sony Zulhuda, Social Function Reconstruction Of Intellectual Property Rights(Ipr) Based On Justice Values, International Journal Of Law Reconstruction, Volume I, Issue 1, September 2017, Page.143

may be faced in the future. Since the dawn of evolution, humans have repeatedly proved that knowledge is the mother of discovery. Humans create basic tools of life to meet their diverse needs and develop these tools gradually to meet ever-evolving demands. The findings and results of the researchers' research offer an integrated system of means of production and lifestyle and this, in turn, helps to develop an integrated economic and social ecosystem.

Every discovery of research results is intended for all mankind without distinction. The main purpose behind every invention is to fulfill people's demands and improve their daily life. With this in mind, how do we explain the rise in poverty, hunger, and the marginalization of society at large, the large numbers of people still suffering from debt, and poor levels of education in advanced industrialized countries, how can we explain the recurring crises in the global economy? and most importantly, how do we use inventions and technological advances to solve pressing problems? also, how do we raise our ethical standards to keep pace with our scientific and technological advances? The answers to these questions can help us better understand what we need to achieve in the next phase of development. The Third Industrial Revolution and the Fourth Industrial Revolution that are imminent today can help solve critical problems such as social disintegration<sup>12</sup>. Human consciousness, even as it establishes standards and priorities and provides people with modern tools and techniques. this revolution must have the mandate to improve the social status of the people and not remain limited to the development of material instruments. Many economists have highlighted the challenges of the Fourth Industrial Revolution. Klaus Schwab, Founder and Executive Chair of the World Economic Forum examines the possible challenges that could arise as a result of this new production system. In an article in Project Syndicate, which publishes and syndicates commentary and analysis on a wide range of topics including global affairs, economics, finance, and development, Schwab says: The Fourth Industrial Revolution has the potential to empower individuals and communities, as it creates new opportunities for economic, social and personal development. It can also lead to the marginalization of some groups, exacerbate inequalities, create new security risks, and weaken human relations. In the same article, Schwab calls for a new collective and moral consciousness to end individualism and elite supremacy while pushing technology towards the enhancement of human knowledge and enabling it to serve as a tool for achieving long-term stability and sustainability. Responsible investment and financial measures should serve the ultimate goal of meeting the needs of the majority rather than simply responding to the demands and ambitions of the elites. The new technology that the next industrial revolution will provide a golden opportunity for all human beings. They will create new businesses and tools to solve scientific challenges and climate problems.

It can also give people in the fourth world the opportunity to reduce costs and set up new factories and companies. In addition, this technology will reduce the cost of health care, education, transportation, and online communication systems. If technology succeeds in reducing the cost of education, it will be much easier to access knowledge. Knowledge will serve as an important component of future competition, especially with the growth of the digital economy. The human element is key in defining the trend of the next industrial revolution.<sup>13</sup>

Scientific and technological progress needs to be developed in parallel with the conscious consideration of the world's most pressing needs. At this time people agree that sustainability

<sup>12</sup> Lee, M., Yun, J. J., Pyka, A., Won, D., Kodama, F., Schiuma, G. Jung, K. (2018). How To Respond To The Fourth Industrial Revolution, Or The Second Information Technology Revolution? Dynamic New Combinations Between Technology, Market, And Society Through Open Innovation. Journal Of Open Innovation: Technology, Market, And Complexity, 4(3), 2018, Page 21.

<sup>13</sup> Bianchi, P., & Labory, S. (2018). The Fourth Industrial Revolution, By Klaus Schwab. World Economic Forum. https://Doi.Org/10.4337/9781786 430328.00006

and social stability are the ultimate goals behind any future activity. The current need is to empower human resources among the new generation and also factor in the cultural and ethical empowerment of future pioneers. These potential leaders have grown up in an era of troubled economies where greed and the desire for quick profits, regardless of cost, have overtaken the values and standards that govern all human behavior. The Islamic economic sector emerged during an economic transformation driven by a new technological revolution. The emergence of technological breakthroughs such as artificial intelligence, robotics, the internet, peer to peer financial services, blockchain, big data, quantum computing, e-commerce, cloud storage, and banking is indirectly reshaping the operations and business models of industries in the Islamic economy. . The adoption of technological innovations in the industry will lead to efficiency, productivity and market penetration. Industrial revolution 4.0 encourages the integration of technological innovation into Islamic economic operations and business models. Indonesia, with its large Muslim population and status as the world's sixteenth largest economy, is poised to become a global player in the Islamic economy. In the opinion of professor Jonathan Wilson, the country is considered a "treasure" and "sleeping giant" of the global Islamic economy by Sutan Emir Hidayat, Director of the National Islamic Finance Committee.

Scientific and technological progress needs to be developed in parallel with the conscious consideration of the world's most pressing needs. At this time people agree that sustainability and social stability are the ultimate goals behind any future activity. The current need is to empower human resources among the new generation and also factor in the cultural and ethical empowerment of future pioneers. These potential leaders have grown up in an era of troubled economies where greed and the desire for quick profits, regardless of cost, have overtaken the values and standards that govern all human behavior. The Islamic economic sector emerged during an economic transformation driven by a new technological revolution. The emergence of technological breakthroughs such as artificial intelligence, robotics, the internet, peer to peer financial services, blockchain, big data, quantum computing, e-commerce, cloud storage, and banking is indirectly reshaping the operations and business models of industries in the Islamic economy. . The adoption of technological innovations in the industry will lead to efficiency, productivity and market penetration. Industrial revolution 4.0 encourages the integration of technological innovation into Islamic economic operations and business models. Indonesia, with its large Muslim population and status as the world's sixteenth largest economy, is poised to become a global player in the Islamic economy. In the opinion of professor Jonathan Wilson, the country is considered a "treasure" and "sleeping giant" of the global Islamic economy by Sutan Emir Hidayat, Director of the National Islamic Finance Committee<sup>14</sup>.

The strengthening of the halal industry should be adjusted to the technological developments that are developing in the ongoing industrial revolution. Several applications of industrial revolution 4.0 technology such as the use of the internet, cellular technology, blockchain, the use of big data, smart logistics support and intelligence are a means of accelerating and optimizing the halal business chain which in the future will have an impact on the effectiveness and efficiency of the halal industry. The revival of the technological revolution that will fundamentally change the way we live, work and relate to one another in the form of the Industrial Revolution 4.0. The world community is now starting to understand the importance of Muslims' needs for food and other consumption known as the halal market. The market for certified halal food and products is growing strongly, both domestically and internationally. Although the term halal never attracted as much attention as it does today, today, there are Muslim consumers whose tastes and preferences are governed by halal regulations on food specifications such as the existence of a halal food market. Every Muslim should 14 Admin2. (2019). Islamic Economic Revolution 4.0. Retrieved From Https://Www.Uinjkt.Ac.Id/Id/Islamic-Economic-Revolution-4-0/

make sure that what they eat comes from halal sources. This not only means checking the ingredients only but also ensuring that the entire process complies with Shariah principles. In Indonesia, this technology has been used to increase the guarantee of halal products Indonesia<sup>15</sup> iuncluding its use in the food industry. The key to the effectiveness of this operation is the increasing factor of public trust in the halal food industry. From farmers and producers to kitchens and end consumers, every step in the food industry can be enhanced with blockchain technology. As the Halal food sector increases, consequently, producers must find ways to improve supply chain efficiency by filling the gap through greater transparency and assurance of Halal compliance<sup>16</sup>.

The development of the halal industry with technology that is in line with the 4.0 industrial revolution can help Indonesia in international trade. However, the obstacles that occur, especially in Indonesia, halal standards must be determined and applied by the Barrier to Trade Agreement to obtain the benefits of international trade. The government must pay attention to the provisions of the Technical Barriers to Trade Agreement in implementing halal standards in measuring the consistency of the Halal law with the law of the World Trade Organization. Several steps need to be achieved. First, the establishment of halal assurance standards must be efficient; The government should simplify the processes and procedures for obtaining halal certificates. Simple processes and efficient procedures will make production much cheaper. Efficiency can also be a fairly short time limit in obtaining a certificate.

#### 2. Society Revolution 5.0

The Japanese government defines society 5.0 as a human-centered society that can balance economic progress with solving social problems using a system that integrates virtual and physical worlds. According to Fukuyama<sup>17</sup> that society 5.0 proposed by the Japanese government is a clear concept. It was drawn up in the fifth Science and Technology Basic Plan by the Science, Technology, and Innovation Council, and approved by Cabinet decision in January 2016.

Regarding the stages of society (society) based on human history. Society 1.0 is defined as a group of people who gather and hunt in life, then coexist in harmony with nature, starting with the creation of humans. Society 2.0 formed groups based on agricultural cultivation, organizational improvement, and nation-building, starting from 13,000 BC. Society 3.0 is a society that promotes industrialization through the industrial revolution 1.0, starting from the end of the 18th century. Society 4.0 is an information society that realizes increasing added value by connecting intangible assets as information networks, starting from the mid-20th century. In this stage, society 5.0 is an information society built on society 4.0, which aims for a more prosperous society.Fukuyama<sup>18</sup> also argues that in digital transformation some regions or countries use different terms. Europe uses the term industry 4.0, North America uses the term industrial internet, Asia uses the term society 5.0. Where digital transformation uses the Internet of Things, artificial intelligence, robotics, big data, and blockchain.<sup>19</sup>

18 Ibid, Page 48

<sup>15</sup> Charity, M. L., Jaminan Produk Halal Di Indonesia (Halal Products Guarantee In Indonesia). Jurnal Legislasi Indonesia, 14(1), 20017, Page 99–107

<sup>16</sup> Chandra, G. R., Liaqat, I. A., & Sharma, B., Blockchain Redefining: The Halal Food Sector. In 2019 Amity International Conference On Artificial Intelligence (Aicai) 2019, Page. 349–354. https://Doi.Org/10.1109/Aicai.2019.8701321

<sup>17</sup> Fukuyama, Mayumi. 2018. "Society 5.0: Aiming For A New Human-Centered Society". Japan Economy Foundation Journal - Japan Spotlight. Page 47 https://Www.Jef.Or.Jp/Journal/Pdf/220th\_Special\_Article\_02.Pdf

<sup>19</sup> Nakanishi, Hiroaki And Hiroaki Kitano. 2018. "Society 5.0 Co-Creating The Future". Policy Proposals Industrial Technology, Keidanren (Japan Business Federation). Page 4-5 https://www.Keidanren.Or.Jp/En/Policy/2018/095.html

In the era of society 5.0, the new value created through innovation will eliminate regional, age, gender, and language disparities and enable the provision of products and services that are well adapted to the diverse needs of individuals and groups. In this way, it is possible to achieve a society that can promote economic development and find solutions to social problems. However, this achievement will have difficulties or obstacles, Japan is ready to face it head-on to be the first in the world as a country facing problems to present a model of a future society. In society 5.0 blueprint for sustainable development goals designed by Nakanishi and Kitano<sup>20</sup>.

Fukuyama There are technologies in the form of big data, IoT, artificial inteligent, robot, drone, sensor, 3D print, public key infrastructure, sharing, on demand, mobile, edge, cloud, 5G, virtual reality, augmented reality and mixed reality. Fukuyama said that the goal of society 5.0 is to create a society where people enjoy life to the fullest. Economic growth and technological development exist for that purpose and not for the prosperity of the few. Although society 5.0 originated in Japan, its goal is not just for the welfare of one country. The frameworks and technologies developed will contribute to solving the challenges of societies around the world.

The concept of Society 5.0 has actually promoted by the Japanese government in 2015. No longer centered on the industry, the concept of Society 5.0 is more centered on people or in this case society. By utilizing technology as a driving force, the Japanese government initiated this movement to create a super-smart society. Internet of Things (IoT), Artificial Intelligence (AI), Big Data, and robotics are the four main technologies used by Japan to make Society 5.0 successful. For example, Japan uses drones to help the elderly/people in meeting their needs when they can't go far. The elderly also do not have to go far to see a doctor in person because they can easily check their health regularly through machines with AI technology provided at the nearest points or even at the homes of each elderly in need.

The equation of the Industrial Era 4.0 and Society 5.0 is as follows:<sup>21</sup>

- a. Equally Emphasize IoT, AI, Smart Machines, Knowledge Management, and Smart Web technologies to represent work connectivity;
- b. Both emphasize how people communicate with machines or other people through the available Intelligent Machines;
- c. Both have the power to multitask through various types of automated media and computing platforms;
- d. Both of them emphasized that work in this era is no longer just a single job per hour, but is a process that always runs with other processes or as a medium to other procedures;
- e. Both emphasize free movement from one process to another and require fewer protocols to get the job done;
- f. Both consider sustainability engineering in the midst of progressive technology deployed materially by ensuring the preservation of nature and ecology is still in good condition.

Where there are similarities, there are also differences. Broadly speaking, there are three differences between Industry 4.0 and Society 5.0, namely:

- a. Industry 4.0 emphasizes how work is done automatically, while Society 5.0 emphasizes how to optimize working hours responsibilities to complete work;
- b. Industry 4.0 highlights the effectiveness of using automated machines, while Society
  20 Ibid, Page 14
  21 https://Idmetafora.Com/News/Read/333/Industry-40-Vs-Society-50.html Acceesed On Aprl 2022

5.0 highlights the effectiveness of optimizing people/society knowledge with the help of intelligent machines;

c. Industry 4.0 is all about computerized communication in every way, while Society 5.0 is meant to make work easier and faster with the help of intelligent machines for the benefit of the people.

Even though they have different focuses, basically the purpose of Industry 4.0 and Society 5.0 is to make human activities easier and of course so that everything becomes more effective and efficient. For those of us who are currently still busy with the Industrial Revolution 4.0, it's a good idea to start understanding the concept of Society 5.0 as well. It would be even better if Indonesia in the future could slowly implement it simultaneously.

#### 3. Development of Halal Product E-Commerce Transactions

COVID-19 has had a significant impact on the decline in industrial growth in Indonesia. However, this condition improved when entering the new normal period (around June 2020) compared to the previous period. The decline in the industry in Indonesia during the COVID19 period was mainly due to a decrease in the number of buyers specifically in Q2 2020, both in the make-up and face care categories<sup>22</sup>. and food and garment or fashion.

Nielsen added that during this new normal period, humans are asked to return to their routine activities with health protocols and using e-commerce. Consumers are also obsessed with everything related to "Health and Hygiene" to avoid the spread of COVID-19<sup>23</sup>.

Thus, since COVID 19 was announced and the #AtHome physical distancing policy was implemented, consumers have shifted their shopping behavior from offline to online. This online shopping behavior is predicted to continue. Especially for beauty products, for example, consumers will seek information about beauty from home. Several opportunities that can be exploited such as online beauty consulting services or the use of chatbots and Virtual Reality (VR) technology are able to move more consumers who need consultations from home. Beauty treatments that can be done from home will also increase, such as using masks or products that can lift the mood. Although there is a tendency to shop online, it will be different because it depends on the generation, namely whether they include the generation of seniors, Baby Boomers, Gen X, or Millennials.

With this phenomenon, as the largest cosmetic company and has the first halal product in Indonesia, PTI immediately anticipates the need for digital transformation. Learning from China that digital transformation must be carried out quickly, strongly, and proactively, PT PTI implemented 9 strategies in order to survive, namely (1) communication and brand content relevant to the "new normal", (2) launching new products for new needs. normally through online channels, (3) optimize social media, (4) online shop in market places, (5) e-catalog products, (6) internally managed online shops, (7) launching Wardah resellers, (8) Instagram and WhatsApp as a means of selling, and (9) utilizing digital technology to stay productive<sup>24</sup>.

As previously explained, people are now more interested in issuing halal-based products, to be able to continue to exist and be loved by consumers, considering that many Muslim communities are used as material for consideration such as fashion, make-up, food, and others

<sup>22</sup> Nielsen. (2020). Shopper In The New Normal. https://Www.Nielsen.Com/Wpcontent/Uploads/Sites/3/2020/06/The-New-Shopper-Normal-Covid-19-Sellsheet.Pdf?Cid=Socsprinklr-Nielsen+Vietnam

<sup>23</sup> Kantar. (2020). Webinar Series: Covid-19 Impact On Indonesian Attitudes And Behaviours. Https://Www.Kantar.Com/Inspiration/Coronavirus/ Webinar-Covid-19-Impact-On-Indonesian-Attitudes-Behaviours

 <sup>24</sup> Etikah Karyani1, Ira Geraldina, Marissa Grace Haque Transformasi Digital Dan Industri Halal: Studi Kasus Pada Produsen Besar Dan Umkm, Wirakrama Parahita Journal, Vol 5 No 2, November 2021, Page 149

based on halal. The following is a chart of the Halal Certification Process in Indonesia:



Produsen /Perusahaan Besar:

source: Law Number 33 of 2014 \*days are expressed in working days

Business ethics in an Islamic perspective is a source of efforts and processes related to what is right or wrong with regard to products, and company services with interested parties with company demands. One of the basics of Islamic business ethics is selling halal goods according to the hadith of the Prophet Muhammad that Allah forbids goods, the price is also haram (for sale). Entrepreneurs selling goods should be of good quality and prohibited from hiding the defects of an item. In Indonesia, the Halal Product Guarantee Agency or the government agency for the halal assurance system is under the Ministry of Religion. This provision is based on Law no. 33 of 2014 concerning the Halal Assurance System in Indonesia.

The Covid-19 pandemic has two sides, namely positive and negative sides. Apart from the negative effects it causes, the pandemic has accelerated the digital transformation process for all types of businesses, including the halal business or industry. In the dimension of e-commerce technology there is ubiquity and global reach can be interpreted everywhere and reaches across national borders, meaning that e-commerce can be accessed everywhere using the internet, in industry 4.0 this becomes very important, such as production control can be controlled through smartphone and accessed anywhere, so that ubiquity and global reach in e-commerce adopt the technology. Then universal standards can be interpreted that there is a set of technology standards, namely the internet, industry 4.0 also uses the internet. Furthermore, the richness can be interpreted that this technology is rich in content such as video, audio, and text, Industry 4.0 in marketing products using the same content as e-commerce.

Within the framework of e-commerce, there are people who are part of society in society 5.0. Policies and regulations in e-commerce will be adjusted in the era of society 5.0 in accordance with the utilization and advancement of technology. Then marketing and advertising on e-commerce in the era of society 5.0 will be easier because people are connected to the internet and become their lifestyle. Next are supporting services such as logistics, payment, and system and network security, in the era of society 5.0, of course, supporting services will be strengthened by utilizing IoT, AI, cloud, robot, drone, and sensor technology to facilitate e-commerce support services including in terms of security. In terms of e-commerce business partnerships, in the era of society 5.0 it will be easier to establish partnership relationships

using IoT and mixed reality technology.

The dimensions of e-commerce technology are ubiquity, global reach, and universal standards, in the era of society 5.0 this has become commonplace because the internet has become a lifestyle for people who can reach cross-border access, e-commerce is strongly supported from this dimension making it easier public. Then richness, in the era of society 5.0, content wealth will be more advanced because the community is getting more creative and innovative in creating content so e-commerce is getting richer in content growth.<sup>25</sup>

#### D. CONCLUSION

The existence of globalization in the industrial era 4.0 and society 5.0 is an era of transformation of analog technology into digital. The increasing trend of consuming halal products around the world is driven by the very large Muslim population. As a country with the largest Muslim population in the world, Indonesia should pay attention to the needs of its citizens in consuming halal products. One of them is through the provision of halal guarantees for products consumed by its citizens. The technology in society 5.0 is a continuation of industrial technology 4.0. Digital transformation has changed the way of life of people and industries, thus having a great influence on the progress of e-commerce. Technological alignment occurs between e-commerce and technology in the industrial era 4.0 and society 5.0, where e-commerce technology follows and adapts its technology to each of these eras. The industrial era 4.0 and society 5.0 have a lot of positive impacts on e-commerce in general so that the prospects for e-commerce growth will be better in the future.

The dimensions of e-commerce technology are ubiquity, global reach, and universal standards, in the era of society 5.0 this has become commonplace because the internet has become a lifestyle for people who can reach cross-border access, e-commerce is strongly supported from this dimension making it easier public. Then richness, in the era of society 5.0, content wealth will be more advanced because the community is getting more creative and innovative in creating content so e-commerce is getting richer in content growth.

<sup>25</sup> Decky Hendarsyah, *E-Commerce* Di Era Industri 4.0 Dan *Society 5.0, Iqtishaduna : Jurnal Ilmiah Ekonomi Kita, Volume 8 No. 2, December 2019, 171-184.* 

#### BLIBIOGRAPHY

- Admin2. 2019. *Islamic Economic Revolution 4.0.* Retrieved From <u>Https://Www.Uinjkt.Ac.Id/Id/</u> <u>Islamic-Economic-Revolution-4-0/</u>
- Ahmad, A., Tangngareng, T., Harun, A., & Masri, M. (2019). *Halal Product: New Market Opportunity* In Challenging The Industrial Revolution 4.0. <u>Https://Doi.Org/10.4108/Eai.2-5-2019.2284751</u>
- Anis Mashdurohatun, Ferry Susanto Limbong, Legal Protection Of Trademarks Based On The Justice Value, *International Journal Of Innovation, Creativity And Change*. Volume 12, Number 12, 2020\_
- Anis Mashdurohatun, Hayyan Ul Haq, Sony Zulhuda, Social Function Reconstruction Of Intellectual Property Rights(Ipr) Based On Justice Values, *International Journal Of Law Reconstruction*, Volume I, No 1, September 2017,
- Bianchi, P., & Labory, S. (2018). *The Fourth Industrial Revolution*, By Klaus Schwab. World Economic Forum. <u>https://Doi.Org/10.4337/9781786430328.00006</u>
- Chandra, G. R., Liaqat, I. A., & Sharma, B., Blockchain Redefining: The Halal Food Sector. In 2019 *Amity International Conference On Artificial Intelligence (Aicai) 2019*, <u>https://Doi.Org/10.1109/</u> <u>Aicai.2019.8701321</u>
- Charity, M. L., Jaminan Produk Halal Di Indonesia (Halal Products Guarantee In Indonesia). *Jurnal Legislasi Indonesia,* Volume 14 No 1, 20017,
- Decky Hendarsyah, E-Commerce Di Era Industri 4.0 Dan Society 5.0, Iqtishaduna : *Jurnal Ilmiah Ekonomi Kita*, Volume 8 No. 2, December 2019,
- Dinar Standard, T. R. And R. And, & Thomson Reuters And Dinarstandard. (2018). State Of The Global Islamic Economy Report 2018/19. Dubai International Financial Centre. <u>Https://</u> <u>Dataindonesia.Id/Bursa-Keuangan/Detail/Ri-Masuk-Daftar-Negara-Dengan-Aset-Keuangan-Syariah-Terbesar</u>
- Elasrag, H. 2016. Halal Industry: Key Challenges And Opportunities. Available At Ssrn 2735417.
- Etikah Karyani1, Ira Geraldina, Marissa Grace Haque Transformasi Digital Dan Industri Halal: Studi Kasus Pada Produsen Besar Dan Umkm, *Wirakrama Parahita Journal*, Vol 5 No 2, November 2021
- Fukuyama, Mayumi. 2018. "Society 5.0: Aiming For A New Human-Centered Society". Japan Economy Foundation Journal - Japan Spotlight. Page 47 <u>https://Www.Jef.Or.Jp/Journal/Pdf/220th\_Special\_Article\_02.Pdf</u>
- Ida Musofiana, Legal Protection For Victims Of Cybercrime In The Digital Era In Strengthening Cyber Democracy In Indonesia Post 2019 General Election, On *Proceeding Democracy In Digital Era* : Law, Governance, Sosial And Economic Perspective In Asia, Australia And Dutch
- Jeff Diamant. The Countries With The 10 Largest Christian Populations And The 10 Largest Muslim Populations. Pew Research Center. April 1, 2019.
- Kantar. 2020. Webinar Series: Covid-19 Impact On Indonesian Attitudes And Behaviours. <u>Https://Www.</u> Kantar.Com/Inspiration/Coronavirus/Webinar-Covid-19-Impact-On-Indonesian-Attitudes-Behaviours
- Lee, M., Yun, J. J., Pyka, A., Won, D., Kodama, F., Schiuma, G. Jung, K. (2018). How To Respond To The Fourth Industrial Revolution, Or The Second Information Technology Revolution? Dynamic New Combinations Between Technology, Market, And Society Through Open Innovation. Journal Of Open Innovation: Technology, Market, And Complexity, 4(3), 2018

- Michael Lipka And Conrad Hackett. *Why Muslims Are The World's Fastest-Growing Religious Group*. Pew Research Center. April 6, 2017
- Nakanishi, Hiroaki And Hiroaki Kitano. 2018. "Society 5.0 Co-Creating The Future". Policy Proposals Industrial Technology, Keidanren (Japan Business Federation). Page 4-5 <u>Https://Www. Keidanren.Or.Jp/En/Policy/2018/095.Html</u>.
- Nidya Waras Sayekti, Jaminan Produk Halal Dalam Perspektif Kelembagaan, Jurnal Ekonomi & Kebijakan Publik, Vol. 5 No. 2, Desember 2014
- Nielsen. 2020. Shopper In The New Normal. <u>https://Www.Nielsen.Com/Wpcontent/Uploads/</u> <u>Sites/3/2020/06/The-New-Shopper-Normal-Covid-19-Sellsheet.Pdf?Cid=Socsprinklr-Nielsen+Vietnam https://Idmetafora.Com/News/Read/333/Industry-40-Vs-Society-50.html</u>
- Petrillo, A., Felice, F. De, Cioffi, R., & Zomparelli, F. 2018. Fourth Industrial Revolution: Current Practices, Challenges, And Opportunities. Digital Transformation In Smart Manufacturing,
- Setiono, Understanding Of Legal Research Methodology Postgraduate Law Studies Of Sebelas Maret University, 2010,
- The Future Of World Religions: *Population Growth Projections, 2010-2050.* Pew Research Center. April 2, 2015.