THE ADVANCEMENT IN GLOBAL HALAL INDUSTRY FROM FARM TO FORK

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ABSTRACT

In light of the increasing Muslim population worldwide, it is crucial to pay attention to their lifestyle and regulations. This is particularly important for facilitating trade with Muslim nations, especially since the majority of exporters to these nations are non-Muslim. The terms "Halal" and "Haram" hold significant value in the Muslim world, as they refer to what is permissible and forbidden, respectively, according to religious guidelines (Shari'ah). Global trade and the attachment of the Halal logo to products rely on these terms. Interestingly, non-Muslims have shown a positive attitude towards Halal products, believing that they are manufactured in a more hygienic, tasty, and safer manner. However, there are challenges that need to be addressed, such as the lack of an unified Halal certification and regulations for the entire Muslim world, particularly in the era of globalization. There is an urgent need for globally accepted Halal guidelines and regulations that cover the entire supply chain, including processing, logistics, technologies, retail and wholesale, marketing, and branding. This will ensure Halal integrity and enhance trade between non-Muslim and Muslim countries

Keywords: Halal, Haram, Globalization, Halal Certification, Halal integration

INTRODUCTION

According to a United Nations report, Islam is widely recognized the second most prominent religion globally, following Christianity. The Muslim crowd is growing at a rate of approximately 6.4% annually, while Christianity is growing at a rate of 1.46% (Elasrag, 2016). This means that one out of every five individuals in the world is either born into or resides in a Muslim-majority area. Muslims make up an estimated 23% of the global population, which translates to around 1.8 billion consumers (Dar et al. 2013). It has been proposed that by the year 2050, the Muslim community may potentially grow to 2.6 billion individuals, accounting for approximately 30% of the total global population (Elasrag, 2016). Furthermore, by the year 2060, this particular demographic statistic could rise to 31.1% or 3 billion Muslims (Yousaf & Xiucheng 2018). While Europe and the USA will continue to have a minority population of Muslims, their population is expected to grow significantly, reaching 58.2 million in Europe and doubling in the USA by 2030. Additionally, the Asia Pacific region is predicted to include over 60% of the world's Muslims, while this figure for the Middle East and North Africa will be approximately 20% of the total (Ahmad et al., 2020). The most population of Muslims are concentrated in countries such as Indonesia, Malaysia, Iran, Saudi Arabia, Egypt, and Morocco (Ahmad et al., 2020). These statistics highlight the importance for western companies to understand the requirements and preferences of the Muslim market to foster trade with Asia, the Middle East, and North Africa on a large scale (Elasrag, 2016).

The attention given to Islamic halal regulations and laws is crucial for exploring trade opportunities with the global Muslim population. Many experts in the field of food economics believe that the halal food industry has the potential to become a significant market force in the coming years. This is primarily due to the rapid growth of the Islamic religion worldwide, which has resulted in a growing demand for halal items. Additionally, consuming halal products is increasing among non-Muslim consumers, driven by ethical and safety concerns (Elasrag, 2016). Interestingly, the halal food market is experiencing rapid

development, even in countries with non-Muslim majorities, especially in Europe, Asia-Pacific, and the Americas. At present, a vast majority of fast-food restaurants and leading retailers provide halal food options on their menus (Awan et al., 2015; Mostafa, 2020).

The marketability of certain food and beverage products is being modified to meet halal standards, as outlined by Elasrag (2016) and Saurdi et al (2021). Halal food and beverage criteria extend beyond the absence of pork and alcohol, encompassing the prohibition of carnivorous animals (e.g. cats and dogs), amphibians (frogs and mangrove crabs), and most insects (excluding grasshoppers). Allowed animals like poultry and cattle must be slaughtered according Islamic law to be considered halal. Additionally, there is a need for standardized hygiene and sanitation practices to verify that halal food is safe for consumption without posing any health risks (Nurrachmi, 2017; Saurdi et al., 2021). Animals are deemed non-halal due to their perceived impurity, uncleanliness, potential danger, or association with human disease (Kamarulzaman et al., 2016).

The consumption of halal food is reflected in a purified soul and leads to peace and tranquility of the human mind (Zannierah Syed Marzuki et al. 2012). However, foods forbidden by Islam pose physical and mental risks (Sabry & Vohra 2013). Halal food possesses four effects on individual characteristics such as balancing the human soul, growing wholeheartedness to uphold Islamic teachings, avoiding saying virtuous words and fostering optimism. Unpleasant human behavior like corruption and lying stems from consuming non-halal items (Pratikto et al., 2021).

In recent years, there had been extensive research conducted distinctive elements of Halal industry this research has focused on topics, for example halal supply chain management (Khan et al., 2018; Maman et al., 2018), halal meals ecosystems (Randeree, 2019), halal food standardization (Khan et al., 2019), halal certification (Ahmad et al., 2018), halal logistics (Haleem & Khan, 2017; Kwag & Ko, 2019), halal traceability structures (Sayogo, 2018), trust in halal food procedure (Demirci et al., 2016), non-compliance troubles (Rahman et al., 2017), non-public values (Arsil et al., 2018), reputation and notion of halal food among Muslims (Awan et al., 2015; Said et al., 2014), as well as drivers and limitations to halal product improvement in non-Muslim societies (Wibowo & Ahmad, 2016; De Boni & Forleo, 2019; Bashir et al., 2019). These studies have contributed to a better understanding of the Halal industry and its significance in today's global market.

This review paper represents a comprehensive overview of the concept of Halal, its defining features, the significance of maintaining Halal integrity throughout the entire supply chain, regulatory frameworks governing halal in different nations, and the global trade of halal products and services in both the Muslim and non-Muslim countries.

CHARACTERISTICS OF HALAL AND HARAM TERMS

The terms "Halal" and "Haram" hold significant importance in various cultures and religious. These terms are used to define what is permissible, allowed, lawful or legal (halal) and what is forbidden, unlawful or illegal (haram) in accordance with religious guidelines (shari'ah). Understanding the characteristics of these two terms is crucial in maintaining religious practices and beliefs. Halal and haram principles are universally implemented to all aspects of worship (ibadat), transactions (muamalat), and social interactions (mua'sharah). Halal can be taken into consideration a facultative act and item or conduct without praise or a punishment. Halal may also have been diagnosed by applying express proof inside shari'ah or by employing connection with the presumption of permissibility. Globally, there are widespread recommendations associated with halal for member international locations via the Food and Agriculture Organization of the United Nations (Elasrag, 2016; Shikoh et al. 2018). The foundation of religious obligation, as outlined in the Quran and Sunnah, influence the behavior of individuals in all aspects of their lives. The significance of halal is emphasized in Islam, particularly in relation to food consumption and dietary necessities (Tieman and Hassan, 2015). There is a growing body of research on Muslim consumers and halal resource (Omar and Zahrain, 2012; Batu and Regenstein, 2014). Interestingly, in addition to monitoring ingredients, the entire food production processes must adhere to sharia principles (Nurrachmi, 2017). As mentioned earlier, halal encompasses the avoidance of any prohibited components, including 'pork free' food ingredients such as gelatine, enzymes, lecithin, glycerine as well as additives like flavorings and coloring agents (Hj Hassan 2013; Elasrag, 2016). Quranic surah's, such as Al-A'raf [7]: 157, Al-Baqarah [2]: 173, Al-Maidah [5]: 3, Al-An'am [6]: 145 and An-Nahl [16]: 115 provide a list of halal and haram

items (Nurrachmi, 2017). As an instance, pig and bat have been introduced as haram items in Al-maidah Verse 3 and Al-Mughni Verse 96, respectively, whereas shrimp is considered halal in Al-maidah verse 96. According to Al-Quran or Hadith, haram animals include snake, eagle, mouse, and hazard, and fish, camel, rabbit, horse are considered halal (Suardi et al., 2021; Zafar et al., 2023).

Nowadays, there exist technologies that provide halal information about the halal status of products. For instance, one such technology is the use of camera phone barcode scanning for detecting halal dietary options (Suardi et al., 2021). These technologies determine the halal status based on ingredients used, but they do not necessarily indicate compliance with halal law. Minority Muslim countries may encounter difficulties in accessing reliable sources of Halal information (Bonne & Verbeke 2008). To tackle this issue, one potential solution is the implementation of chatbot as a replacement technology. A chatbot is a platform that engages in dialogue with users through a chat box and provides responses to their queries (Husein et al. 2020; Ranoliya et al. 2017). Operating on predefined rules, chatbots utilize artificial intelligence and can be utilized for various purposes, ranging from practical to entertaining (Suardi et al., 2021).

Based on statistical records, the worldwide market for halal food is experiencing significant growth, with the most of the people of Muslim markets situated in Asian nations, accounting for 63.3% of the overall halal market (Nurrachmi, 2017). Islamic regulation dictates that everything is considered halal or permissible, except for those items that are explicitly prohibited (haram) through Islamic regulation. Consequently, the concept of the halal Market financial system has been set up, in which sectors ensure the removal of haram factors from their middle services and products (Shikoh et al., 2018).

PRINCIPALS OF HALAL PRODUCTS

There exist foundational principles in Quran and the Hadiths that pertain to the intake of halal meals and beverages. Even as the current focus of the industry revolves around what is taken into consideration "halal" or lawful, it is critical to notice that the steering additionally emphasizes the idea of "tayyab" or purity (Shikoh et al. 2018). Further to spiritual principles, halal also encompasses factors of fitness, cleanliness, and safety. Muslims, in particular, should take note of sure principles outlined by Elasrag (2016): The classification of merchandise or items as halal or haram (lawful or illegal) is determined to the aid of Divine orders; The categorization of halal or haram is based on whether they are beneficial or harmful, respectively; Shariah orders regarding certain topics can be either fixed or variable, depending on certain times and locations; shariah orders are ranked in step with their level of gain or damage, with the preference given to the best selection whenever vital; and certain controls and governing laws, including the principle of "La zirar" (no harm to humans), the idea of haraj (the presence of great threats or constraints), and urgency regulations, may disapprove certain orders from time to time.

The enlargement of the halal enterprise is now beyond the food sector that encompasses diverse different sectors such as prescription drugs, cosmetics, health goods, toiletries and medical gadgets. Additionally, it has prolonged its attain to service zone components like logistics, advertising and marketing, print and digital media, packaging, branding, and financing (Dar, Azmi et al. 2013; Elasrag, 2016; Ahmad et al., 2020). Furthermore, with a boom inside the range of prosperous Muslims, the halal industry has further advanced to provide lifestyle products and services, which includes halal journey and hospitality offerings in addition to fashion (Elasrag, 2016). As an instance, the Ritz-Carlton, with a purpose to cater to multicultural travelers worldwide, provides Quran, prayer-carpets, halal food, and bidets in select locations. In other life-style segments, Sun Silk, a hair-care logo, has brought a range of unique shampoos for women who wear the hijab. DKNY has also launched a special grab line for Ramadan (Shikoh et al. 2018).

The notice of consumers is the reason why it is far essential to apply the Halal certification and logo on the food merchandise. By means of having the logo on the packaging, it guarantees that the products have been produced and organized in accordance with Islamic requirements. Moreover, this logo demonstrates the most hygienic and clean way of production for non-Moslem consumers (Nurrachmi, 2017). Diverse researches in this field have constantly proven a high-quality correlation between the halal logo and positive perspectives in the direction of halal food. In reality, Muslim consumers use the halal logo as a reliable and visible approach to verify the "halalness" of food items

(Marzuki et al., 2012). In a study conducted by Hamdan et al. (2013), it was found that Muslims exhibit a higher level of trust towards products bearing the halal logo as opposed to those with the ISO certification.

The halal industry has experienced sizeable growth and popularity all over the world, including in western areas like America and Europe. The growing attention and awareness of halal items and services have contributed to this rapid development. Humans select to eat halal products for various reasons, such as hygiene, safety, health benefits, and the guarantee of trustworthiness resulting from religious ideas. Additionally, the motivation behind the selection of halal products stems for globalization and the mixing of various cultures and cuisines (Ahmad et al., 2020).

A verity of legislative activities has been undertaken by numerous countries to comfort the regular trade of shariah compliant food items. These activities encompass the status quo of shariah compliant guidelines, the implementation of inspection and authorization methods, the endorsement of merchandise, export promotions, and various initiatives. As a result, the administration has recognized the significance of the shariah compliant industry in all enterprise endeavors (Ahmad et al., 2020).

HALAL SECTOR IN MUSLIM AND NON-MUSLIM SOCIETIES

The halal market has gained the reputation among non-Muslim purchasers who are interested in ethical consumerism. The values associated with halal, such as social responsibility, environmental stewardship, financial and social justice, welfare of animal, and ethical investment, have attracted attention beyond religious compliance. Additionally, the increasing reputation of halal certified products amongst non-Muslim consumers may be attributed to the growing demand for high-quality, safe, and ethical items that also taste good. Halal certification provides assurance to consumers and influences their purchasing behavior. The presence of the halal logo enhances brand credibility and fosters trustworthiness. Consumers choose halal products not only for their standards and quality, but additionally because they appreciate the cultural integration and dietary acculturation that comes with them. This plays a significant role in the purchase of shariah-compliant items (Elasrag, 2016; Ahmad et al., 2020).

However, there are non-Muslims who hold the belief that Halal contradicts commonplace sensibilities due to its requirement of extracting all blood from meat, similar to Kosher food. Consequently, Halal has acquired a negative connotation amongst certain audiences. Despite the fact that, considering the sizeable marketplace length and the relatively simple procedure of converting food to Halal, some businesses have discreetly delivered "Halal by using stealth." Unfortunately, this technique has further worsened the issue and hindered the wider accessibility and reputation of Halal products, as stated in this report (Elasrag, 2016).

Asia and the Middle East have traditionally been the primary target markets for halal products from a market attitude. However, the UK, Europe, and the united states, as key markets, can have a significant impact on the global improvement of the halal marketplace. The inclusion of halal products in the Western diet is steadily growing, evolving into a thriving international industry worth billions of dollars. This industry consists of major multinational groups such as Tesco, Unilever, and Nestlé, who have actively developed their halal-licensed product lines. In 2016, Nestlé had 150 out of its 468 factories global licensed as halal, providing more than 300 halal food and beverage items in over 50 countries. Other foremost global retailers like Carrefour and Tesco are also expanding their services of halal food in numerous markets.

Developed nations like Japan, Australia, and the UK have witnessed an extensive demand for halal products, driven by the desire for a convenient lifestyle. Apparently, individuals from other religions also demonstrate an inclination towards purchasing Halal products because of the concept that they are safer. In the UK, for instance, Muslim population accounts for approximately 3 million people, with a substantial consumption of Halal meat amounting to over 6 million dollars. This can be attributed to the demands of non-Muslims as well (Ismail, 2015). The eco-ethical characteristics associated with shariah compliance play a crucial role in establishing the "halal or tayyib" products as healthy, clean, and harmless. Therefore, it is imperative to incorporate the tayyib standards as an essential component of the halal system. Additionally, sustainability is another key factor from an eco-ethical perspective that should be integrated into the concept of "halal and tayyib." Certain shariah compliant food companies in the USA, such as Saffron Road and Crescent Foods, have already demonstrated the integration of

"green" elements in their product designs, marketing strategies, and advertising campaigns. In the future, the incorporation of shariah compliant foods into the mainstream business could further embrace these eco-ethical aspects (Ahmad et al., 2020).

Based on a record, manufacturing halal food is commanded by non-Muslim countries, including the united states, China, Argentina, Canada, New Zealand, France, Brazil, and Australia. These nations export halal meats in most cases to members of the Organization of Islamic Committee (OIC), highlighting the significance of the halal niche marketplace and its contribution to their respective economies. Australia, being the foremost global exporter and leader in halal meat production, plays a crucial role in this industry. The primitive importers of Australian Halal meat are Indonesia, Saudi Arabia, and the United Arab Emirates (Elasrag, 2016; Nurrachmi, 2017). Notably, Brazil, Argentina, New Zealand, and Australia are recognized as key players in the export of halal meat and poultry (Elasrag, 2016).

However, there are several obstacles in the international production of halal food. One of the main challenges is the continued confusion surrounding halal standards, requirements, and essential certificates. This confusion arises from the involvement of numerous governmental and private organizations, as well as impartial Halal Certification Bodies (HCB's). Additionally, there may be little regulatory oversight of independent HCB's in non-Muslim majority nations, which further complicates the issue. Another challenge is the difficulty in acquiring shariah-compliant investment for halal food production. Despite these challenges, there are also opportunities on this discipline. OIC-countries (Organization of Islamic Cooperation) and non-OIC countries can form partnerships to enhance their halal capabilities. As an instance, countries like China, South Korea, and South Africa have already joined forces with Malaysia and the UAE to expand their halal capability. Furthermore, advancements in technology can contribute to supply chain integrity, particularly in the raw meat and food ingredient sectors. The Brazilian Meat Exporting Industries Association (ABIEC) has introduced a device named the e-seal, which tracks meat cargo passing through ports. There is also a growing demand for hormone-free meat due to the side effects associated with hormone usage. The UAE supermarket chain Spinneys has taken the lead in selling hormone-free meat. Moreover, it is crucial to prioritize the concepts of halal and tayyib to establish a global standard of safety and wholesomeness for halal food. The trend of consuming organic and natural food has gained popularity among Muslim consumers, especially the more youthful millennial generation. Despite the higher cost of organic and natural products, such as meat, achieving such products is a long-term purpose for Muslim manufacturers. Improvements and advancement can also be made in areas such as product quality, marketing messaging, packaging, branding, and overall communication for both existing brands and new producers. Additionally, there are investment opportunities in integrating the halal food value chain, from slaughterhouses to distributors, and in the development of strong companies. (Elasrag, 2016; Shikoh et al., 2018).

HALAL FOOD: FROM FARM TO FORK

Halal conventionally referred to meat and poultry, but it has now developed to include non-meat products like dairy, baked goods, snacks, confectionery, ready-made meals, and other processed food and beverage products. The concept of "Farm to fork" halal process integrity is evident throughout the entire supply chain, including warehousing, transportation, and logistics (International Trade Centre, 2015).

Both Muslims and non-Muslims prefer consuming Halal products because they are considered healthier, cleaner, tastier, and of high purity from the farm to the table. Nourishment and sanitation are the key aspects of halal food (Zafar et al., 2023). In Islamic countries like Malaysia, the food chain, including agricultural activities, production, logistics of restaurants, and retail chains, is operated with the involvement of non-Muslim economies. Hence, it is essential to inspect products throughout the whole food supply chain, from preparation to final retail and distribution, before obtaining the final certification of halal HCBs. This certification is beneficial for both producers and buyers. However, due to variations in legislation regarding the extent of slaughtering in Islamic economies, there is no internationally unified halal certification (Adams, 2011; Zafar et al., 2023).

- **Technology**

    This sector plays a crucial role in agriculture and food industries, leading to the advancement of superior Halal standards and certification. This includes aspects such as the slaughter process, food processing, micro ingredients, additives, etc. As a result, there is a growing need for more professional audits and numerous HCBs. One debatable technological advancement in the meat industry, broadly employed in the Muslim world, is stunning. Also, the sharing of halal and haram production lines has introduced new challenges in testing for haram substances, such as porcine DNA, using check kits. Furthermore, technology has facilitated the track-and-trace method through radio frequency identification for providers of logistics service. However, its implementation in the halal industry is not clear. On the other hand, on-line systems created through digital technology have spread out online halal marketplaces like daganghalal.com and zilzar.com to global audiences. These systems provide the opportunity to access an international market for producers, manufacturers, and traders. In addition, there are various online services catering to Muslim and family-friendly travel, such as CrescentRating and HalalBooking. Alchemiya is an online subscription channel that streams content on global Muslim culture, while several websites provide Islamic and modest clothing fashion options. These initiatives tap into the digital economy and cater to the young urban population, which is highly familiar with the Internet and social media (International Trade Centre, 2015). Given these developments, it is crucial to expand skill sets and provide micro-learning opportunities to effectively manage rapidly evolving technologies that support halal compliance (Voak & Fairman, 2021).

    In relation to the worldwide significance of ensuring food safety and its influence on shariah compliant food industry, it is imperative to motivate nations reliant on imported food to implement certain policies and technological advancements to tackle this issue. One such approach could involve utilizing advanced water irrigation systems, hydroponics, and modern air-conditioning facilities for poultry and dairy farms (Ahmad et al., 2020).

- **Logistics**

    Logistics is an important driver in the halal marketplace as it contributes to maintaining the integrity of the supply chain from beginning to the end. The progression of halal logistics has been prevented by the excessive expense of investing in track-trace technology and the absence of clear requirement and guidelines. However, efforts are being made to address these challenges in the future. Halal logistics involves the use of dedicated storage, handling, and transportation facilities for Halal products, ensuring their segregation from non-Halal items. This segregation prevents any direct contact with Haram items, thereby mitigating the contamination risk (International Trade Centre, 2015).

    Halal logistics encompasses several significant concerns related to the management of practices. These consist of ensuring the safe food transportation and distribution, implementing proper storage and warehousing protocols for perishable items, and adopting appropriate methods for handling materials and operational processing at terminal nodes (Voak & Fairman, 2021).

- **Supply Chain**

    Halal supply chain compliance is rooted in ensuring hygiene, cleanliness, safety, and wholesomeness of products and services in accordance with Sharia law. This requires adherence to specific hygiene maintenance programs and protocols, including orderly vetting of cleaning, sanitation, waste, and the pest control systems employed by a provider of logistics service. Additionally, individual hygiene of distribution employees must be monitored, and proper hygiene practices should be followed during product transportation. The labeling of halal products is of the utmost importance for easy identification. Furthermore, the smooth flow and integrity of products within the supply chain rely on comprehensive training of all operators regarding halal food hygiene and protocols. This training encompasses knowledge about the job itself and the underlying principles of shariah, which serves as a driving force for enhancing human capability within the Halal supply chain and in a Halal environment. This knowledge encompasses understanding halal-haram principles and implementing proper Halal

management practices in accordance with halal Islamic rulings and shariah law (Omar & Jaafar 2011; Nor et al. 2016; Shariff et al. 2016).

However, ensuring compliance in the global trade and complex food supply chains has proven to be a challenge (Voak & Fairman, 2021). Therefore, it is necessary to develop a skilled and knowledgeable workforce with exceptional performance and social assets that align with strict halal compliance (Hashim & Shariff, 2016). Modern halal supply chains involve conducting tests throughout the production, distribution, and consumption processes (Rejeb, 2018). The longer chains and increased vulnerability due to globalization during food transportation have further emphasized the need for appropriate connections between supplier yield, supply chain performance, and customer service to maintain trust and uphold service standards (Voak & Fairman, 2021). Consumers' growing awareness of global halal food has made them more concerned about the origin, authenticity, safety, and quality of their food (Abd Kadir et al., 2016). Mapping the halal chain is crucial to reduce non-compliance and ensure integrity among the various sectors of the supply chain. This involves effectively monitoring critical control points and adhering to hygiene, cleanliness, safety, and wholesomeness requirements to maintain the integrity of the halal supply chain. Implementing a halal supply chain compliance program is essential for better control over product quality, the transparency of information, regular financial flows, and increased visibility. To reduce the risk of non-compliance, supply chain actors must be harmonized, monitored, and managed more effectively through comprehensive enterprise halal supply chain risk management programs that encompass proper risk-management activities and ensure the control of financial, product, and information flows from manufacturer to customer (Voak & Fairman, 2021).

The manner in which animals are raised, handled, and fed holds great significance in the halal sector. When it comes to animals, especially poultry, there are several important factors to consider, such as providing access to outdoor spaces, allowing foraging, and enabling a natural way of life. Consumers are becoming more sensitive to the type of feed given to animals before slaughter. For instance, feeding chickens with vegetarian items is preferred over using blood or animal by-products. Similarly, consumers are avoiding food that contains hormones and antibiotics, indicating a growing preference for natural foods. In order to ensure compliance with halal standards, it is crucial to adhere to specific certification and standards set by HCBs. This is particularly important for exporting products to countries with their own importing standards. Manufacturers in the halal industry must closely evaluate the development of halal compliant decisions at national, regional, and global levels in order to maintain ahead of any alterations (International Trade Centre. 2015).

Slaughtering is one of the most contentious issues in this context. Non-dedicated and shared slaughter lines in Muslim-minority countries are more susceptible to contamination, such as the presence of pork DNA due to inadequate wash-down procedures. In countries like Australia and New Zealand, dedicated processing plants that adhere to Halal compliant standards are considered the appropriate choice. Other controversial topics of discussion among industry authorities, certifiers, and the public include hand slaughter, stunning, and the usage of mechanical blades. The compliance perspective and consumer demand are key factors influencing market variations. Contrary to the viewpoint of certifiers, mechanical slaughter is not considered a global trend due to its lack of acceptability in terms of halal compliance. From the consumers' perspective, non-stunned hand slaughter is preferred, although this is not always practical, especially for poultry (International Trade Centre, 2015).

The rise in Halal food fraud can be attributed to the increasing abusage of Halal Certification and Regulative logos. These fraudulent actions expose the flaws in assessing product compliance without a doubt (Supian et al. 2019). In order to distribute responsibility among all stakeholders, the traceability of Halal food has been established (Supian et al. 2019). This involves characterizing the item, process, participant, marketing features, and related logistics data in the supply chain from both upstream and downstream perspectives. All this information should be recorded at every node and securely stored in a centralized database (Khan et al. 2018). To further streamline the administration of traceability, it is crucial for halal certification and regulatory bodies to adopt standardization protocols that adhere to similar accreditation standards (Hassan et al. 2016). The use of traceability-tracking structures enables

fast communication and transparency of information flow along the supply chain (Voak & Fairman, 2021). Achieving this requires extensive cooperation amongst all sectors involved (Mohd Saifudin et al. 2017). However, the lack of universally accepted halal standards across Muslim countries poses an important challenge for the advancement of the halal industry. Each nation has its own halal compliance standards, making monitoring and regulation complicated (Majid et al. 2015).

- **Processing and Manufacturing**

    Halal compliance places its primary focus on ensuring, regulating, and certifying the processes involved in food production. The standards associated with this compliance are designed to oversee cleanliness, hygiene, and prevention of cross-contamination with non-halal foods throughout various stages such as production, on-farm facilities, and slaughtering equipment. It is crucial to maintain physical segregation not only during the production stage but also throughout the entire supply chain to uphold the halal status of the items (Abd Kadir et al. 2016).

    After globalization, the integration of halal practices into various sectors of the supply chain has become increasingly complex. It is crucial to meticulously consider every aspect, ranging from the ingredients used, including flavorings, colorings, and additives, to even the adhesive used in packaging. Ensuring safety requirements and upholding halal integrity falls primarily on the shoulders of manufacturers. Food suppliers must undergo training to guarantee that they maintain the similar level of halal integrity as expected by the brand owners in a multicultural environment. While product quality typically varies based on its cost and market positioning, both high-end and discounted products can be produced while still upholding the development of halal integrity (International Trade Centre. 2015).

- **Labelling**

    There is a diverse range of perspectives among policymakers worldwide regarding the labeling of halal products. In Europe, for instance, the method of slaughter must be clearly indicated on the label, specifying whether stunning occurs before or after cutting. Some argue that this requirement may lead to religious discrimination against both the Jewish and Muslim communities, as non-Muslim consumers may question the religious slaughter's impact on animal welfare or secular principles. Certain Muslim groups attach great importance to knowing whether stunning or mechanical slaughter was employed. Policymakers and manufacturers face challenge of addressing this issue. Additionally, labeling and packaging play a crucial role in marketing. While halal products may align with the values of eco-ethical food movements, there remains a significant disparity between the way these products are labeled and displayed. Manufacturers should carefully consider their halal product labels, rather than simply including the Arabic word of 'halal' or the HCB logo on the label (International Trade Centre. 2015).

- **Marketing and Branding**

    Product branding relies heavily on labelling, with packaging being a crucial aspect of halal food products. This is because first-time customers place greater emphasis on packaging rather than the actual contents. Understanding consumer preferences and distinguishing between their requests is vital. Obtaining real-time information about the target market's consumer behavior and mindset can be achieved through direct conversations or specialized research conducted by agencies like EthnicFocus in London or Us DinarStandard. Additionally, strategic campaigns on social media platforms can provide immediate options for reaching the desired audience. The younger generation, both Muslim and non-Muslim, recognizes the growing effectiveness of social media in gathering real-time market information, which greatly contributes to successful marketing efforts (International Trade Centre. 2015).

- **Logistics**

    The halal industry is increasingly recognizing the importance of a comprehensive farm-to-fork process, and compliance in whole areas of logistics contributes to guaranteeing the halal items' integrity. Consumers expect that the halal standards are maintained throughout the entire journey, from manufacturing to consumption. Approximately 15% of the total value of certain market sectors is attributed to logistics. Currently, there are various standards for halal logistics,

with notable ones established by Standards Malaysia and ESMA in Dubai. Establishing appropriate halal logistics requires collaboration among different parts of the supply chain, which has proven to be challenging and remains largely theoretical. However, forward-thinking manufacturers and exporters should closely monitor the halal logistics' emergence. Examples of initiatives in halal logistics include Dubai's halal industrial parks in the Jebel Ali Free Zone and the TechnoPark. Leveraging Dubai's expertise as a trans-shipment hub, along with the implementation of ESMA's standards, may lead to the establishment of port-to-port procedures in the next stage of market improvement. In the future, dedicated logistics may become a requirement rather than an option, as it will provide convenience for producers and instill confidence in consumers (International Trade Centre. 2015).

All compliance requirements must be met by logistics, equipment, facilities, and the distribution-related infrastructure. These elements should be constantly monitored, maintained, and cleaned to ensure adherence. Additionally, it is crucial to establish mechanisms that prevent contamination. It is the duty of suppliers and producers to diligently oversee every stage of distribution and guarantee complete transparency in the movement of their products. Transparency contributes considerably to ensuring the security of logistics-associated services, which in turn facilitates the implementation of preventive or mitigating measures across the entire supply chain (Voak & Fairman, 2021).

- **Ingredients and Additives**

    The complexity of product recipes and their supply chains have heightened the significance of micro-ingredients, with discerning the consumers demanding information about food additives and flavors. In certain cases, recipes may be altered to incorporate vegetable-based or synthetic ingredients instead of animal-derived ones. Halal manufacturers must conduct extensive research on an ingredient they use and partner with a competent HCB to navigate regulation on additives. In line with the growing preference for natural foods, producers should prioritize "less is more" when considering micro-ingredients as well as food additives (International Trade Centre. 2015).

- **Wholesale and Retail**

    Manufactures of halal products place great important on wholesale and retail partnerships with halal-friendly businesses. Retailers understand that many Muslim customers rely on their stores for their weekly shopping, and nor offering halal products can lead to a loss of customers. As a result, many large retails are now stocking halal products to attract these customers, leading to competition among local stores to gain their business (International Trade Centre. 2015).

- **Customer Relations**

    The importance of customer satisfaction in the success of any business cannot be overstated. Despite the halal sector not yet being fully integrated into the mainstream market, it has managed to establish strong customer relationships that are even more crucial than mainstream presence. Nevertheless, establishing these connections has proven to be a formidable undertaking as a result of historical apathy in Muslim-dominated economies and a dearth of trust in marginalized markets. The advent of social media and the digital economy has fast changed this landscape, bringing manufacturers and retailers closer to their customers than ever before. Effective communication and a sincere understanding of the customer's value for halal are crucial in preserving brand loyalty. As the halal food market continues to grow, the interconnected nature of all connections in the value chain could become increasingly significant (International Trade Centre. 2015).

CONCLUSION

Halal compliance, particularly in the realm of food production, has gained significant popularity in both Muslim-majority and Muslim-minority communities in recent decades. It has become one of the largest industries worldwide. Every aspect of food preparation, handling, packaging, transportation, and logistics must adhere to Halal standards. When manufacturing Halal food, compliance should begin at

the farm and continue all the way to the consumer's plate. The product must be nutritive and prepared using allowed ingredients in a clean and hygienic status, without any contamination from the haram elements. Halal food requirements encompass all food ingredients, especially meat products. Various standards setting bodies and halal certifying companies are responsible for managing the standards, regulations, and monitoring of Halal compliance. In most Muslim-majority countries, government agencies directly oversee these requirements as part of import regulations. The broader halal market dynamic extends beyond food production and encompasses a humane ethos that emphasizes fair treatment of animals, organic/pure (tayyab) foods, and environmental friendliness. The advancements in food production technology have led to significant progress in food processing. The advancement in the Sharia compliant trade calls for the establishment of regulations and certification, specifically in the domains of food processing, smaller scale ingredients, and additives.

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