

The Impact of Halal Certification in Herbal Medicine on Indonesia's Agribusiness and Pharma Sectors: A Review

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The Islam feature in the embark on a herbal contribution for the Indonesian economy and herbal medicine use Islam features to settle on a business model. One of the focus of the study is to employ in the Halal Treatments starting from the analysis of the available herbal treatments and certification of this treatment, it's marketing issue and prospects of this market in the Indonesia region. There is a rising need for Halal certified products globally especially herbal products as a result of ethical and natural products due to the increase in health concerns. Indonesia embracing agriculture in compliance with halal certification would indeed be an enticing business opportunity as farmers would sell the ingredients and also promote rural development. It really affects the farming community structure as they would be able to practice halal compliant practices that provide a false promise of rural development. The same benefits also go the pharmaceutical sector as the farmers have the raw materials they need expanding their target market both locally and internationally. The documentation protocol is lengthy and complicated which increases the requirement for higher costs as they need high levels of compatibility especially from Islamic standards. These challenges simply demonstrate the need for more assistance in the form of industry coordination and coherence of the policies to meet targets without compromising on quality. In spite of those issues, there is a conspiring trend that bare noticing for many companies, the trend of getting higher levels of consumer trust and access to overseas markets is one that has already been established. This review emphasizes the need for increased study and work of the industry to better the certification process, cut costs, and improve the economic benefits for Indonesia's Halal-certified herbal medicine industry. It follows that halal certification is likely to enhance the international competitiveness of Indonesia's herbal products working to position them as quality products on the market for health-conscious consumers worldwide.

Keywords: Agribusiness, certification, halal, herbal medicine, pharmaceutical, Indonesia.

INTRODUCTION

Halal an Arabic term meaning lawful has its roots in food items but have since expanded to include pharmaceuticals and animal husbandry. The idea of halal certification indicates that the general item is suitable for consumption or usage as it was manufactured with consideration of the Islamic rules (Kamali, 2013). Herbal medicine has earned its place in primary health care as it has been in practice in the past. WHO is anticipating that about 80 per cent of the population in the world appreciate primary health care in the forms of herbal medicine as its practice (Bhardwaj *et al.*, 2018). This is the case in the Muslim communities where there are greater opportunities for constituencies for halal products. As of 2020, the market for halal medicines was valued at 93.5 billion dollars and it is expected to reach 174.59 billion in

2026 with a compound annual growth rate of 10.3% (Grand View Research, 2021).

Herbal therapy and healing has always been regarded as one of the Indonesian legacies and traditional forms of medicine. Many herbal products have also increased in popularity in recent years because they are believed to be safe, not harmful, and can be sourced from nature (Widjaja, 2024). As a result of this growing concern for health and the source of the cure, the need for a halal certified herbal medicine has gone up considerably. Certification of halal means that the products are in compliance with Islamic laws concerning food substances, which prohibits the use of some ingredients and also specifies the manner in which foods should be processed (Krisharyanto *et al.*, 2019). For herbal medicines, this includes the assurance that the ingredients are free from haram (prohibited) substances and that the process of making

them is consistent with the rules of Islam. The whole certification process is complex and involves inspections and audits by the authorized halal certifying authorities.

Even so, in spite of the optimistic prospects for the market for Halal-certified herbal medicine, some issues continue to affect the industry such as legal intricacies, cost, and supply chain and traceability transparency. These barriers make it problematic particularly for small and medium enterprises to obtain and retain the certification, thus circumscribing the market and its growth. Attention in previous research has mainly been directed towards Halal accreditation of primary food items with little attention focused on cosmetics and other chemicals. Such works are relatively weak in exploring the special needs and challenges that are attributable to the herbal drugs which include special regulatory, procurement and manufacturing aspects. Contra to food products, herbal drugs require rather strict Q.A. procedures because of their medicinal use and because the raw material comes from nature which is oftentimes not stable and has variations. The objective of this research is to fill this void by performing an in depth examination of the issues surrounding Halal certification in relation to herbal medicine in Indonesia including the circumstances leading to its enforcement, the laws and policies against it, as well as the possible opportunities for the market (Alqudsi, 2014; Khan and Haleem, 2016). While these areas are undoubtedly important, there is an absent literature that deals directly with the special circumstances of Halal certification in herbal medicine, as well as specific strategies for marketing this herbal medicine to Muslim consumers.

There is potentially profound consequence of halal certification in herbal medicine to the agribusiness and pharmaceutical prospective of Indonesia. For agribusiness, it offers a market penetration in the expanding halal sector by growing and offering raw materials which are halal compliant. This, in turn, helps rural areas and encourages sustainable agriculture. For the pharmaceutical sector, halal certification increases the competitiveness of the market and diversify the clientele, both national and abroad. But, acquiring and maintaining the halal certificate has its set of difficulties. These are being able to monitor the supply chain's flow and openness, meeting the high standards required for certification, and meeting compliance requirements which are often expensive. In spite of those challenges, the added potential costs in terms of broadening the market and in gaining the trust of aggrieved consumers means that halal certification is a key objective especially for most companies in Indonesia.

This article tries to and provide the present context of halal certification with particular emphasis on agribusiness and pharmaceutical industries in Indonesia focusing on herbal medicine sector. As such, it tries to analyze regulations, markets dynamics and case studies to address the prospects and difficulties of halal certification. Moreover, it points out

the use of halal certification in promoting Indonesian herbal medicine products in the international market.

MATERIAS AND METHODS

This research approach utilizes a thorough and comprehensive literature review to assess the situation regarding halal certification within the herbal medicine sector of Indonesia with particular attention to legal frameworks, consumer market as well as industry issues. The methodology is developed into three main stages:

1. Information Gathering: We performed which articles in journals, industry's reports, government's documents and workshop/policy briefs related to verified halal bodies such as BPJPH (Badan Penyelenggara Jaminan Produk Halal) and MUI (Majelis Ulama Indonesia) were available. Scopus, Google Scholar, and PubMed cited relevant articles and books as long as the dates were up-to-date and valid. Sample search terms used include "halal certification", "herbal medicine", "agribusiness", "pharmaceutical industry" and "Indonesia."
2. Analysis of Data's Inclusion and exclusion criteria: Only the articles that were on topic and pertained to halal certification and the herbal medicine industry in Indonesia were selected for the research cutoffs. Halal certification in other sectors such as food and cosmetics articles was read with a view of providing contextual understanding but were not specifically analyzed unless they helped in explaining the regulation and or market conditions in herbal medicine.
3. Results: The gathered materials were subsequently arranged systematically into themes in accordance to the objectives of the research, which are: (i) processes and requirements for halal certification, (ii) potential markets and consumption patterns, and (iii) regulations and barriers to practice within the herbal medicine industry. Content analysis was done so as to extract the themes, patterns and gaps in the literature available. Furthermore, such analysis was used to elaborate on the differences in the requirements of food and those of herbal products, and which formed the rationale and the problem of the study.

With this approach, it was possible to provide a detailed exposition of the Japanese halal certification issue in the context of the Indonesian herbal medicine market while stressing relevant regulations, economic and operational variables involved in the expansion of the market.

RESULTS AND DISCUSSION

Historical Context and Evolution of Halal Certification:

The term "halal" can be traced back to the Islamic dietary rules which are derived from the Quran and Hadith. Such prohibitory measures were principally directed towards food



and drinks to ensure that the Muslim population consumed only that which was categorically allowed food. However, with globalization and an increase in a Muslim population, the requirement for halal certification became more prevalent in order to respond to a diversified and modern consumer demand. This advancement has included medicines, cosmetics, and more recently herbal medicine. Growing interest in the formalized halal certification began around the mid-20th century as several countries established regulatory bodies to oversee the process. Before the halal certification conducted by the Indonesian Ulema Council (MUI) in 1989, the Ministry of Health initiated halal labelling of food goods in Indonesia at the end of 1976. Effective November 10, 1976, all food and beverages containing pork and its derivatives must clearly indicate the presence of pork. This is governed by the Decree of the Minister of Health of the Republic of Indonesia Number 280/Men.Kes/Per/XI/76 about the Regulations for the Distribution and Labelling of Foods Containing Pig-Derived Ingredients (Faridah, 2019).

In 1994, Malaysia developed JAKIM (Department of Islamic Development Malaysia), which has subsequently emerged as a global standard for Halal certification (Abdullah, 2019). Likewise, other nations with substantial Muslim demographics, such as Saudi Arabia and the UAE, have established their own certification systems. The initial efforts in Halal certification were motivated by the need to assure Muslim consumers that the items they consumed adhered to Islamic rules. Due to specific regulations around the slaughtering process, the focus at the outset was primarily on meat based products and poultry. However, with the growth of the Muslim community in these non-Muslim majority countries, the importance of these Halal items rose, leading to a wider variety of certification (Suryawan *et al.*, 2022).

Certification as Halal has become a multi-dimensional and sometime a complicated process in one's modern society, it involves the particular Muslim authority, the qualified scientist and other relevant industry practitioners. The generally accepted procedure on certification involves follow-ups, inspection, auditing and even testing for the compliance with the requirements for all things Halal. Such criteria are affected by new challenges and inventions from the areas such as food tech, pharmaceutical or even cosmetics. The establishment of international halal standards marks a significant step towards the development of halal certification. For example, standards developed by the ihia and the smiic (Said *et al.*, 2023). These are efforts meant to unify the procedures of halal certification across different countries, thus making transactions easy and uniformity of practice all over the world. In addition, the global outbreak of the digitization of halal certification practices has brought about increased transparency and traceability of the certification leading consumers to easily confirm halal status of the product. Also other forms of technology such as blockchain are being studied and finding ways for ensuring

the reliability of the certification process as well as speeding it up in a quality manner.

Current State of Halal Certification in Indonesia: Throughout the years, halal certification in Indonesia has evolved remarkably. Initially, the Indonesian Ulema Council (MUI) undertook responsibility for that duty, now BPJPH has taken over that duty with the aim of achieving greater control that is both coordinated and systematic. The details of all the ingredients, techniques and even handling are scrutinized in the certification process in order to maintain halal compliance (Rachman and Sangare, 2023). The transfer of responsibilities to BPJPH was part of the move to establish a coherent framework of policies in relation to halal certification. Still, this transition has not been without its challenges, including the coexistence of various regulations and the challenge of training the public and stakeholders sufficient on the new approaches. The other aspect that can be considered as critical and integral in BPJPH's approaches are that of the constructs of open and convenience. This also includes the development of surveillance systems that do not hinder the development process without imposing additional capital and labor requirements on the system (Rosidah *et al.*, 2021). This encompasses the provision of digital systems for tracking and applying for certification thereby shortening the time spent on red tape and improving the overall efficiency of the practice.



Figure 1. Logo for Badan Penyelenggara Jaminan Produk Halal (BPJPH).

Furthermore, the BPJPH has engaged in several international collaborations aimed at standardizing Indonesia's Halal certification with the global practice. This standardization is essential in promoting the exportation of Indonesian Halal commodities to worldwide markets, thus benefiting the country's economy and local industries. In addition, integration with global Halal certification agencies improves the acceptance of Indonesian halal products in the global market.

Education and outreach are also elements of BPJPH's strategy. The agency organizes periodic workshops, seminars, and training programmes for relevant stakeholders so that they are updated on the latest Halal certification requirements and procedures. These efforts are directed at creating a culture



of compliance and quality in the industry which in the long run benefits the consumers (Bahrudin *et al.*, 2024). Moreover, BPJPH's function does not end with certification alone. The agency also engages in anti-research and development work that aims at improving the Halal standard and solving the new problems in the Halal industry. Such forward-looking measures guarantee that Indonesia keeps pace with the innovations in the Halal certification as well as maintains its status as the leading country in the global Halal market.



Figure 2. A. old logo; B. new logo for halal certified in Indonesia.

General process of halal certification in herbal medicine:

The purpose of Halal certification for herbal medicine is to ensure compliance with Sharia laws. The whole process can be subdivided into the following main stages (Khan and Haleem, 2016):

1. Sourcing of Raw Materials: Raw materials of herbal medicines which can be deemed as Halal cannot be sourced from Haram sources such as pigs or not

slaughtered meat. Furthermore, these materials should be intact from any contamination with non-Hala items during their growing, fetching and safekeeping processes.

2. Manufacturing Processes: Manufacturing processes should indeed be in conformity with Halal requirements, this has to do with ensuring that apparatus and facilities do not contain trace amounts of non-Halal products. This means that dedicated lines will be needed or time-consuming wash-outs carried out between runs of Halal and non-Halal items.
3. Quality Assurance and Testing: Testing of herbal medicines must go through quality assurance process or processes that will ensure everything about the product is safe, effective, and in line with Halal standards. This implies screening for the presence of non-Hala pathogen-free substances, microbiology assessment, and through inspection of all health and safety legal constraints.
4. Certification and Labelling: A product that has fulfilled each requirement can be certified as Halal by a relevant certification body. This certification may be denoted by a Halal label on the product's packaging, which assures the consumers that the product is in accordance with the tenets of Islam.

Halal Certification Process of herbal medicine in Indonesia by BPJPH:

The procedure for acquiring halal certification for herbal medicine products in Indonesia through BPJPH (Badan Penyelenggara Jaminan Produk Halal) consists of many particular structured phases which enable them to align with the halal standard. First companies have to collect the required documents that are necessary in the applications such as the product ingredient, how the product was produced, and



Figure 3. Halal certification process.



even whether each of the raw materials is halal. After that, they have to register their product and company by creating an account in BPJPH's online portal. They are also asked to upload the application documents including the halal management system and detailed product profiles. Upon receiving completed application packages, BPJPH crosschecks the submitted documents. When the documents are satisfactory a date for an on-site visit and audit is settled. This audit is carried out by the institution authorized by government that can evaluate the HYGIENIC quality of product after the getting finished. Also during the onsite test, random samples may be taken to be tested chemically in laboratories as one way of ensuring that halal standards are adhered to the core after every production. Once the on-site monitoring is completed, the audit costs are submitted by the reporting authority to the BPJPH and handed to a total government authority which concentrates entirely on certification approval. The halal documents are made available if the product satisfies the requirements.

Subsequently, such products are registered on the corporate members' official BPJPH website, and businesses are obliged to display the halal logo on their products vividly. The certificate mandates uniformity conducted at certain intervals and the certificate is also renewed for the sake of halal compliance post receiving the certificate. This system makes sure that the standard requirements of producing herbal medicine and the Islamic rules attached to the said requirement are all met assuring consumers of the halal status of the said product (BPJPH, 2023).

Market potential of halal herbal medicine in Indonesia:

There is a notable increase in demand for herbal medicines and other items that are certified halal. Multiple studies indicate that this is the case owing to the transformation in perception of Muslim consumers, particularly in relation to the development of markets in Islam-dominant countries (Halal Food Council USA, 2023; ISA, 2023). Being able to achieve Halal certification can also add economic value as it allows expansion into new competitive markets. The major factor that enhances supply for the few producers of Halal Goods is the growing interest in products that comply with Islamic laws (Halal Food Council USA, 2023; Akram, 2022). There has been an increase in the market for halal herbal medicines alongside the growing comprehension of halal within the Muslim community (ISA, 2023; Zakaria *et al.*, 2017). The advancement applies not just for food products but for other areas including cosmetics, pharmaceuticals and even health products (ISA, 2023; Halal Foundation, 2023).

On the other hand, countries such as Indonesia, Saudi Arabia and Malaysia as well as the United Arab Emirates offer a large target market for halal certified herbal healing products. As most of the populations in these regions practice Islam there is a growing interest and demand for halal products (Halal Food Council USA, 2023; ISA, 2023). In fact, it has been observed that the demand for herbal medicine that is halal

certificated is heightened in Indonesia which is the most highly populated Muslim country (Halal Foundation, 2023). The government of Indonesia has supported the Halal industry by introducing laws and regulations which are directed towards the establishment and usage of Halal products (Halal Food Council USA, 2023).

Securing a halal certification offers a huge edge to herbal medicine company since it ensures to their customers that the product that they provide is legal according to Islamic law which include hygiene, hygiene cleanliness and ethical harvesting (ISA, 2023; Zakaria *et al.*, 2017). This certification has the potential to improve brand image and consumer confidence and Thus increased market share. For example, Sidomuncul and Mustika Ratu have taken advantage of the opportunity of halal certification to market their products in ways that differ from the processes of non halal competition (Akram, 2022). These companies have entered new markets and expanded their customer reach by becoming halal certified. This process is to ensure that thorough examinations and audits, which increase the guarantee to the customers of the product's quality with respect to Halal foundation standards.

Economic impact on agribusiness and pharmaceutical Industries:

The increase in the demand for Halal-certified herbal products has considerable investment returns for both agribusiness and pharmaceutical markets. In the case of agribusiness, there is an additional requirement for raw materials sourced in a way that permits them to carry the Halal mark. Furthermore, this extra requirement can assist in increasing the outputs of farming and widen the options of farmers. This then leads to the creation of specialized farming techniques and the establishment of a Halal certified supply chain.

When it comes to the pharmaceutical industry, the marketplace for Halal-certified herbal medicines also opens opportunities for further formulation research and production of more herbal medicines that are compliant with Halal. Such a trend will promote the increase of research and development activities in respect of new technologies for herbal medicine preparation and even the technologies in its production. The economic aspect has impacts too: creation of employment, construction of new Halal-certified production facilities, and prospects for partnerships with companies from abroad that aim to satisfy the Halal market. Comparative research data for economic impact in halal certification show in Table 1.

Challenges for agribusiness and herbal medicine industries:

The primary challenges include the complexity and cost of the certification process (Sofyan *et al.*, 2022), the need for rigorous supply chain management (Tumiwa *et al.*, 2023), and the potential for overlap with other certification standards (Azizah, 2022). There is also a lack of standardized guidelines across different certification bodies (Aziz and Chok, 2013).

Halal certification is an essential requirement for agribusiness and herbal medicine industries in Indonesia, a country with



Table 1. Comparative research data for economic impact in halal certification.

No.	Topic	Main Result	References
1	Halal Certification of Agricultural Export Commodities	Halal certification efforts for agricultural commodities were not only considered beneficial for consumers but also for producers and business actors.	Budyoko et al., 2022
2	Implikasi Halal Certification Product	Halal certification increases demand for halal products.	Alfira et al., 2023
3	Halal Industry	Halal industry markets can be capital in Islamic economic development in Indonesia.	Yazid et al., 2020
4	Halal Certification for Agricultural Product Processing Industry	Halal-based commodities have been growing rapidly in the world market.	Prabowo and Rahman, 2016
5	General Halal Certification	Halal certification has positive implications in building a halal business climate in Indonesia.	Warto and Samsuri, 2020
6	halal certification for MSME business	Halal certification can help micro, small, and medium-sized enterprises increase their turnover or sales.	Purnomo, 2020
7	Impact Halal certification for MSME business	The participation of micro-entrepreneurs who already have halal certificate is only 20% of the total.	Mush'ab, 2021
8	Platform SEHATI (halal certification for MSME business)	Increase Halal certification and increases demand for halal products.	Sari, 2023

the largest Muslim population in the world ([Sofyan et al., 2022](#)). This certification ensures that products comply with Islamic dietary laws, which is critical for gaining consumer trust and accessing both domestic and international markets ([Azizah, 2022](#)). Nonetheless, it should also be noted that acquiring and holding halal certification causes some difficulties ([Tumiwa et al., 2023](#)). These problems include, but are not limited to, aspects such as the cost and intricacy of the halal certification process ([Sofyan et al., 2022](#)), supply chain management that is demand-oriented and rigorous ([Aziz and Chok, 2013](#)), conflicts or parallel with multi other certification systems ([Azizah, 2022](#)), and disparity between various certifying organizations regarding common understanding of procedures and standards. The Identified challenges for agribusiness and herbal medicine industries can be seen in Table 2.

Obtaining a Halal certification for a natural drug raises a number of issues. The differences that exist in the criteria for certification that each country maintains serve as a barrier and these differences slow down the expansion of businesses which are trying to go global. Businesses are also required to find enough funding to pay for multiple expensive certification processes, which as a result enables them to operate globally. For small and medium enterprises, these barriers can be even greater as funding the halal certification process can be rather difficult as a lack of funding can greatly hinder their expansion. Every business has to go over a huge hurdle of changing their facilities and undergoing regular audits to remain competitive in the market, which more often than not is something greatly beyond the reach of smaller

enterprises. It is also quite the hassle to trace every ingredient in the supply chain to ensure it is suitable for everyone to use because different people have different dietary restrictions and allergies. To optimize operational costs, advanced tracking systems are essential. Likewise, building new manufacturing lines or implementing cross contamination procedures can be quite resource and time consuming for businesses with limited or narrow spans. Exceedingly high levels of investment and professional help is required in training, monitor the use of paperwork, and getting Halal Certification Is very difficult for many in the fold. Combined, these matters make obtaining and retaining a Halal Certification an exceedingly difficult task.

Social and Environmental Impact: Halal certification offers a wide range of social advantages in that it builds faith and appreciation among Muslims. There seems to be an increase in consumer loyalty and brand reputation for items that are Halal certified in Muslim markets because such artifacts are highly regarded on the basis of morality and religion ([Hayat et al., 2013](#)). Besides the religious factor, Halal certification also has markets on a wider range that includes non-Muslims who advocate for social responsible practices and transparency in businesses ([Rezai et al., 2012](#)). For example, by marketing and selling halal approved products, which claim to be socially and ethically respectable, can target a wide range of consumers who prefer being socially responsible. This vast and varied appeal improves the brand image and creates a perception of social and cultural sensitivity in society. In addition, Halal certification aids in the reduction of cultural barriers by showing regard to



Table 2. Identified challenges for agribusiness and herbal medicine industries.

Challenges	Details	References
Complexity and Cost of Certification	The certification and registration process in Indonesia is complicated and costly, particularly for SMEs. This includes lengthy paperwork, routine inspections, and adherence to MUI standards.	Sofyan et al., 2022 ; Tumiwa et al., 2023
Documentation and Compliance	To provide evidence of compliance with halal standards, agribusinesses must provide detailed records of each and every step of the production processes including the supply of raw materials, methods of manufacturing, warehousing, and logistics.	Tumiwa et al., 2023
Regular Audits and Inspections	MUI regularly monitors compliance with the halal standard as noncompliance means a business management that is not of a high standard	Tumiwa et al., 2023
Financial Burden	Costs include certification fees, audit expenses, and potential infrastructural changes, which can be challenging for SMEs.	Sofyan et al., 2022
Rigorous Supply Chain Management	Ensuring halal compliance throughout the supply chain is challenging, as each stakeholder from raw material suppliers to transportation must meet halal standards.	Sofyan et al., 2022
Sourcing Raw Materials	Companies must verify the halal status of raw materials and ensure suppliers comply with halal standards, such as using halal fertilizers and pesticides.	Sofyan et al., 2022
Preventing Cross-Contamination	Separate facilities and transportation for halal products are required to prevent contamination with non-halal items, which can be costly and logistically complex.	Sofyan et al., 2022
Supply Chain Transparency	Comprehensive tracking systems are essential for ensuring compliance at every production stage, which is crucial for consumer trust and certification maintenance.	Sofyan et al., 2022
Overlap with Other Certification Standards	Obtaining multiple certifications (e.g., organic, non-GMO) can complicate the halal certification process, as criteria may sometimes conflict.	Azizah, 2022
Reconciling Different Standards	Companies need to navigate conflicting requirements, such as organic standards allowing non-halal ingredients that are not permissible in halal certification.	Azizah, 2022
Research and Reformulation	Reconciling standards may require extensive research and reformulation to find compliant alternatives, adding time and cost.	Azizah, 2022
Increased Operational Costs	Meeting multiple standards can increase costs related to staffing, training, and infrastructure, especially for SMEs with limited resources.	Azizah, 2022
Lack of Standardized Guidelines Across Certification Bodies	Different halal certification bodies (e.g., MUI in Indonesia, HDC in Malaysia) have varying criteria, creating confusion and potential delays.	Azam and Abdullah, 2021
Variability in Guidelines	Different certification bodies may have conflicting criteria, leading to inconsistencies and delays in certification.	Hassan et al., 2023 ; Al-Mahmood and Fraser, 2023
Multiple Certifications	Companies exporting to multiple regions may need separate certifications, increasing costs and complexity.	Abdallah et al., 2021
Navigating Differing Requirements	Companies must invest time and resources in understanding and complying with the criteria of various certification bodies, which is challenging for new or expanding businesses.	Bux et al., 2022

religious beliefs which may give way to international boundaries and promote cultural acceptance and understanding.

Halal certification advocates for the environmental stewardship of practices by ensuring that transparency and traceability is maintained along the supply chain. Such practices entail compliance, and for this reason, firms have to

resort to more stringent sourcing policies, waste reduction measures, and responsible raw material management practices which benefit the environment. For example, as a provision of the halal certification, it is required that a product is not tainted with halal prohibitive substances which may compel firms to set up chain or independent supply networks ([Ab Rashid and Bojei, 2020](#)). Such practices may be affected



because of the need to ensure that there is ethical procurement of the materials used to produce and assemble the retail products which are legitimate and legal to the market. On the other hand, they may be unimpactful due to the barriers posed in obtaining extra resources and setting up the infrastructure needed. Their existence however does not deny the fact that energy and resource consumption could be further enhanced. For instance, resource and energy may be consumed in higher volumes when trying to ensure that the production lines and facilities are free from contamination. Therefore, there is a valid situation as to why there is a challenge for organizations especially those that want to be fully compliant with Halal policies. However, such organizations can greatly appeal to a new customer base that is eco-friendly by advertising their products as having been made without compromising environmental wellbeing at the same time maintaining their ethical compliance standards.

Opportunities: The halal certification has vast potential for the herbal medicine sector as it allows access to a large and growing base of Muslim customers across the globe, especially in regions where a Muslim population is dominant and halal is a pre-requisite. As for small and medium size enterprises, halal certification becomes a unique selling point for the newly introduced products and allows them to be more competitive at local as well as international markets (Hasan *et al.*, 2020). Halal certification encourages brand loyalty among Muslim consumers while helping establish faith and ethical values in products when viewed from the social perspective. There are significant advantages over this model; first, the emphasis on Halal endorsed ethical behavior reaches out into a much wider circle than Islam; non-Muslim customers who respond to socially responsible products. There is a growing need for accountability and traceability, especially in Playboy endorsed items that will ensure the availability of sustainable products and manufacturing methods without harming the environment. Meeting these requirements should address the interests of environmentally friendly consumers and promote improving the company's image.

As Rachman and Sangare (2023) argue, having a halal certificate encourages cooperation throughout a wide spectrum of businesses. Therefore, deeper ties within the industry are developed as firms deal with suppliers, registration bodies, and certifying agents to ensure compliance. In a nutshell, all these opportunities bolster the importance of Halal certification in increasing potential new markets, enhancing customers' trust and patterning products within the Islamic business framework.

In Indonesia, where the majority of the population is Muslim, the halal certification is highly valued as it enhances trust for the brands. Furthermore, such certifications can invoke customer loyalty as a certain brand's commitment to halal's stringent rules and regulations is made clear to them. With a boom in the Muslim population, the demand for halal certified goods is growing rapidly, and brands that have this

certification amass a competitive advantage over the rest. Halal certified products can help expand a company's customer base and international presence as they can differentiate them from other brands. This can, in turn, help in penetrating different economies such as the Middle East, Southeast Asia and parts of Africa (Afendi, 2020; Widyanto and Sitohang, 2022). Importantly, the number of Muslims in Indonesia is considerably large which facilitates the huge domestic sale of agribusiness and herbal products catering to the millions of Muslim consumers. This also encompasses various institutions such as schools, hospitals etc that require halal certified products. Furthermore, several countries with a majority Muslim population have stringent rules regarding halal making certification vital for entering the market. Countries such as Malaysia, Brunei and other countries in the Middle East have a large market for halal certified products which can open various possibilities for Indonesian businesses to grow (Widyanto and Sitohang, 2022; Hassan *et al.*, 2023; Nurhayati and Hendar, 2022).

Halal products are also gaining recognition in non-Muslim countries with wider Muslim populations including Canadian and American markets. People outside the Muslim community are also beginning to take an interest. Halal is seen as healthy and ethical, and this trend opens opportunities for Indonesian companies to reach high value segments in the international arena (Mabkhot, 2023). The ripple in ethical consumption globally endorses the consumption of halal certified products as they are perceived to be clean, pure and free from cruelty. Such a market is not limited only to Muslims, as there are many who appreciate the health and quality of the products endorsed for halal. For example, halal-certified herbal medicine is one of the alternatives that can attract consumers who are high concern for their health (Hassan *et al.*, 2023; Mabkhot, 2023).

Religious compliance is a vital consideration for Muslim consumers. If a product has a halal certificate, it means that the food meets the Islamic requirements. One of the main reasons for this certification is meat and strong herbal medicines. Companies can gain the trust of consumers and foster loyalty, among other benefits. The agribusiness directly has the potential to breed new crops that meet the halal standard where every aspect such as the source of the seed, harvesting and even fertilizers to be used are certified so as to keep the crops halal, hence marketing it to Muslim consumers while promoting ethical farming (Widyanto and Sitohang, 2022). Furthermore, halal-compliant raw material innovation still provides the potential to grow since agribusinesses can create halal certified ingredients for foods or antibiotics and cosmetic products. The rise in demand for vegan halal products is being satisfied by the creation of meat substitutes produced from plants. New alliances within and outside agribusiness can also be a source of innovation and new growth areas (Hassan *et al.*, 2023; Nurhayati and Hendar, 2022).



By adhering to religious guidelines pertaining to product formulation, the halal certification provides a competitive edge to the herbal medicine industry as it meets the consumers' needs and the requirements of the authorities in mostly Muslim countries. Along the lines of the other herbal products, several countries have made halal certification mandatory for herbal medicines which eases market access for Indonesian companies. Research and development investment solicits the creation of new, unique and of high standards halal compliant herbal medicines (Widyanto and Sitohang, 2022; Mabkhot, 2023). However, the greater visibility resulting from the certification initiative in the herbal sector also presents the opportunity that exists within the market alongside brand enhancement, however, high levels of investment more so in the supply chains coupled with the stringent measures need to be put in place to ensure compliance with the set requirements. The capability of the agribusiness and pharmaceutical industries to meet halal demands will involve meeting these challenges collectively.

Comparative Analysis of Halal Certification Practices: Comparative studies on halal certification issues indicate that there are both differences and similarities in how Indonesian halal certification practices compare with other Muslim nations like Malaysia, Saudi Arabia, and others. Malaysia is one such nation that is known for its exemplary halal certification issued by JAKIM which is the most sought global benchmark. With JAKIM's well defined guidelines and processes, the acceptance of Malaysian halal certification is of an international standard and aids other markets in integrating Malaysian products therein (Yustianingsih *et al.*, 2024).

Halal certification in Saudi Arabia has a stronger theological integration as it is restricted by the Islamic standard without flexibility. More so, imported items have a higher concentration and this caters to Saudi Arabia greatly as it possesses an extensive Muslim populace, adds (Khoira *et al.*, 2024). Herein lies the disparity in the Indonesian endeavor which aims at deregulation of international provision and domestic supply under a more concentrated mechanism buffed under BPJPH. The lack of cohesiveness to unify such diverse systems is a serious predicament that every single jurisdiction shares when it comes to halal certification. The diverse systems available on a global level for halal certification include those from Malaysia, Indonesia, and Saudi Arabia that have different focus areas with potential pathways for advancements.

Case Studies of Successful Halal-Certified Herbal Medicine Companies in Indonesia: Several Indonesian Incorporations dealing with herbal medicine have achieved growth in their businesses after attaining a nod for their products to be Halal. For example, one of the leading herbal brand in Indonesia, Sidomuncul after getting this certification was able to enjoy a considerable amount of growth. This certification opened further business opportunities for the company among the

Muslim audience seeking halal products thus building on the company's global image, Sidomuncul was successful in expanding its global outreach by presenting its products as being in compliance with religious values (Angreyani *et al.*, 2023).

Similar to Sidomuncul, another herbal brand Able to pursue sidomuncul's strategy is Mustika Ratu which also worked on getting a Halal Niche to differentiate itself from its competitors. This certification catered to the expectations of the audience seeking halal friendly products, thus proving beneficial for the overall image of the company, which enabled the local and foreign clients seeking halal products. Such strategies gave the Mustika Ratu's leverage to Foster deeper penetration in the different countries addressing the Global Audience seeking Halal. These examples clearly show Usama's claims that Indonesian companies dealing with herbal medicine Upper Hand once they get certified for halal offering improving their reputation and consumer retention in the US market. This case also highlights the importance of halal as a growing niche in herbal medicine as well as the potential target market across different countries: Indonesia as a country with a high demand for herbal medicine.

Policy Recommendations: To ensure that the Indonesian Halal herbal medicine industry continues to grow, there are some policies that are suggested.

- a. Further Rationalise Regulatory Procedures: The halal certification process should be made as less burdensome as possible and the costs multifaceted in order to enable SMEs and other entities to have viable legal compliance.
- b. Strengthen Physical Infrastructure: Build more Halal compliant production and storage sites to ensure traceability along the supply chain.
- c. Encourage Focus on Green Innovation: Avail funds and incentives to support robust R&D in Halal herbal medicine and new green projects and products.
- d. Assist in Financing the SMEs: Politicians should provide SMEs the Halal certification, as well as norms and standards instructions, training, and coverage of the certification costs, preferably through low/zero interest loans.
- e. Promote Export Plus Domestic Market growth: Promote awareness on use Halal products among local customers, and also promote Indonesian Halal products internationally.

Future Research Directions: In the future, studies may focus on the role of Halal certification in the agribusiness sector and for small and medium-sized enterprises dealing in herbal medicine, with emphasis on market penetration and barriers to entry. Most probably, studies related to such topics as the cultivation of Halal-approved herbal products and the use of technological innovations such as blockchain in the certification process would be useful. The development of halal standards for new herbal products and understanding of



consumer needs may improve business development as well as customer satisfaction in the industry.

Conclusion: Halal certifications have recently gained importance in the herbal medicine sector which potentially benefits the agribusiness and pharmaceutical industries. Nonetheless, the adoption of Halal certification renders competitive advantages and responds to the increasing demand of the consumers for Halal-compliant products. More studies as well as industry partnerships are necessary in order to enhance the certification process and optimize the benefits.

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