

The Significance of Halal Knowledge: Unveiling its Influence on Halal Controller Performance

Sazelin Arif*, Nur Syamimi Fazila, Zawiah Mat

Institute of Technology Management and Entrepreneurship, Universiti Teknikal Malaysia
Melaka, Malaysia

*Corresponding Authors Email: sazelin@utem.edu.my

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Abstract

This article addresses the growing challenges of fraud, non-compliance and integrity issues threatening Malaysia's halal certification system. Motivated by the need to uphold certification credibility, this study aims to investigate the role of halal knowledge in strengthening the performance of halal controllers. A qualitative research design was adopted, involving in-depth interviews with key representatives of the authorities across three stakeholder groups. Thematic analysis was conducted using NVivo software to identify emerging themes and sub-factors. The study identified six sub-factors under the main theme of halal knowledge: (1) education and training, (2) religious values and ethical principles, (3) adequate and competent personnel, (4) auditing and inspection skills, (5) regulatory knowledge, and (6) standardized knowledge management. These sub-factors emphasize the need for an integrated approach that includes standardising training, enhancing interagency collaboration and building manpower capacity to ensure controllers adhere to Shariah compliance. The study contributes a practical and theoretical framework to improve halal governance by integrating both technical competencies and spiritual values. Overall, this study provides a comprehensive approach to identifying essential knowledge components for halal controllers, offering practical guidance to enhance Malaysia's standing as a global halal hub and guarantee the sustainability of the halal industry.

Keywords: Halal Knowledge, Control System, Food, Performance Factor, Malaysia

Introduction

The Sustainable Development Goals (SDGs) are currently the focus of intense international attention. The halal industry has the potential to contribute to the long-term achievement of the SDGs due to its diverse economic sectors. It has grown exponentially and is now a quickly expanding worldwide industry (Bidin et al., 2021). Empirical data shows that many researchers are consistently devoted to creating a variety of solutions aimed to help the halal industry grow and advance (Napitupulu et al., 2024; Mubarak & Imam, 2020; Aisyah, Suzanawaty & Said, 2019; Al-shami & Abdullah, 2023; Basarud-din et al., 2022; Idris, Musa & Sumardi, 2022; Rahmah & Barizah, 2020; Rusydiana et al., 2023; Alrobaish et al., 2021; Widyanto & Sitohang, 2022). Numerous studies have also looked into control systems, but they concentrated on looking at supply chains in halal food (Mohamed, Abdul Rahim &

Ma'aram, 2020; Ab Rashid & Bojei, 2019; Supian & Abdullah, 2019). This shows that the world is closely observing its development and highlights the need for more research on halal, particularly in relation to halal control, so that more people can understand it.

Malaysia's halal certification is vital for becoming a global leader. It fosters an economic chain founded on halal understanding and therefore supports Sustainable Development Goals (SDG) 12, which emphasize production and consumption. Several fundamental issues need to be taken care of to preserve halal food systems. Among the most crucial is the halal control system. It involves many stakeholders and oversees food chain activities (Ahmad et al., 2018). Halal control ensures food and beverage products abide by Islamic dietary standards. This enhances global trade, fosters customer trust, and advances Islamic values. The halal food control system plays a major role in guaranteeing that every food product that is delivered to customers complies with established standards. A thorough and integrated control system should oversee halal products in order to stop fraud and other wrongdoing that can erode consumer trust in the halal certification and logo.

The halal food control system covers many parts and steps, from making the food to storing it, handling it, and shipping it to the customer. It includes specific actions, steps, and processes to make sure that everyone involved follows halal rules set by Islamic law. This system is very important to make sure that all the food that people eat has been through steps that meet the halal standards and guidelines. When we talk about halal food control, we mean a complete system that has been put in place to make sure that halal goods and services are safe and follow the rules all the way through the supply chain. This complete ecosystem works like the halal business's Standard Operating Procedure (SOP) because the people who hold halal certificates are committed to following the rules. To stop any fraud or abuse that could undermine consumer confidence in the halal brand, its strong governance is imperative.

This control responsibility is carried out by various stakeholder groups, including government agencies, certification bodies, and religious authorities. Effective implementation of SOPs relies on a trustworthy system to prevent misuse during the halal control process. Shalini, Neeliah, and Goburdhun (2008) defined stakeholders as individuals or organizations with an interest in or influence over the quality and safety of food. Within the halal food control system, stakeholders can be categorized into three (3) types based on their main roles, as shown in Table 1.

Table 1

Groups of stakeholders in the halal food control system

Type of Stakeholders	Roles	Institutions
1. Leading Role Stakeholders	The bodies directly responsible for and playing a leading role in the food control system have key responsibilities, including inspection and enforcement, legislation, standard development, and issuing fatwas.	<ol style="list-style-type: none"> 1. Department of Islamic Development Malaysia (JAKIM) 2. State Islamic Religious Council (JAIN/MAIN) 3. Ministry of Health (MoH) 4. Malaysian Quarantine and Inspection Services (MAQIS) 5. Royal Malaysian Customs Department (Customs) 6. Department of Veterinary Services (DVS)
2. Secondary Role Stakeholders	The bodies that play secondary roles in the implementation of the food control system hold key responsibilities, including halal analysis, laboratory testing, halal education, and training.	<ol style="list-style-type: none"> 1. Department of Islamic Development Malaysia (JAKIM) 2. Halal Development Corporation Berhad (HDC) 3. MyHAC
3. Affected Stakeholders	Entities or individuals who are indirectly impacted by the certification process and its outcomes, without being directly involved in the process itself	<ol style="list-style-type: none"> 1. Consumers 2. Consumers organizations: (Persatuan Pengguna Islam Malaysia - PPIM and Consumers Association of Penang – CAP)

Every stakeholder has a specific role to play, and various government agencies or bodies fall under its jurisdiction. It is the duty of every agency to guarantee that halal food products that are delivered to customers completely adhere to halal regulations. For instance, the Department of Islamic Development Malaysia (JAKIM) and the State Islamic Religious Councils/Departments (MAIN/JAIN) are among the government agencies classified under the category of leading-role stakeholders. They serve as the official authorities for the issuance of halal certificates and the Malaysian halal logo. While the Department of Veterinary Services (DVS) makes sure that meat-based imported food goods have been certified as halal, the Royal Malaysian Customs Department (Customs) acts as the inspector of such imports. Consumers are the final group in the halal food industry's supply chain who should be able to enjoy goods that follow Shariah. They are the ones who will eventually gain from or be impacted by the quality of the goods that are consumed. Consumers must thus exercise awareness and vigilance when choosing foods to consume. They should proactively look for information about a product's halal status. When in doubt, they are urged to inform associations or organisations that represent their interests of their concerns and pertinent information.

Halal food control is essential to ensure that the food reaching the consumers is halal and safe to eat. In reality, the halal status of many food products available in the market is often disputed due to a range of factors including the safety and fraud issues. According to

reports, a large number of food and beverage producers fail to comply with food safety regulations. This causes issues like preservatives, flavours, dyes, and microbiological contamination. Some of them also fail to comply with labelling laws. This therefore might harm consumers and raise doubt about the halal certification of the products. For example, there were reports of unslaughtered chickens sold in the market. Recent reports indicated that the Selangor Islamic Religious Department (JAIS) had confirmed that the chicken sold at the Bukit Changgang store in Banting is not halal and has no legal halal certificate (Tahir, 2023). Weaknesses in the halal food control system were also found in yet another example including a meat cartel. The supplier used forged documents, including import permits and halal certificates (Muhammad Shahrulnizam, 2020). To trick local authorities, they repackaged non-halal meat with a halal label (Hassan, Rahman & Ismail, 2020) and mixed non-halal meat with halal meat (Rusni et al., 2020). Factors contributing to these loopholes included poor operational procedures (Berita Harian, 2021), weaknesses in standard operating procedures (SOPs) (Astro Awani, 2021), integrity issues (Ab Rahman & Muhamed, 2021) and overlapping agency scopes that hindered control (Mohamed Arshad, 2020).

Many cases of fraud and malpractice expose deficiencies in halal certification, highlighting a critical need for enhanced control. Halal controllers are in charge of making sure that this integrity is maintained. Their ability to do well depends on how well they know the halal rules, standards, and criteria. Halal knowledge is a big part of what makes them work well. This is the knowledge that a person or business has about halal products (Nuraini & Sucipto, 2021; Rahman et al., 2022). Hassan, Arif, and Sidek (2015) state that halal executives, who are in charge of making sure that companies follow halal rules, need to have at least two types of knowledge: spiritual knowledge (Shariah) and technical knowledge (food technology). To have good spiritual knowledge, halal controllers need to know all the Islamic rules and restrictions, including those about halal (allowed), haram (forbidden), *syubhah* (doubtful), and *najs* (filth). This information is often used in real life, especially when judging raw materials and important ingredients, like figuring out whether it's okay to use materials made from slaughtered animals. For this reason, halal controllers must show that they are very committed to learning about spiritual knowledge so that their control mechanisms are in line with Islamic values. Another important area for halal controllers is technical know-how related to food technology, especially when it comes to managing raw materials and important ingredients. This includes important things like being able to find cross-contamination, knowing the risks of microbes in food, storing food at the right temperature, using good cleaning methods, and keeping an eye on the use of chemicals.

One of the fundamental requirements for halal controllers is a thorough understanding of halal knowledge. In addition to being vital to an organization's success (Rahman et al., 2022), maintaining integrity, ensuring standards are met, and satisfying customers are also crucial for all parties involved in the halal industry (Mohamed, Abdul Rahim & Ma'aram, 2020). Halal controllers, in particular, need to comprehend both the technical aspects of halal certification and the fundamental principles of halal (Othman et al., 2019). Since they are in charge of overseeing halal certifications, halal controllers need to be highly knowledgeable. This includes being proficient in handling halal requirements and procedures (Pratama, 2022) and having a thorough understanding of the core Islamic halal principles (Hanafi & Nurdin, 2022). Such knowledge encompasses permissible ingredients, processing methods, and procedures that are in line with Islamic teachings (Romadlon,

Istikomah, & Haryanto, 2023). Significantly, any gaps in the control process indicate a deficiency in the crucial implementation of halal knowledge (Muhammad, Elistina & Ahmad, 2020), which emphasises the need for all stakeholders to be knowledgeable about halal. This deep comprehension enables halal controllers to make careful judgements about whether goods, food, or beverages are halal. In essence, having a foundational understanding that encompasses both spiritual and technical halal knowledge is crucial because these two elements need to complement each other. Thus, in order to guarantee that halal-labelled food on the market satisfies both Shariah compliance and quality standards, halal controllers must therefore be fluent in both.

Building upon the previously discussed background and research problems, this article aims to examine the significance of halal knowledge as a crucial factor influencing the performance of halal controllers. This study is motivated by growing concerns about fraud, halal integrity issues, and uneven enforcement, all of which jeopardise Malaysia's standing as a global centre for halal. This article's remaining sections are organised as follows: Section two delves into the methodologies employed. Section three presents the study's findings and their discussion, with section four concluding the paper. This article provides significant practical value by identifying the primary factor concerning halal knowledge that demand attention from halal controllers within every stakeholder group across Malaysia's halal food control ecosystem. It effectively identifies the primary halal knowledge-related factors that halal controllers, encompassing all pertinent stakeholder groups (including regulatory and enforcement bodies, certification agencies), must critically address. By concentrating on halal knowledge and its fundamental elements, this study offers a structured system that can direct practice and policy in order to improve halal governance. It is anticipated that a better comprehension of the factor will lessen the occurrence of fraud and leakage that are common in the halal sector, eventually resulting in a more resilient, open, and reliable halal market. This study provides a straight road to reduce several kinds of leakage and dishonest acts that have historically afflicted the halal sector by offering this targeted knowledge. This entails lowering false halal claims, protecting ingredient integrity, and avoiding deception. Ultimately, the knowledge gathered from this research is crucial for preserving the general integrity and legitimacy of halal goods in the marketplace, safeguarding customers, and promoting long-term expansion of the halal sector.

Method

This study adopted a qualitative research approach. This section presents the research design, sampling procedures, data collection procedures and data analysis of this study.

Research Design

This study aimed to examine the significance of halal knowledge as a critical factor influencing the performance of halal controller. This study adopts a qualitative approach because the researchers aim to understand the phenomenon of the knowledge as a factor influencing the performance of halal controller. To achieve the objective, this study used a qualitative study design that usually uses questions such as, how, what and why. The qualitative approach was chosen because it emphasizes more on the social context to enable informants to share their views, experiences and understandings in depth. Moreover, a qualitative approach is considered appropriate because this study involves human interactions that require researchers to interpret or understand the practices of human activities in a natural way.

To identify and understand the factors influencing the performance of halal food system controllers, this study will utilize a stakeholder-based model as the framework. This framework is particularly suitable as the study focuses on the diverse roles of parties involved in halal food control system. Considering that this study aims to examine the importance of relevant knowledge among controllers from diverse stakeholder groups with varying roles, it will adopt the stakeholder model established by Freeman in 1984. Freeman's (1984) stakeholder model identifies key groups such as governments, local communities, employees, media, and rivals who are essential for an organization's success. These stakeholders contribute positively by fulfilling vital responsibilities, which enables the organization to benefit both itself and the broader community. This framework directly corresponds to the stakeholder model applied in this study. As illustrated in Figure 1, this study will examine the significance of halal knowledge among controllers by analyzing it through the lens of three distinct stakeholder groups: leading-role stakeholders, secondary-role stakeholders, and affected stakeholders.

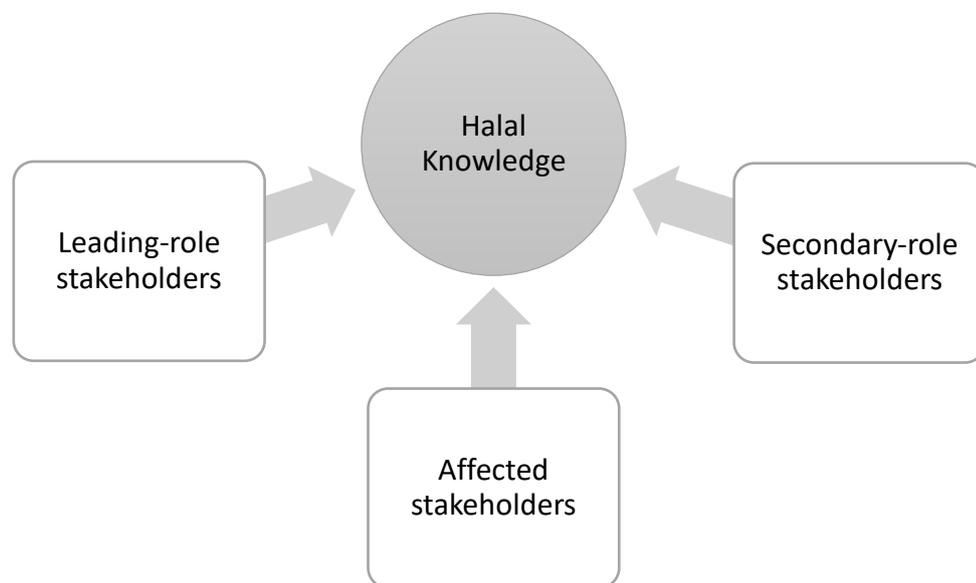


Figure 1. The research design

Sampling Procedures

The samples were formulated by identifying the population of halal food controllers that selected from the agencies or authorities from three groups of stakeholders. The selection of samples is conducted using purposive sampling technique where the researchers selected a group of subjects who have certain characteristics as informants. The selection of the informants for leading roles and secondary roles stakeholder is based on the criteria that they must have at least 5 years experiences in handling halal control system. Whereas for affected stakeholders the informants were selected from those who have power/voice to represent consumers. A total of 6 halal authorities, 1 halal institution and 2 consumer body agreed to participate in the study.

Data Collection Procedures

To investigate the ways in which halal knowledge is applied by the controllers, the researchers adopted interview technique as the main tool to collect the data. The instruments used for the interview was semi-structured interview design as it was adopted to allow flexibility in

order to approach different respondents without ignoring the focus of the research area needed (Ruslin et al., 2022). This type of interview helps researchers to gather more information and allows researcher to ask further or additional questions to get better explanation as long as did not asked out from the questions approve by ethics committee. The semi-structured interview questions were divided into 3 sections; background, factors influencing the performance of halal food, and recommendation. These research interview questions were validated and verified by an expert from Universiti Teknologi Malaysia (UTM), a halal senior officer from the Melaka Islamic Religious Department (JAIM) and approved by the ethics committee in UTeM. The questions were then revised based on the feedback from the experts. The final set of interview questions and approval letter for interview was presented to every respondent before set up the interviews with respondents.

A total of 6 halal authorities, 1 halal institution and 2 consumer bodies agreed to participate in the study. All informants were first contacted via email and phone before the interview appointments were made. The interviews were conducted face-to-face in their respective offices and online. The average length of the interview was about 1.5 hours to 2.5 hours depends on the knowledge and questions asked by the researchers. The questions asked towards the respondents had been structured earlier and modified depends on who are the respondents involved to suit with what are the information needed by the researchers. The questions had been validated by ethics committee in UTeM. Figure 2 shows the process of data collection, which consists of five stages. The five stages were designing the interview questions, validating the interview questions, identifying the samples, contacting the respondents, and conducting the interviews.



Figure 2. Data collection procedures

Data Analysis

The researcher used NVivo 11 Pro to collect data through coding. The recordings of interviews will be categorised, dated, and verbatim transcribed. Before the transcript is analysed, interviewees review it to ensure they agree with its content. The data will then be analysed using NVivo software. Compared to manual human interpretation, NVivo's findings analysis is more systematic and can reduce the likelihood of bias or errors in data interpretation. NVivo, a popular tool for qualitative research, makes it easy and efficient for researchers to gather, arrange, categorise, and code interview data in a systematic way. The coding data later will be categorised into distinguishing themes which will be explained in the next section.

Findings

A total of 6 halal authorities, 1 halal institution and 2 consumer bodies agreed to participate in the study. The background of the informants is as stated in Table 2:

Table 2
Background of informants

No	Stakeholder	Agency	Position	Experience	Label
1	Leading-roles stakeholders (halal authorities)	JAKIM JAIN MoH Customs DVS MAQIS	Senior Assistant Director Senior Assistant Director Assistant Officer Assistant Officer Assistant Research Officer Assistant Officer	>5years	JAK JAM MoH CUS DVS MAQ
2	Secondary-roles stakeholders (halal authorities + institution)	JAKIM HDC	Senior Assistant Director Senior Assistant Director	>5years	JAK HDC
3	Affected stakeholders (consumer bodies)	PPIM CAP	Research Officer Research Officer	-	PPIM CAP

From the interview sessions that have been conducted with all informants, the findings of the study found that there are 6 sub-factors under theme halal knowledge that emerged from the NVivo analysis. As stated in the Table 3 and Figure 3 below, the 6 sub-factors that have been identified are:

Table 3
Factors influencing halal controller performance

Main factor (theme)	Sub-factors emerged
Halal knowledge	Education and training in halal Religious values and ethical principles Adequate and competent personnel Halal auditing and inspection skills Halal regulatory knowledge Standardize knowledge management

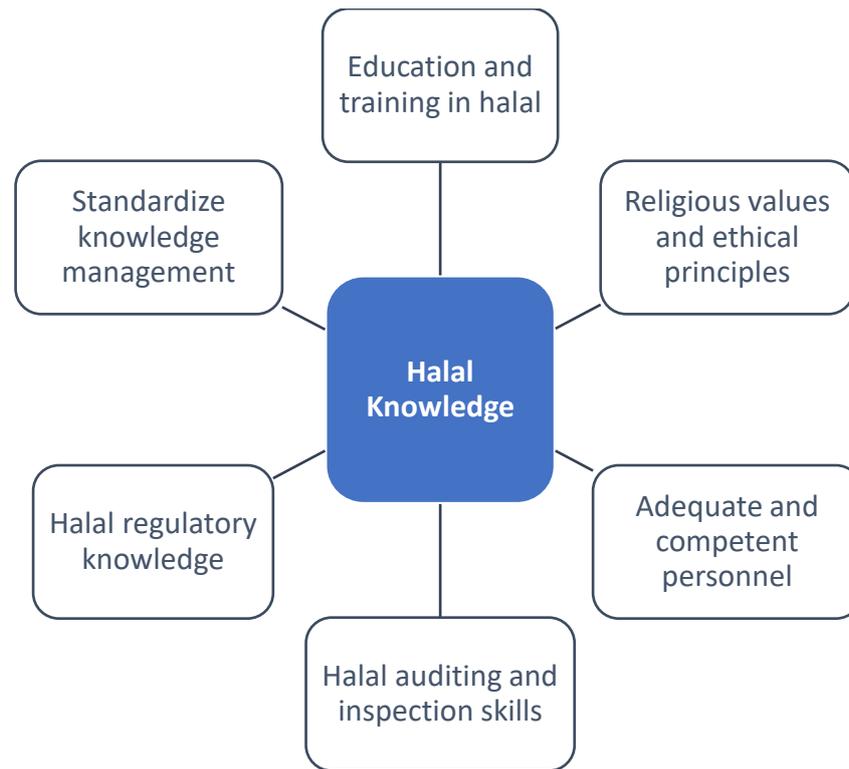


Figure 3. Factors influencing halal controller performance

Education and Training in Halal

Based on the interview findings, the informants acknowledged that they need to have knowledge and education about halal. Education and training related to halal will be provided by those with authority in the field, namely JAKIM and HDC, which are well-known institutions for conducting such training. In addition, internal training within their respective departments/agencies is also conducted. This is supported by the following evidences:

Table 4

Evidences related to education and training in halal

Sub-Factor	Evidences
Education and training in halal	“Halal training and education are important to raise awareness about halal standards and to ensure that there are no halal issues in products imported from other countries.” -JAK
	“Firstly, knowledge related with halal certification should be provided comprehensively and regularly.”
	“JAKIM will conduct training based on the issues that arise during meetings.”
	“In order for the officer to increase their skills, they need to have knowledge in halal.”
	“The officers in halal control get knowledge from the training conducted by JAKIM.” -JAM
	“MAQIS also provides training and awareness to parties involved in the food industry.” -MAQ
	“Officers who handle halal control must be able to analyze problems using their knowledge and experience...”
	“Halal training is provided to officers in halal slaughtering, animal health, and standard operating procedures related to cleanliness ...” -DVS
	“Halal related officers have been trained in implementation, inspection, and audit. They should also understand Good Manufacturing Practices (GMP) and Good Hygiene Practices (GHP)...” -CUS
“Training related to food safety and hygiene in halal food production is provided to ensure alignment with halal requirements.” -MoH	
“The Halal Development Corporation is responsible for providing halal training to certification bodies, entrepreneurs, and food manufacturers to ensure compliance with halal standards.” -HDC	
“Customers nowadays are encouraged to read product labels and understand the ingredients in order to differentiate non-halal products.” -PPIM	

Religious Values and Ethical Principles

The findings revealed that another sub-factor emerging from the theme of halal knowledge is religious values and ethical principles. These are essential values that must be upheld by officers responsible for overseeing halal food production. This includes having a fundamental understanding of Islam, knowing what is permitted and prohibited in the religion, and having integrity as a person. These principles indirectly help individuals to refrain from engaging in corrupt practices that are prohibited in Islam. The evidences of these are as follows:

Table 5

Evidences related to religious values and ethical principles

Sub-Factor	Evidences
Religious Values and Ethical Principles	“Islam teaches us about integrity. We are taught to value time, and both Allah and the Prophet have emphasized the importance of being trustworthy.”
	“For me, religious factors are the main guiding principles in everything we do because Islam has taught us to uphold integrity.” -JAK
	“Religion is one of the important factors. If we truly follow what Islam teaches us, we do not have to worry about integrity issues”
	“We have no issues with integrity and have been certified under the Anti-Bribery Management System.”
	“The officer should be able to make the right decision based on their knowledge of halal issues” -JAM
	“MAQIS will inspect meat imports to Malaysia during the quarantine process to verify all consignment notes and ensure compliance with halal standards.” -MAQ
	“It is crucial to ensure that these slaughterhouses follow the Islamic method of animal slaughter.” -DVS
	“Accredited bodies must provide recognized halal certification for imported items. Customs officers are responsible for verifying that the goods fulfill halal requirements, especially when they originate from non-Muslim countries.” -CUS
	“Under the halal category, the food served to customers must not only comply with religious principles but also be safe, hygienic, and properly handled.” -MoH
“The halal sector, both in Malaysia and internationally, adheres to halal principles.” -HDC	
“Our organization is committed to supporting halal integrity in goods and services while also safeguarding consumer rights.” -CAP	

Adequate and Competent Personnel

One of the critical sub-factors identified is the availability of adequate and competent manpower in halal certification procedures. Personnel who possess experience and expertise in halal certification are better equipped to detect instances of non-compliance effectively. Furthermore, it is essential that each agency maintains a sufficient number of halal controllers. A shortage of manpower may hinder operational efficiency and result in non-adherence to the client charters established by respective halal authorities. It is evidenced by the following findings:

Table 6

Evidences related to adequate and competent personnel

Sub-Factor	Evidences
Adequate and Competent Personnel	“The shortage of officers handling halal certification has affected overall performance, as they are required to manage numerous daily tasks with insufficient manpower.” -JAK
	“All procedures followed are based on the halal guidelines provided by JAKIM.”
	“JAKIM is the main body responsible for guiding all halal authorities in each state to ensure that officers are competent.”
	“A shortage of qualified officers in halal certification has hindered operational effectiveness due to the heavy workload and inadequate staffing.” -JAM
	“We have consistently adhered to the guidelines outlined in JAKIM's standard procedures.”
	“DVS manages the inspection and certification of animals used for food, such as cattle, poultry, to ensure that health standards and slaughtering methods comply with the required regulations.”
	“Normally, officers handle halal cases by following JAKIM's procedures and standards. However, limited manpower and inexperienced officers result in insufficient time to thoroughly review each applicant for halal certification.” -DVS
	“The procedures used in handling halal matters are all based on JAKIM's guidelines.” -MoH

Halal Auditing and Inspection Skills

Halal auditing and inspection skills are crucial for officers and halal authorities involved in ensuring compliance with halal standards. Based on the interviews with the informants, these skills are identified as sub-factors under halal knowledge that significantly impact the performance of halal controllers. Halal controllers must have the basic knowledge of the halal and haram, as it appears in the Islamic dietary laws. Islam has set clear boundaries on halal and haram ingredients, operations and processes, and knowledge on such operations directly assist the practitioner to develop a skilled halal auditor and inspector.

Table 7

Evidences related to halal auditing and inspection skills

Sub-Factor	Evidences
Halal Auditing and Inspection Skills	<p>“We will conduct an audit and visit the slaughterhouse to inspect whether it follows the correct procedures for meat processing.”</p> <p>“We will visit slaughterhouses that have been certified halal to verify that halal standards are continuously maintained.”</p> <p>“If any doubts arise, the slaughterhouse may be removed from the halal certification list.”</p> <p>“When people engage in business, there may be instances of cheating and dishonesty. That is why the government enacted the Trade Descriptions Act 10/11 to promote honest business practices.”</p> <p>-JAK</p>
	<p>“The auditor will carry out inspections at the relevant premises to verify whether the ingredients used have been properly declared.”</p> <p>“One of the factors that can increase halal knowledge is through inspections and audits conducted by our entire team. Sometimes, I may not identify certain issues in the cases I handle, but my team members might discover them.”</p> <p>-JAM</p>
	<p>“Any food imported into our country will be inspected to ensure compliance with both halal and health standards. The process involves checking documents, consignment notes, conducting physical inspections of the products, and taking samples when necessary.”</p> <p>“Imported products must include complete details about the company, the substances contained within, and the quantity of items. For meat products, they must be halal-certified, accompanied by the signature of an authorized representative from a halal certification body recognized by JAKIM, along with the valid halal certificate.”</p> <p>-MAQ</p>
	<p>“Surveillance by officers during the processing and production of animal-based food is conducted to ensure that halal standards related to cleanliness and product handling are properly followed, in accordance with JAKIM’s procedural manual.”</p> <p>-DVS</p>
	<p>“Customs will check the relevant documents during food import inspections to ensure compliance with halal standards and related regulations.”</p> <p>“All imported products, including meat, must first pass through Customs. Once the Customs terms and conditions are fulfilled, the products are placed under quarantine for further inspection. MAQIS will verify halal compliance by checking the consignment note, which includes the company details.”</p> <p>-CUS</p>
	<p>“Inspections on quality and cleanliness are conducted to ensure that the products and tools used in food or beverage production do not contain harmful substances.”</p> <p>-MoH</p>

Halal Regulatory Knowledge

Regulatory knowledge in halal refers to understanding and adhering to the legal frameworks, regulations, and industry standards that govern the halal sector. This knowledge is crucial for people and businesses that produce, certify, and distribute halal goods. One of the essential elements of halal regulation knowledge is those of requirements for halal certification. It is important that the organisation set the guidelines and stipulations of halal certification bodies are known. These organizations might be different from one country to another or from one region to another, having their own certification requirements.

A thorough understanding of the procedures is necessary to adhere to these standards. Training is essential for educating stakeholders about the rules and guidelines governing halal practices. Regular training sessions help ensure that all parties remain informed and compliant with halal requirements. Halal regulatory knowledge is dynamic and constantly evolving, requiring continuous learning and adaptation to stay aligned with the latest standards and legal requirements. Therefore, individuals working in the halal sector must make a committed effort to stay updated on current regulations and industry developments.

Table 8

Evidences related to halal regulatory knowledge

Sub-Factor	Evidences
Halal Regulatory Knowledge	<p>“In general, Malaysia adopts an open business paradigm, allowing anyone to start and operate a business, provided they comply with established regulations. This open approach creates opportunities for Malaysians to engage in entrepreneurship. Within this context, halal logos are considered sacred and hold significant importance in business, as they represent the integrity and authenticity of halal-certified products.” -JAK</p>
	<p>“Every officer must possess regulatory knowledge, as without it, they would be unable to handle halal cases appropriately.” -JAM</p>
	<p>“Upholding halal product regulations, particularly those established by JAKIM, is essential to preserving the integrity of the halal supply chain. This involves taking appropriate measures against non-compliant products.” -MAQ</p>
	<p>“The public needs to understand the halal standards applied by HDC, halal grading agencies, and other relevant authorities. This includes being aware of the differences between local and international regulatory standards.”</p>
	<p>“HDC offers courses and educational programs on halal for business owners and entrepreneurs. It also continues to promote public awareness about halal food and its significance.” -HDC</p>
	<p>“Customers may become confused by halal logos in the marketplace, so it's critical to know how to differentiate between real and fake ones.”</p> <p>“The existence of multiple halal logos in the marketplace can occasionally lead to consumer confusion. Therefore, when buying food, consumers should exercise caution. To make sure the food they select are unquestionably halal, they must be informed and aware of which logos are real and which are not.” -CAP</p>

Standardize Knowledge Management

The efficacy and integrity of the halal control system are largely dependent on knowledge management. To keep officers and other relevant staff members up to date on the newest techniques, procedures, and knowledge for halal operations, it entails continuous education and training. To ensure that halal information is accurate and consistent, standardize knowledge must be transferred to all parties involved, including industry players, certification bodies, and enforcement agencies.

Standardized knowledge management involves the systematic management, sharing and updating of critical knowledge among halal stakeholders. To ensure compliance with halal standards and technological advancements, the knowledge must be updated regularly to maintain relevance. Stakeholders can engage in open and structured communication to improve coordination and consistency in decision-making during certification processes. Additionally, it is important to develop the skills of halal controllers so that they can respond quickly to new challenges and maintain high performance standards.

Table 9

Evidences related to standardize knowledge management

Sub-Factor	Evidences
Standardize Knowledge Management	“As the authority responsible for halal certification and the enforcement of related rules and regulations, JAKIM primarily oversees halal compliance in Malaysia.”
	“Maintaining confidence and compliance in the halal market requires effective communication and training among halal stakeholders.”
	“Proper communication is essential when addressing halal issues; for example, DVS and JAKIM should clearly convey the correct procedures for handling slaughter animals and keep updated on slaughterhouses certified halal by JAKIM.” -JAK
	“All stakeholders involved in verifying halal status should understand key concepts such as halal, toyyib, and the requirements for halal certification.” -JAM
	“JAKIM is the main body responsible for guiding all halal authorities in each state and regularly hosts forums to provide updates on halal standards” -MAQ
	“All guidelines used by stakeholders are based on JAKIM’s procedural guidelines, starting from the initial procedures and continuing throughout the entire process.”
	“Halal authorities must address these inconsistencies by maintaining a transparent and consistent certification process, as different scholars may hold varying views on the acceptability of mechanical slaughter”. -DVS
“The procedures used in handling halal matters are all based on JAKIM’s established procedures and requirements.” -MoH	

Discussion of Findings

The main authorities responsible for controlling and regulating halal processes in Malaysia are JAKIM and MAIN or JAIN. However, MAQIS, Customs, DVS, MoH and HDC are among the other agencies involved in related halal processes. In managing different stages of the halal process, these stakeholders are split up according to their roles. The main role of JAKIM is to issue halal certification in collaboration with MAIN or JAIN (Razif & Yoyo, 2021), while MAQIS and Customs handle imported products at the border (Rahim, Ahmi & Rahman, 2020). The slaughtering process is overseen by DVS while MoH monitors food safety in the production phase and HDC participates in training activities and analysis related to halal practices (Daud, Zarmani & Tumiran, 2021),

The findings clearly indicate that halal knowledge is essential for halal authorities and related agencies responsible for managing and controlling halal matters in Malaysia. This knowledge ensures that halal standards are upheld in accordance with ethical principles, as well as cultural and religious norms. To guarantee that the halal controllers can improve their performance, they should be knowledgeable since it is crucial to assist them in properly analysing the situation and making decisions. Since halal cases involve extremely delicate matters involving consumer food and beverages, their understanding of and training in halal standards from each halal authority body is extremely important. Each halal authority body is in charge of providing its officers with halal training in order to guarantee that the halal standards are closely adhered to.

All parties involved in the implementation of halal are required to have a clear understanding of the fundamental principles of Islamic law and halal knowledge (Hanafi & Nurdin, 2022). Halal knowledge is important because it includes understanding what ingredients, processes, and practices are allowed or forbidden in Islam (Romadlon, Istikomah & Haryanto, 2023). It is essential for these stakeholders to have knowledge on how to handle halal procedures correctly, particularly since they are responsible for getting a certification and overseeing the corresponding process (Pratama, 2022). This entails being knowledgeable about screening and verifying ingredients to ensure compliance with halal standards (Eldaw & Ahmed Osman, 2023). In the event of weaknesses in the process, it could indicate inadequate application of halal knowledge (Muhammad, Elistina & Ahmad, 2020). Thus, halal knowledge and understanding must be present among all stakeholders.

Education and training are key sub-factors of halal knowledge that significantly influence the performance of halal controllers. They gain halal knowledge through training provided by JAKIM and other halal authorities during the handling of halal certification processes. Under the direction of JAKIM, these trainings frequently entail cooperation between state halal authorities. Continuous halal knowledge improvement through structured training programmes and continuous education is the key to improving the capacity of stakeholders (Umami, Puspa & Irawan, 2023). Workshops, certification courses, and training sessions may be implemented to enhance knowledge of halal principles, practices, legal requirements (Islam, 2023; Ab Latiff, Zakaria & Man, 2024). Furthermore, halal controllers must be guided by ethical and religious principles in order to carry out their duties with integrity. Understanding religious and ethical principles is defined by a person's ability to apply these values in practical situations and distinguish between right and wrong based on their religious convictions. Officers who are knowledgeable about Islam are better

equipped to handle halal matters responsibly, ensuring that their actions align with ethical and religious norms. The findings show that having this knowledge not only helps with making thoughtful decisions but also helps to prevent issues like bribery, which boosts trust in the halal certification process.

Concerning the third sub-factor, it is clear that the large number of applications and the officer shortage have impacted the performance of halal controllers. Inadequate and inexperienced staff make it difficult to effectively handle every task. Having a sufficient number of officers who are well-trained and knowledgeable is essential to ensuring that halal certification procedures are carried out efficiently and in complete compliance with standards. This emphasises the need for qualified and sufficient staff. Therefore, it is essential to boost manpower, expertise, and human resource capacity in order to preserve public trust and guarantee the security of the halal certification system. Moreover, halal controllers must possess the auditing and inspection abilities required to guarantee adherence to the rules and guidelines. Interviews with JAKIM, MAQIS, and other halal authorities indicate that these skills significantly influence the performance of halal controllers. Technical expertise is necessary for the job, but so is a thorough comprehension of Islamic halal and haram laws. Officers can handle a variety of halal-related cases more adeptly by expanding their knowledge of halal and gaining valuable experience through audits and inspections. The validity and integrity of the halal certification system depend heavily on having auditing and inspection abilities grounded in religious principles.

The fifth sub-factor, regulatory knowledge, is also crucial in highlighting how important halal knowledge is for controllers to carry out their tasks well. Part of this includes being aware of the legal framework, certification requirements, and the halal certification manual and standards. Every step pertaining to halal must follow the most recent legal requirements and guidelines (Prawiro & Fathudin, 2023; Potter, 2024). The body of knowledge can be strengthened through knowledge enhancement, consistent training, and continuous learning. Standardised knowledge management is the last sub-factor that has been found to be capable of producing strong and comprehensive halal knowledge. One essential component to help halal controllers operate efficiently is the requirement for standardised knowledge management, in which data is methodically exchanged, updated, and applied by all parties involved. It outlines an organised and uniform method for obtaining, categorising, sharing, and updating halal information for all stakeholders, including halal authorities, auditors, industry players, and supporting organisations. By implementing a standardised system for managing and sharing halal knowledge, halal authorities can ensure consistency, accuracy and integrity in the halal certification process, safeguarding the legitimacy of Malaysia's halal ecosystem.

Conclusion

In conclusion, halal knowledge is a crucial factor that determines the effectiveness of halal controllers within Malaysia's halal food control ecosystem. The findings identified six sub-factors that influence their performance; (1) education and training, (2) religious and ethical values, (3) adequate and competent personnel, (4) halal auditing and inspection skills, (5) regulatory knowledge, and (6) standardized knowledge management. Every one of these factors plays a distinctive point in ensuring that the halal control system operates efficiently and in full accordance with Islamic principles, legal requirements and consumer expectations.

Halal controllers are guaranteed to be knowledgeable about the halal laws and practices through education and ongoing training. They make decisions based on ethical and religious principles when the halal status is uncertain. The presence of sufficient and skilled staff is crucial to managing the increasing volume of applications and ensuring timely and accurate evaluations. Consumer trust and the validity of halal certification may be jeopardised by delays and possible mistakes in the control process caused by a lack of personnel or experience. Additionally, the ability to conduct halal audits and inspections is essential for verifying compliance at each stage of the halal control procedure. By recognising problems such as cross-contamination and mislabelling, these abilities allow officers to protect the integrity of halal-certified products. Regulatory knowledge gives halal controllers an in-depth understanding of operational requirements, guaranteeing that enforcement actions and decisions are both legal and warranted. In order to guarantee uniformity and precision in the distribution of knowledge, it is imperative that all stakeholders adopt standardised knowledge management. In addition to aligning operational procedures and reducing interpretational inconsistencies, this can foster cross-agency cooperation.

All stakeholders must gain a deeper understanding of halal knowledge to strengthen Malaysia's position as a global leader in the halal industry. Along with the six sub-factors that have been identified, halal knowledge is the primary factor that is essential to guaranteeing that halal controllers have the skills, values and procedural knowledge required to maintain the integrity of halal certification procedures. It is suggested that more empirical studies be carried out in the future to quantify the influence of each sub-factor on the performance of the halal controller. Furthermore, research from other nations or areas may provide more information about the most effective halal control management techniques. Policymakers and industry players can use the study's findings to develop more effective strategic reforms. In essence, to sustain Malaysia's position as a major halal hub, the halal ecosystem should be improved by focusing on stakeholder coordination and knowledge enhancement, which will simultaneously boost consumer confidence worldwide.

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