

A SYSTEMATIC LITERATURE REVIEW (SLR) ON HALAL LABELING AND NUTRITIONAL CONTENT IN PACKAGED FOODS: PERSPECTIVES ON COMPLIANCE AND CONSUMER AWARENESS

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Abstract

The global food industry has seen significant growth in demand for packaged food products, driven by urbanization, lifestyle changes, and the convenience offered by such products. For Muslim consumers, adherence to halal principles in food selection is of paramount importance, as it ensures that the food aligns with Islamic dietary laws. In addition to halal considerations, modern consumers are increasingly health-conscious, seeking nutritional transparency in packaged foods to make informed dietary choices. Combining halal certification with nutritional labeling adds complexity for producers and regulatory bodies, as they strive to meet the dual demands for religious compliance and health awareness. This study aims to systematically review the literature on halal labeling and nutritional content in packaged foods, focusing on industry compliance and consumer awareness levels. Halal labels and nutritional information have become essential components influencing consumer decisions, especially among Muslim communities prioritizing adherence to Sharia law. Using a Systematic Literature Review (SLR) approach, this research compiles and analyzes recent studies to identify trends, challenges, and the impact of halal certification and nutritional information on consumer behavior. The findings are expected to provide insights into the role of halal labeling in strengthening Muslim consumer loyalty and increasing industry transparency in offering quality, Sharia-compliant products. This study also discusses the implications of enhanced nutritional education for increasing consumer awareness of balanced nutrition in packaged food consumption.

Keywords: *Halal labelling, nutritional content, awareness*

INTRODUCTION

The global food market has seen a surge in the demand for halal-certified products, particularly due to the growing Muslim population worldwide and a rising interest in ethical and health-conscious food choices. Halal certification not only signifies compliance with Islamic dietary laws but has also become a hallmark of quality and safety that appeals to both Muslim and non-Muslim consumers alike (Bachtiar et al., 2024a). Halal foods are those that meet specific religious criteria, including the prohibition of ingredients such as pork and alcohol, as well as the requirement for slaughtering practices to meet Islamic guidelines. In tandem with the rise of halal products, nutritional content labeling has become an increasingly important focus, with consumers demanding greater

transparency about the health implications of the foods they purchase (Verbeke et al., 2013). Revisiting this topic is crucial for addressing the evolving expectations of consumers, resolving regulatory inconsistencies, and leveraging innovations to improve halal labeling and nutritional transparency. Consumers are increasingly demanding food products that not only comply with halal certification standards but also provide detailed nutritional information to support health-conscious decisions (Novita Susiang et al., 2022). Additionally, inconsistencies in global halal certification systems continue to challenge regulatory authorities and manufacturers, with fragmented standards limiting cross-border trust and trade opportunities (Islam et al., 2023).

Such efforts are expected to contribute to enhancing consumer trust in halal-certified products, fostering the growth of the global halal food market, and aligning the industry with emerging ethical and health-conscious consumer trends. This alignment reflects the broader demands of consumers who associate halal labels not only with religious compliance but also with sustainable and ethical practices (Bux et al., 2022). Halal labeling, however, does not only serve religious needs but is also believed to align with consumer desires for ethical food production, as halal-certified products are often associated with higher standards of quality, animal welfare, and hygiene (Widjaja, 2021). As such, halal food labeling has gained significant attention from policymakers, food producers, and consumers alike. Additionally, the growing trend of health-conscious eating has emphasized the need for clear nutritional labeling on packaged foods. Understanding how these two factors—halal certification and nutritional content—intersect and influence consumer decisions is critical for both the food industry and consumers. (Shangguan et al., 2019)

Previous research has extensively explored the impact of halal certification on consumer behavior, particularly in markets where halal products are in high demand. Several studies have examined the relationship between halal labeling and consumer perceptions, with findings indicating that halal certification increases trust and influences purchasing decisions (Yener, 2022). In addition to religious and cultural factors, the growing awareness of food quality, health, and sustainability has made halal labeling an important tool for consumers. The integration of halal certification with other quality indicators, such as organic or non-GMO labels, has also been shown to amplify consumer confidence in product integrity. Moreover, studies have also highlighted the significance of nutritional content in influencing consumer choices, particularly as consumers become more concerned with food's impact on their health (Darmawan & Fathurrohman, 2023)

Moreover, integrating nutritional information with halal labeling can enhance the marketability of halal products by appealing to a broader audience, including non-Muslim consumers. Transparency in nutritional content aligns with global trends toward ethical and health-conscious consumption. For instance, adding a clear breakdown of macro- and micronutrients, alongside halal certification, could communicate the dual benefits of religious compliance and health considerations (Jimmi & Gita, 2024).

By combining halal certification with transparent nutritional labeling, food manufacturers can not only meet consumer expectations but also build trust and credibility in an increasingly competitive market. This integration addresses both religious and health concerns, providing a holistic solution that resonates with diverse consumer demographics. Additionally, it positions manufacturers as proactive and

innovative, appealing to consumers who value ethical practices and comprehensive product information. The synergy between halal labeling and nutritional transparency represents an important opportunity for the packaged food industry to adapt to evolving consumer needs. By leveraging this approach, businesses can enhance their brand differentiation, tap into emerging global markets, and respond effectively to the increasing demand for products that align with health, sustainability, and ethical consumption trends. (Muflih & Juliana, 2021)

Despite the substantial body of literature on halal labeling, there remains a significant gap in understanding the dual role of halal certification and nutritional content labeling in shaping consumer awareness and decision-making. While halal certification is often associated with food safety and quality, its interaction with nutritional labeling in influencing consumer choices has not been explored in depth. Most studies have focused either on the religious implications of halal certification or on consumer awareness of nutritional labels, but the intersection of these two aspects remains underexplored. This oversight is particularly significant in multicultural and globalized markets, where consumers increasingly seek products that align with both their ethical values and health priorities. Furthermore, while consumer behavior regarding halal foods has been well-documented, there is limited research on the challenges food producers face in complying with both halal certification standards and nutritional content labeling requirements. Understanding these challenges is critical, as they may include cost implications, regulatory hurdles, and the complexity of meeting diverse consumer expectations simultaneously (Muhammad Ilham Atha Abhinaya & Anton Agus Setyawan, 2024).

This research aims to fill these gaps by investigating how halal labeling and nutritional content together influence consumer decisions, the compliance challenges faced by food producers, and the level of consumer awareness about the nutritional implications of halal foods. By examining these dimensions in a comprehensive manner, this study will provide insights into the effectiveness of halal and nutritional labeling in shaping consumer behavior and highlight areas for improvement in both certification and labeling practices. Additionally, this research will explore how these labels can be leveraged as strategic tools to enhance consumer trust and brand loyalty in competitive markets. The findings are expected to inform policymakers and industry stakeholders on creating more integrated and consumer-friendly labeling frameworks, while also addressing the practical hurdles faced by producers in adhering to complex certification and labeling requirements.

The primary objective of this systematic literature review is to explore the intersection of halal food labeling and nutritional content in packaged foods, with a focus on compliance and consumer awareness. Specifically, this research aims to: Assess the role of halal labeling in influencing consumer purchasing decisions, with particular attention to the nutritional aspects of the food; examine the challenges faced by food producers in complying with both halal certification and nutritional labeling standards; evaluate the level of consumer awareness regarding the implications of halal certification, particularly in terms of health and nutrition; identify the gaps in current research on the combined impact of halal and nutritional labeling, with suggestions for future studies. This review also seeks to understand the broader implications of integrating halal and nutritional labeling for promoting sustainable and ethical consumption practices,

especially in culturally diverse markets. By synthesizing the existing literature, this paper aims to contribute to a more holistic understanding of how halal certification and nutritional content labeling affect consumer behavior and the food industry. Furthermore, this study will highlight actionable insights for policymakers and industry stakeholders to design more effective labeling strategies that meet evolving consumer expectations and regulatory demands.

LITERATURE REVIEW

2.1 Halal Labelling in the Food Industry

The rise in demand for halal-certified products has become a key feature of the global food industry, especially in markets with a significant Muslim population. Halal certification, which ensures compliance with Islamic dietary laws, is not only a marker of religious conformity but has increasingly been associated with higher food safety standards, ethical sourcing, and production practices (Millatina et al., 2022). The global halal food market, valued at billions of dollars, has seen its reach extend beyond Muslim-majority countries to Western and non-Muslim markets where halal products are perceived as premium items associated with hygiene and ethical practices (Bahrudin et al., 2024).

The importance of halal certification is evident in several studies, with some indicating that it enhances trust and confidence among Muslim consumers, making it a crucial factor in purchase decisions (Millatina et al., 2022). However, halal certification is not universally standardized, as different regions have their own certification bodies and criteria, leading to variations in what constitutes "halal" (Al-Mahmood & Fraser, 2023). This is particularly evident in Malaysia and Indonesia, where halal certification processes are among the most developed and widely recognized in the world. In Malaysia, the Department of Islamic Development Malaysia (JAKIM) is the primary authority for halal certification, with rigorous standards and well-established auditing mechanisms. JAKIM-certified products are trusted both domestically and internationally, serving as a benchmark for halal compliance. Similarly, in Indonesia, the Indonesian Ulema Council (MUI) oversees halal certification. MUI certification is highly influential, as Indonesia is home to the world's largest Muslim population. Both countries emphasize stringent verification processes, including regular audits and laboratory testing, to ensure compliance with Islamic dietary laws and broader consumer trust (Ab Latiff, 2020).

Globally, halal certification systems are far more diverse and fragmented. In the Middle East, for example, halal certification bodies vary across countries, with some regions having multiple certifiers with overlapping jurisdictions. In Europe and North America, halal certification is managed by private organizations, leading to inconsistencies and debates over credibility. For instance, while the United Kingdom has well-recognized certifiers such as the Halal Monitoring Committee (HMC), the absence of a unified regulatory framework creates challenges for consumers and producers alike (Faiqoh Faiz

Nur & Fatwa Nur, 2024) This lack of standardization is further complicated by differing interpretations of halal principles, particularly on issues such as stunning before slaughter and the use of certain additives. These regional variations not only pose challenges for consumers in verifying halal authenticity but also create barriers for manufacturers attempting to access global halal markets (Nguyen & Alang, 2024). Establishing a unified international standard remains a critical step for addressing these disparities and promoting consumer confidence worldwide.

While this creates challenges for global food companies, it also presents an opportunity to cater to diverse consumer bases by ensuring transparency in halal certification. Moreover, halal labeling is increasingly viewed as a tool for ethical and sustainable consumption, attracting not only Muslim but also non-Muslim consumers who are interested in responsible food production (Sungnoi & Soonthonsmai, 2024). Despite its growing importance, halal labeling faces various challenges, including the complexity and cost of certification processes, particularly for smaller producers. The lack of a universally accepted halal certification standard across different markets further complicates the matter, as consumers and producers struggle to navigate diverse certification systems. This gap underscores the need for more harmonized certification practices and clearer labeling to facilitate consumer understanding and trust (Islam et al., 2023)

2.2 Nutritional Content and Labeling in Packaged Foods

In parallel to the rise of halal food, consumer demand for healthier, more transparent food options has grown globally, driven by rising concerns about obesity, non-communicable diseases, and food-related health risks. Nutritional content labeling, which provides consumers with information on calorie count, sugar, fat, and other nutritional factors, has become a cornerstone of food transparency. The importance of nutritional labeling has been highlighted in numerous studies, with findings suggesting that clear labeling encourages healthier food choices and increases consumer trust in food products (Ahmed Khan, 2024)

Non-communicable diseases (NCDs), such as hypertension, cancer, chronic obstructive respiratory disease (COPD), and diabetes are global health threats that are the leading causes of death in the world (CDC, 2021). NCDs are known to kill 41 million people each year or equivalent to 71% of global deaths. Cardiovascular diseases (17.9 million/year), cancer (9.3 million/year), respiratory diseases (4.1 million/year), and diabetes (1.5 million/year) are the four diseases that contribute to the largest number of deaths globally. Of all deaths from NCDs, 77% are in low-middle income countries. (WHO, 2022)

FOPL to complement the detailed nutrition declaration on the back of the package. Increasing evidence suggests that such labels can help consumers understand nutritional quality, encourage healthier food choices and product reformulation by the food

industry. (Jones et al., 2019) Based on the trend used in nutritional information on food products, the three most common types of nutrients are vitamins (mostly vitamin C and vitamin B), “gluten-free” and minerals (mostly iron and calcium). (North et al., 2023)

The development of nutrition policies plays an important role in health promotion. Regarding nutrition labeling, the food industry and food authorities have proposed various schemes, each of which has advantages and disadvantages. Recently, FOPL has received attention as a potential nutrition policy that can contribute to reducing nutrition-related diseases. (Zampelas, 2023)

Some people still do not understand how to read nutrition labels on food products correctly. Often the information presented is in the form of numbers or the amount of nutrients contained. The lower a person's education level, the more difficult it is to understand the meaning of the numbers ((Roberto et al., 2021) So several educational studies on the use of nutrition labels have been conducted to improve public understanding. One study of objective understanding of four front-of-pack label (FOPL) nutrition labels—namely Nutri-Score, Multiple Traffic Lights (MTL), Simplified Nutrition Labeling System (SENS), and Modified Reference Intakes (mRIs)—investigated in a sample from the NutriNet-Santé French cohort ($n = 3,751$) showed significant results with an increase in consumers' ability to correctly classify products, with wide differences in results by format compared to "no label" products, the best FOPL was Nutri-Score (OR = 20.33 (17.68–23.37)), followed by SENS (OR = 9.57 (8.50–10.77)), MTL (OR = 3.55 (3.20–3.93)) and mRIs (OR = 1.53 (1.39–1.69)) (Egnell et al., 2018).

FOPLs leverage food labels to inform consumers and promote public health. Dozens of countries have adopted FOPL systems, which empower consumers to make healthy choices and encourage packaged food manufacturers and retailers to offer healthier foods (Conklin, 2023). When making purchasing decisions, nearly all consumers (96.0%) have decided to purchase food products with nutrition labels compared to those without. Furthermore, when compared to similar products with nutrition labels, consumers perceived low-fat (28.7%) and low-sugar (22.6%) claims as signals that the product is healthier and has a better nutritional profile. Knowledge of nutrition labels (OR=1.139; 95% CI:1.016–1.276; $p=0.025$) and purchasing decisions for products with nutrition labels (OR=3.426; 95% CI:1.220–9.623; $p=0.019$) were significantly associated with purchasing decisions for healthier processed foods. (Mauludyani et al., 2021)

Food label information helps consumers to better understand the nutritional value of food and allows them to compare the nutritional value of similar food products. As consumers become more aware of the relationship between diet and disease; their demand for nutritional information increases. As a result, food labels are very useful for people on special diets (e.g. people with diabetes or high blood lipids) to choose foods that are appropriate for their health conditions. A review of consumer research studies on food labeling focused on whether consumers read and understand food labels or use



them when purchasing packaged foods. Research shows that consumer knowledge and attitudes are positively correlated with their education level. Those with higher education are usually more receptive to nutrition and health education. (Wahab, 2018)

2.3 Consumer Awareness of Halal Labeling and Nutritional Content

A critical factor influencing the effectiveness of both halal certification and nutritional labeling is consumer awareness. Research has shown that while halal certification is well-understood among Muslim consumers, non-Muslim consumers often lack knowledge about what halal certification entails beyond the religious context (Ali & Ahmad, 2023). This lack of understanding can result in a missed opportunity for food producers to appeal to broader markets. Non-Muslim consumers may fail to recognize the ethical or health-related benefits associated with halal foods, which could affect their willingness to purchase such products.

Furthermore, consumer awareness of nutritional content remains low in many parts of the world. A significant portion of consumers find it difficult to interpret nutritional labels effectively, especially when multiple claims and certifications are present on a single product. This issue is compounded in markets where consumers are unfamiliar with both halal and nutritional labeling systems, creating confusion about how to evaluate products based on these labels (Zafar et al., 2022). Studies suggest that consumer education plays a crucial role in bridging these knowledge gaps. It is critical to raise awareness about what halal certification means beyond religious observance, as well as to improve literacy in reading and understanding nutritional labels.

While some studies have explored the impact of nutritional labels on consumer behavior, few have addressed the combined influence of both halal and nutritional labels. (Millatina et al., 2022). This gap in the literature presents an opportunity to investigate how these two labeling systems interact to influence consumer decision-making. Understanding how consumers perceive the dual impact of halal certification and nutritional content could provide valuable insights into the factors that drive food choices, particularly in multicultural societies. Consumer awareness of the health benefits of halal products, especially in non-Muslim-majority countries, could potentially lead to a broader market for halal foods if better marketing and educational strategies are employed. By integrating health claims with halal labeling, food producers may increase their appeal to health-conscious consumers, regardless of religious background, thereby expanding the consumer base for halal products (Ambali & Bakar, 2014).

2.4 Summary of the Literature

In summary, while extensive research exists on halal food labeling and nutritional content separately, there is a noticeable lack of studies exploring their combined impact on consumer behavior. Halal labeling is primarily seen as a religious and ethical marker, while nutritional content labeling addresses health concerns, but little research has

investigated how these two factors together influence consumer purchasing decisions. The existing literature also highlights significant gaps in consumer awareness regarding the health implications of halal food and the interpretation of nutritional labels, particularly in regions where halal food is not as widely understood (Ramli et al., 2023). Nutritional content labeling is a critical tool for promoting informed consumer choices, yet its integration with halal certification remains limited. Nutritional labels provide key information about calorie content, macronutrient distribution (carbohydrates, proteins, and fats), and micronutrient values (vitamins and minerals). This transparency empowers consumers to align their dietary intake with health goals, such as weight management or the prevention of chronic diseases like obesity and diabetes (Wang, 2024). However, studies show that many halal-certified products fail to include comprehensive nutritional details, which could potentially diminish their appeal to health-conscious consumers. The absence of nutritional transparency may lead to misconceptions about the healthiness of halal foods, particularly in non-Muslim-majority regions where consumers may not fully understand the standards underlying halal certification. (Ali & Ahmad, 2023)

Furthermore, the integration of nutritional content with halal labeling could offer dual benefits by addressing both religious compliance and health considerations. Products combining halal certification with detailed nutritional information are perceived as higher quality and more trustworthy by consumers. This approach not only appeals to devout Muslim consumers but also to a broader audience seeking products that are both ethically sourced and nutritionally beneficial. For example, clear labeling of sodium content in halal packaged foods could help consumers manage hypertension, while transparent ingredient lists may address concerns about allergens or artificial additives (Ramadhan et al., 2024).

Additionally, challenges related to compliance with both halal certification and nutritional labeling are not well-documented, especially in regions with complex regulatory environments. This creates an opportunity for further research into the practicalities of meeting both halal and nutritional labeling standards and how these requirements impact food producers. The intersection of halal food labeling and nutritional content labeling presents an underexplored area of research that could provide valuable insights into how food labeling systems can be integrated to enhance consumer understanding and decision-making.

RESEARCH METHOD

Research design

This study employs a systematic literature review (SLR) is a way of synthesizing scientific evidence to answer a specific research question in a transparent and reproducible manner, while attempting to include all published evidence on the topic and assessing the quality of this evidence. SLR has become a primary methodology in disciplines such as public policy research and health sciences (Lame, 2019).

Research Questions

The primary aim of this SLR is to address the following research questions:

1. What are the standards and regulations governing halal labeling and nutritional content in packaged foods?
2. How do packaged food manufacturers comply with these regulations?
3. What is the level of consumer awareness and understanding of halal labeling and nutritional content?
4. What impact does halal labeling and nutritional content have on consumer purchasing behavior and perceptions?

Data Sources and Search Strategy

The literature search will be conducted using multiple reputable academic databases, such as: Scopus, Web of Science, PubMed, Google Scholar. A comprehensive search strategy will be developed using a combination of keywords and phrases relevant to the research topic. Examples include: "*halal labeling*," "*nutritional content*," "*packaged foods*," "*consumer awareness*," and "*regulatory compliance*." Boolean operators (AND, OR) will be used to refine the search results and ensure the retrieval of relevant studies. Additionally, the search will include papers published from [2020] to [2024]. (Kitchenham, 2004)

Inclusion and Exclusion Criteria

To ensure the relevance and quality of the selected literature, the following criteria will be applied: Inclusion Criteria: Peer-reviewed articles and conference papers; Studies that focus on halal labeling and/or nutritional content in packaged foods; Research addressing compliance with regulations or consumer awareness and behavior; Publications from [insert year range] in the specified languages. Exclusion Criteria: Studies not related to halal labeling or nutritional content; Non-peer-reviewed articles, book chapters, and gray literature; Articles that do not address consumer awareness or compliance issues.

Study Selection Process

The study selection process will be conducted in several phases: Identification: All retrieved studies will be imported into reference management software (e.g., EndNote, Mendeley) to remove duplicates. Screening: Titles and abstracts will be screened based on the inclusion and exclusion criteria. Eligibility: Full-text articles will be reviewed for relevance and methodological rigor. Inclusion: Studies meeting all criteria will be included in the final review.

Data Extraction and Synthesis

A standardized data extraction form will be used to collect relevant information from each selected study. The extracted data will include: (Braun & Clarke, 2006). Study authors and publication year; Research objectives and questions; Methodology and sample size; Key findings related to halal labeling, nutritional content, compliance, and consumer awareness.

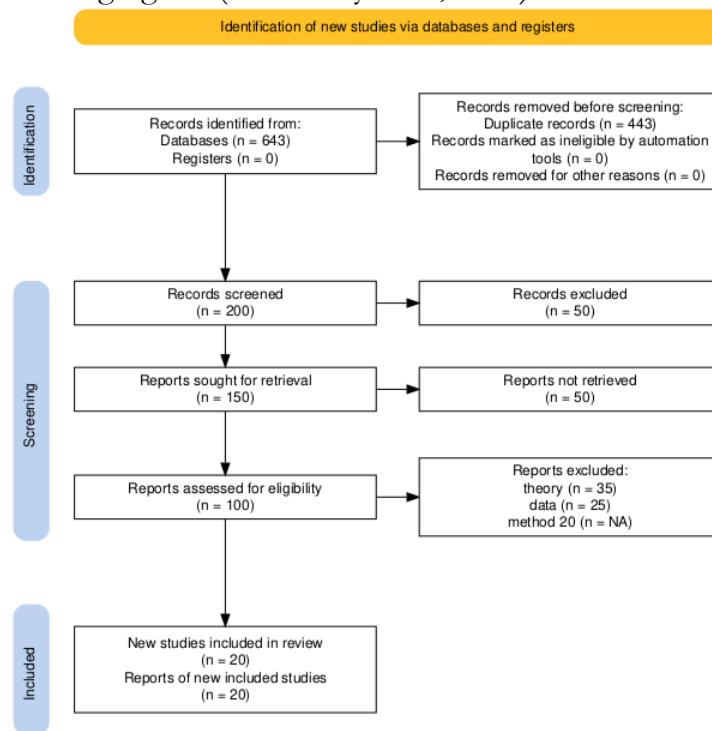
The extracted data will be synthesized using a thematic analysis approach. This will involve categorizing findings into themes that address the research questions. Both quantitative and qualitative findings will be analyzed to provide a comprehensive understanding of the topic.

Quality Assessment

Researchers assess the relevance and quality of each study by referring to the Preferred Reporting Items for Systematic Reviews and Meta Analyses (PRISMA) guidelines used

to be designed to help systematic reviewers transparently report the reasons for the review, what the authors did, and what they found. (Page et al., 2021)

The PRISMA process includes the following steps: first, identification and removal of duplicates, removal of articles that do not match the research objectives as many as 443 articles, and second, 200 articles were screened by removing book chapters, theses, proceedings or seminars, and, third, 100 articles were evaluated and articles outside the scope of the topic, full text was not available and data and method did not match the objectives of this study were removed as many as 80 articles. After that process, 20 articles were selected that best matched the research objectives. Finally, the results were presented. For this purpose, a series of publications underwent evaluation by the authors. The evaluation focused on halal labeling and nutritional content in packaged foods: perspectives on compliance and consumer awareness were suggested, implemented, and discussed in the selected articles. After that, an aggregation approach was used to summarize the conclusions of the reviewed articles. The PRISMA Flowchart is presented in the following figure: (Haddaway et al., 2022)



Pictures 1. PRISMA Flow Chart

RESULTS AND DISCUSSION

The systematic literature review (SLR) analyzed 20 peer-reviewed articles published between 2020 and 2024, focusing on two key aspects: halal labeling compliance and its intersection with consumer awareness, and the impact of nutritional content in packaged foods. The findings reveal critical insights into industry practices and consumer expectations, summarized as follows:

Table 1. Literature Review based on some relevant recent studies

No	Author (Year)	Method	Findings
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1	Prayuti, Yuyut (2020)	Qualitative Descriptive	the form of legal protection for Muslim consumers was regulated through the Consumer Protection Act (UUPK) and other laws. Legal efforts by consumers through dispute resolution outside the court and within the court and through the Consumer Dispute Resolution Agency (BPSK)
2	Deuraseh,Nurdeng (2020)	Qualitative	The requirement and rules in both PBD 24:2007 must take into consideration while dealing with halal product in Negara Brunei Darussalam for safety and quality foods.
3	Parvin Hosseini (2020)	Quantitative	The results showed that animal slaughter, halal logo, food quality and religious commitment have a positive effect on the willingness to pay for halal food. Religious commitment positively moderates the relationship between storage and transportation and the willingness to pay for halal-certified food.
4	Abbadi (2020)	Qualitative	FOPL provide a source of nutrition and health information that is readily understood by consumers, including those with limited literacy. There is

			evidence that FOPL can shift consumer behavior toward more nutritious and healthful choices. However, assessments of the effectiveness of FOPL have been restricted in scope and rely largely on simulation models rather than real-world environments.
5	Ahyani, Hisam et al (2020)	Field Study	Halal food in the three sub-districts was able to boost the economy of the people in the area, as evidenced by the sufficient daily needs needed by the people in the three sub-districts. Various foods that can be used as halal food in these three sub-districts are varied, including cassava based chips, Tape, Cimplung from soybean ingredients including Sule and Tempe Mendoan, from legen ingredients (coconut juice) can be made into Javanese sugar / brown sugar and can also be used as a mixture for making apem / cake foods. However, from the potential of halal food, some are already labeled halal and some are not labeled halal. This is what makes halal food in these three sub-districts less

			attractive to consumers.
6	Septiani, Devi (2020)	Quantitative	The results of this study indicate that halal certification variables and halal awareness both partially have positive effects on purchase intentions of halal food products. Meanwhile, the two variables simultaneously, halal certification and halal awareness, also positively influence the intention to purchase halal food products.
7	Rahman, R. A., Zahari, M. S. M., Hanafiah, M. H., & Mamat, M. N. (2021)	Qualitative	This study added a valuable contribution to the <i>Syubhab</i> food consumption literature by assessing the direct effect between knowledge and purchase behavior and the mediating roles of trust among Muslim consumers.
8	Fadlulah (2021)	Qualitative	There was a significant positive effect of food ingredients and advertising on purchase intention. There was a significant positive effect of the halal label on buying decisions. There was a significant positive effect of advertising on buying decisions.
9	Atan, A. S. ., & Zur Raffar, I. N. A. (2024)	literature review	the consequences of the study show the non-compliance factor

			of Muslim users embraces of the level of knowledge and gratefulness of religion, attitudes, and the impact of curving food on social media.
10	Zainol, Z., Yahaya, R., Osman, J. and Omar, N.A. (2020),	Quantitative	The findings reveal the significant positive effect of health knowledge on nutrition-label use and attitude towards nutrition label, but only attitude towards nutrition label significantly predicts healthy food choice.
11	Budhijana, Raden Bambang (2023)	Qualitative	Halal Awareness, Sharia Compliant, Halal Certification, Customer Perception and Marketing of Halal Food Lifestyle positively and significantly impact the Intention to Buy Halal Food Products In Indonesia.
12	Yaacob, T. Z., Salleh, H. S. M., Hasan, M. Z., & Hashim, H. I. C. (2023)	Quantitative research	Therefore, there is a strong positive significant between religious belief and awareness towards Halal logistics. However, there is a weak positive significant correlation between Awareness towards Halal logistics and Halal certificate
13	Harahap, I. S. (2023)	Descriptive Qualitative	Understanding of the positive impact of the association of halal-labeled food with Surah Al-Baqarah

			Verse 168 on the spiritual, health and business aspects of Muslims.
14	Fialon M, Nabec L, Julia C. (2022)	Netnography	The deconstruction of the legitimacy of the Nutri-Score in Italy pertained mainly to its pragmatic dimension according to the Italian public health experts. Nevertheless, its two other dimensions (normative and cognitive) are also questioned by high-influence stakeholders.
15	(Jain & Singh, 2023)	Qualitative Review	FOPL presents complex information in a simpler way to guide consumer eating behavior and inspire the food industry to reformulate certain products to be healthier. Examples of FOPL use are Nutri-Score with grades A to E and Health Warnings such as “high sugar” or “high sodium”
16	Batista, M.F et al (2022)	Qualitative	Some potential factors that influence the effectiveness of front-of-package nutritional labeling (FOPL) on consumer attitudes have been identified, such as food taste, as a major intrinsic factor. Extrinsic factors, such as price, food category, cultural diversity, politics, and

			economics, were also relevant.
17	Ares, Gastón, et al (2023)	Qualitative	FOP nutrition labeling increases consumer ability to interpret nutritional information and discourages the choice of unhealthy products. Further research is needed to better understand the effect of warning label policies on food choices and long-term population health as well as product reformulation.
18	Muthuraman, Dr. Subrahmanian and Al Haziazi, Dr. Mohammed and Uthaman, Neena and Alghazali, Samia Hudaid Sulaiym (2023)	Qualitative	The food we eat must be nutritious and safe, but we often ignore or overlook the issue of food safety. There is need to Improve the nutrition center in the country, actively spread information and raise consumer awareness about food safety issues. There are other issues related to the costs of implementation of food safety measures and the compliance with the standards which the Government should take care.
19	Faza, F., Hardiyanti, M., Witaningrum, R., Pranoto, Y.A. and Hastuti, J. (2024)	Qualitative	The top five Ultra Processed Food (UPF) products frequently consumed by participants were snacks (both sweets and savoury), instant

			noodles, canned food, beverages, mainly sugar-sweetened beverages (SSB) and bread and frozen foods. From the participants' perspective, instead of prohibiting UPF advertisement, conducting food and nutrition sustainable education is more important to control UPF intake.
20	Y Kurniawati, R Rohani, S Hasri (2020)	Mixed Method	About 57% students have tendency to choose unhealthy food. For the reason of choice, the effect of culture 54%, personality reason 48%, and social-economy reason 71%. Meanwhile, 59% food that they consume are doubtful whether it is halal or not. Halal label does not have significant effect towards the choice of food for muslim students of elementary school in Pekanbaru. Therefore, the education on halal food for muslim students at elementary school is pivotal. The family, students, teachers, and school members must pay attention on this case and avoid the damage on individuals of the future generation.

Discussion

Compliance Challenges

The fragmented nature of halal certification systems globally creates compliance challenges for food manufacturers. While countries like Malaysia and Indonesia have robust systems, other regions often lack adequate oversight. The inconsistency in certification standards complicates cross-border trade and erodes consumer confidence in halal labeling. This lack of uniformity can also lead to higher operational costs for manufacturers, as they must navigate varying requirements to access different markets (Islam et al., 2023). Standardization of halal certification criteria, as proposed by global forums could significantly mitigate these challenges. Such standardization would not only streamline trade processes but also strengthen the credibility of halal labeling on a global scale, fostering trust among consumers and stakeholders. Moreover, a unified approach could encourage greater collaboration between regulatory bodies, certification authorities, and industry players to ensure a transparent and consistent halal certification system worldwide. (Al-Mahmood & Fraser, 2023)

Consumer Awareness

Although awareness about halal labeling is strong in Muslim-majority countries, there is a need for better education in non-Muslim-majority markets. For instance, campaigns emphasizing the quality and ethical dimensions of halal certification have been shown to improve acceptance among non-Muslim consumers (Ramli et al., 2023). Highlighting attributes such as food safety, sustainability, and humane practices associated with halal certification can also help bridge cultural and religious gaps, making it more appealing to a wider audience. Furthermore, integrating halal labeling with nutritional transparency could enhance its relevance in health-conscious markets globally. This approach could position halal-certified products as premium options, aligning them with contemporary consumer preferences for health, ethics, and quality, thereby fostering greater inclusivity in the market.

By highlighting that halal products fulfill religious criteria while also adhering to superior standards of raw material quality, safe production methods, and social responsibility, businesses can expand their market appeal (Mohd Noor et al., 2023). This will appeal not only to Muslim consumers but also to non-Muslim consumers who are increasingly concerned about ethical production techniques and the health implications of their food choices (Nicolosi et al., 2023). The incorporation of halal labels alongside explicit and comprehensive nutritional information might enhance the product's perception as a healthy and conscientious option (Bachtiar et al., 2024b). Aligning halal products with global trends that emphasize attractiveness, transparency, and quality will foster more inclusion, facilitating broader acceptance of halal products in varied markets. Consequently, halal certified items are regarded not merely as a religious preference, but also as a superior option that satisfies contemporary consumer demands.

Nutritional Content and Consumer Health

Based on research, nutritional labels are indirectly beneficial to health. Food labels provide consumers with information about the nutritional content of packaged foods, which can affect the consumption of nutrients such as energy, fat, saturated fat, trans

fat, sodium, and added sugar (Anastasiou et al., 2019). The very significant impact of diet, especially excessive intake of energy, sugar, sodium, and saturated fat has been studied and recommendations have been made to reduce the incidence of non-communicable diseases. (Braesco & Drewnowski, 2023)

Nutrition labels on food are a way to improve public health in preventing non-communicable diseases. WHO recommends the implementation of FOPL nutrition labels to encourage consumers towards healthier food choices, as part of a comprehensive strategy to prevent non-communicable diseases related to diet. Consumption of high-calorie foods has been studied to be associated with NCDs worldwide. This FOPL aims to present the complex in a simpler way to guide consumer eating behavior and inspire the food industry to reformulate certain product information more healthily. Examples of the use of this FOPL are Nutri-Score with values A to E and Health Warnings such as "high sugar" or "high sodium" (Jain & Singh, 2023)

Research shows that there is a 76% increase in adolescent knowledge in understanding nutritional information labels and nutritious healthy snacks through periodic educational assistance and practice reading nutritional information labels. (Lestari and Iswahyudi, 2024). The results of education conducted by Dewi et al. (2023) showed that education, pre-tests, and post-tests related to nutritional information provided can improve students' knowledge and ability to read nutritional information labels. More than 75% of participants were able to apply the material provided through the nutritional information label reading test. (Dewi et al., 2023) Understanding the use of nutritional labels among consumers is very helpful in promoting healthy eating patterns in the future. The results of research by Song et al. (2015) showed that subjective understanding of nutritional labels was moderate (62.8% of respondents). In addition, participants' attitudes towards nutritional labels were also negative based on the level of impact on shopping behavior, trust and satisfaction with nutritional labels. (Song et al., 2015)

Individual factors in their views on healthy lifestyles also play a role in reading nutritional labels on products containing sugar, fat, and other sodium where these contents can affect health. Research shows that there is a relationship between gender, attitude, knowledge, and type of education on a person's interest in reading nutritional label information. The ease of labels to be read properly and correctly by consumers is a challenge in itself where complex and excessive information will hinder consumers from reading nutritional labels so that the level of consumer awareness in sugar consumption is still lacking. (Melinda & Farida, 2021)

CONCLUSION

This systematic literature review highlights the evolving dynamics of halal labeling and nutritional content in packaged foods. While halal certification remains a cornerstone of consumer trust in Muslim-majority countries, its effectiveness is challenged by non-standardized global practices. Furthermore, the growing consumer demand for health-conscious and ethically-produced products underscores the need for transparent nutritional labeling to complement halal certification. Standardization of halal certification, coupled with innovative technological solutions, such as blockchain and QR codes, can enhance compliance and transparency. Additionally, targeted education campaigns are essential to bridge awareness gaps in non-Muslim-majority

markets. The findings advocate for a holistic approach that integrates religious, health, and ethical considerations in halal certification. Such efforts could not only meet the expectations of modern consumers but also pave the way for a more inclusive and sustainable global food market. Future research should focus on standardizing halal certification systems and exploring the broader implications of halal labeling in promoting health and sustainability.

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