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SENTIMENT ANALYSIS ON HALAL CERTIFICATION

ANALISIS SENTIMEN SERTIFIKASI HALAL

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Halal Certificate is a halal guarantee certificate for a product issued by an institution, for private institution or a government agency. There are pros and cons among the public and researchers regarding the existence of Halal certification. Therefore, this research was conducted to examine halal certification within the scope of the economy in terms of the opinions of Twitter social media users. The method used in this research is a qualitative approach with descriptive statistics from literature studies with the theme of halal certification. The data used in this study are 13,824 tweets related to Halal Certification. To classify tweets, a Python library called VADER (Valence Aware Dictionary and Sentiment Reasoner) is used. VADER is a lexicon and rule-based sentiment analysis tool adapted to social media sentiment but also works on texts from other domains. The results of the sentiment analysis show that there is a tendency for positive perceptions of Halal Certification in the opinion of Twitter users, with positive sentiment of 41.8%, neutral sentiment of 30.8% and negative sentiment of

Abstrak

Sertifikat Halal adalah sertifikat jaminan kehalalan suatu produk yang dikeluarkan oleh suatu lembaga, baik itu lembaga swasta maupun instansi pemerintah. Terdapat pro dan kontra dikalangan masyarakat dan para peneliti terkait adanya Halal certification. Oleh karena itu, penelitian ini dilakukan untuk mengkaji sertifikasi halal dalam lingkup ekonomi ditinjau dari opini pengguna media sosial Twitter. Metode yang digunakan dalam penelitian ini adalah pendekatan kualitatif dengan statistik deskriptif dari studi literatur dengan tema sertifikasi halal. Data yang digunakan dalam penelitian ini adalah 13.824 tweet terkait Sertifikasi Halal. Untuk mengklasifikasikan tweet, perpustakaan Python yang disebut VADER (Valence Aware Dictionary and Sentiment Reasoner) digunakan. VADER adalah leksikon dan alat analisis sentimen berbasis aturan yang disesuaikan dengan sentimen media sosial tetapi juga berfungsi pada teks dari domain lain. Hasil analisis sentimen menunjukkan adanya kecenderungan persepsi positif Sertifikasi Halal menurut pendapat pengguna Twitter, dengan sentimen positif sebesar 41,8%, sentimen netral sebesar 30,8% dan sentimen negatif sebesar 27,4%.

27.4%. This diversity of sentiment results is obtained because of the pros and cons of the existence of Halal Certification. The benefit of this research is for literature material and considerations related to Halal Certification. As well as efforts to identify threats, negative perceptions, and lack of Halal certification. In addition, to find out positive perceptions, advantages and benefits of Halal Certification.

Keywords: Halal Certification, Sentiment Analysis, Twitter, Perception

Keberagaman hasil sentimen ini didapat karena adanya pro dan kontra dengan adanya Sertifikasi Halal. Manfaat penelitian ini adalah untuk bahan literatur dan pertimbangan terkait Sertifikasi Halal, serta upaya mengidentifikasi ancaman dan persepsi negative terkait sertifikasi halal. Selain itu, riset ini berguna untuk mengetahui persepsi positif, keuntungan dan manfaat Sertifikasi Halal.

Kata Kunci: Sertifikasi Halal, Analisis Sentimen, Twitter, Persepsi

INTRODUCTION

According to Islamic law, Halal means “permissible,” “lawful,” and “legal” for Muslims (Jallad, 2008), whereas Haram means “prohibited” or “illegal” (Wilson & Liu, 2011). In general, halal products are those that do not include pork, alcohol, blood, or animal-derived ingredients, and their manufacture is free of items considered unclean under Islamic law, including cleaning (Shahid et al., 2018). According to Alserhan (2010), halal certification is a religious obligation for Muslim customers. It is very important in Muslims’ lives since it denotes acceptable and permitted consumption and buying behavior (Rajagopal et al., 2011) 151 questionnaires were distributed to the business student population from different universities in United Arab Emirates.

The halal industry has recently been widely discussed both at domestically and internationally. The halal industry continues to experience significant growth. The value of the international halal market in 2030 is estimated at US\$ 10 trillion (Ali, Ali, & Sherwani, 2017). The Indonesian government does not want to be left behind and even takes

a step forward by planning to make Indonesia a major producer of the global halal industry in 2024 by releasing the 2019-2024 Indonesian Islamic Economic Masterplan in 2018.

With the increasing demand for halal products, standardization, guarantees, or certifications are needed to maintain the quality, hygiene and safety of halal products issued by authorized institutions or authorities. Halal certificates are important for Muslim and non-Muslim consumers because they protect religious principles and consumer rights while providing a sense of security and assurance in the health sector (Khasanah et al., 2021).

Halal certification, which is based on the halal Shariah concept, which is based on a well-known religious belief, has been recognized as a measure of quality standards about a product’s content that brings considerable value and benefits to consumers and producers, particularly within the food industry (Rafiki & Abdul Wahab, 2016). The standard applies not only to food products, but also to the standardisation of items in the pharmaceutical, cosmetics, tourism, and entertainment industries (Ismaeel

& Blaim, 2012). It has been studied by a number of authors, primarily in the marketing field, with studies focusing on the determinants of consumers' intentions to choose halal products and the development of its certification in the global market (Mukhtar & Butt, 2012) the global trade is changing the way we perceive the origin of products and brands and their permissibility under Islamic Sharia laws. This apparently has serious implications for international companies operating in food, cosmetics and pharmaceutical products. The purpose of this paper is to investigate the role of Muslim attitude towards Halal products, their subjective norms and religiosity in predicting intention to choose Halal products. Design/methodology/approach: A structured question was designed to elicit consumer attitude, subjective norms, intention to choose Halal products and degree of inter and intra personal religiosity. Data were collected from 180 adult respondents using a convenience sampling method. Only 150 responses were deemed suitable for further analysis, yielding a response rate of 83 per cent. Stepwise regression analysis was used to test the proposed model. Findings: The results indicated that theory of reasoned action.

Indeed, Islamic halal products have taken center stage on the worldwide market, and they are currently one of the fastest expanding markets, with a market volume projected to reach up to US\$580 billion per year. This demonstrates that the possibility for companies to get halal certification may be endless in terms of their activities and duties in relation to Muslims' identity or nationality (Rafiki & Abdul Wahab, 2016).

Halal certification allows us to experiment with a new marketing paradigm because Halal is such an important part of the Islamic cultural web (Rajagopal et al., 2011) 151 questionnaires

were distributed to the business student population from different universities in United Arab Emirates . The Assessment Institute for Foods, Drugs And Cosmetics, the Indonesian Council of Ulama (AIDC ICU/LP POM MUI) was established in Indonesia in order to ensure the halalness of food items. Halal certification of food, medicine, and cosmetics is the responsibility of an independent entity under the MUI. This halal certification serves as a type of consumer protection, as it ensures that the food being consumed has been thoroughly examined and proclaimed halal by the appropriate authorities, offering a sense of peace and tranquility to the community. LPPOM MUI's participation in halal certification is now confined to voluntary (voluntary) rather than mandatory (mandatory) certification (obligation) (Faidah, 2017).

In addition to the positive role of halal certification on business. There are several challenges that small companies face when they try to apply for halal certification which their owner-managers may emphasize such as fees, regulations, and information (Rafiki & Abdul Wahab, 2016).

However, halal certification among the public is still a matter of debate. Where there are various perceptions regarding this halal certification. Therefore, to test public sentiment towards halal certificates, sentiment analysis is used. Natural language processing (NLP) is a computational linguistic algorithm that determines whether a text has positive, neutral, or negative emotions. By sifting through highly unstructured social network data, opinion mining research aims to uncover hidden trends in broad blogs or reviews. (Zagal, Tomuro, & Shepitsen, 2012). Sentiment analysis described as the examination of people's opinions, feelings, emotions, and attitudes, has earned significant consideration from both the scientific community and

industry for studies of abstract sentiments addressed in the text (Setik et al., 2021). by processing big unstructured data, sentiment and information on certain topics will be analyzed including halal certificates.

Twitter is one of the most popular social media platforms for conducting research. Twitter's monthly active users number 290.5 million people worldwide, with this number expected to increase to more than 340 million by 2024 (Twitter: number of worldwide users 2019-2024, 2022). Meanwhile, Twitter users from Indonesia reached 17.55 million users as of October 2021 (Leading countries based on number of Twitter users as of October 2021, 2022). Twitter is one of the most popular social media platforms for conducting research. According to statista.com, the Twitter microblogging service had 69.3 million users as of January 2021, with 14.05 million of them from Indonesia.

Research on halal certificates has been done by many researcher. Such as (Nasirun, Noor, Sultan, & Haniffiza, 2019), (Khalek & Mokhtar, 2017). Van der Spiegel et al (2012) addressed halal requirements, summarized applied standards and certification, and looked into how halal certificates are currently verified through audits and laboratory analysis. Latif et al (2014) used the requirements for Halal certification to compare the various Halal certification agencies around the world. (Badrudin et al., 2012) conducted research related to the perception of clients on JAKIM's quality service in halal certification. According to the SERVQUAL gap study, the empathy dimension is the most important JAKIM service quality dimension, followed by responsiveness, reliability, assurance, and tangibles. Nonetheless, JAKIM's services failed to fulfill client expectations in all five service quality criteria, according to the findings.

Islamic economic research on sentiment or opinion mining is pretty much done using data from Twitter. Feizollah et al (2021) studied 33,880 tweets from Oct 2008 to Oct 2018 related to halal tourism. The study used a word list, concordance graphs, semantic network analysis, and topic-modeling methodologies to discover and analyze the topics. The sentiment of the tweets was examined using the NRC emotion lexicon. Sentiment analysis found that there were more positive than negative sentiments among the tweets. The findings have shown that halal tourism is a global market and not only restricted to Muslim countries.

Mostafa (2020) analyzed 11.700 world-wide random tweets from 20 January 2015 to 19 January 2019 as sample data. The NRC and AFINN lexicons were used to measure global sentiments regarding halal food. Despite the overall positive sentiment of halal food, the tweets also suggest a broader worry about animal welfare.

Feizollah et al (2019) research analyzed halal tourism and halal cosmetics related tweets from October 2008 until October 2018 years. Using keywords related to halal tourism and halal cosmetics in English and Malay languages. The findings of the research showed that people have a positive sentiment toward halal tourism and halal cosmetics. Halal cosmetics had a higher sentiment score compared to halal tourism, which shows a higher level of a keen interest in this field.

Mostafa (2020) conducted research on global halal food on social media using data from Twitter which concluded that sentiment towards halal food tends to be positive and there are general concerns about animal welfare. Feizollah, et al (2019) examined the sentiments of Twitter users towards halal tourism and halal cosmetics which concluded that

public sentiment was positive. However, research on public opinion and sentiment using social media data from Twitter regarding halal certificates has never been done before. Therefore, this study aims to determine public sentiment towards halal certificates using Twitter data.

The purpose of this research is to get answers to the research questions in this paper. The research question is how is the issue of halal certificates being discussed on social media? and What is the general sentiment expressed towards halal certificates on social media? To answer the research question, the data used in this study is the tweets of Twitter users.

Background Theory

Halal is the opposite of haram or Illicit. Halal is an Arabic word associated with Islam which can be interpreted as permissible (Wilson, 2014). Halal in action is an act that has no sin when it is done or abandoned. Halal products are products that are allowed to be used or consumed by Islam. Meanwhile, halal food is food that can be consumed according to Islam and processed according to Islamic guidelines. Muslims are commanded to consume halal food.

Halal Certificate is a halal guarantee certificate for a product issued by an institution, be it a private institution or a government agency. Halal certification is a security guarantee for Muslims who want to consume food according to Islamic teachings (Nurcahyo & Hudransyah, 2017). Halal certification should not be limited to one aspect only; rather, it should be looked at as a whole, including the role of the certification body, halal legislation, standards and guidelines, certification process, legal references and issues, and the halal sign or 'logo' (Othman et al., 2016). Each region or country has its own policy regarding halal certificates. Based on Law Number 33 of 2014 concerning

Halal Product Assurance, the authority to issue halal certificates in Indonesia is BPJPH (Halal Product Assurance Organizing Agency).

In the food business, halal certification or labeling is already a standard. However, when the Malaysian government created a halal cosmetics standard in 2010, the concept's popularity in the cosmetics industry skyrocketed. This drew the attention of Muslim shoppers all around the world (Shahid et al., 2018). Sharia compliant procedures for making materials for goods must be supervised and authorized. Halal certification, from a commercial point of view, is a source of competitive advantage that ensures product differentiation and quality (Rafiki & Abdul Wahab, 2016).

There are various problems that small businesses have while attempting to obtain halal certification, which may be highlighted by owner-managers (Rafiki & Abdul Wahab, 2016):

1. Institutional policies: This is based on previously established policies. Producers might be supportive of policies that are both effective and efficient in addressing the halal certification issue, as well as in consistently and successfully enforcing and punishing compliance with laws. Government institutions are thought to be impediments to the spread of halal values.
2. Cost and organizational change: There are two sorts of costs associated with halal certification: direct and transactional. When asking for halal certification, both forms are likely to be employed as important limits. While goals, authority, structure, direction, operational, and strategy are frequently connected with changes in an organization, there would definitely be additional considerations in applying for such a certification.

3. Informational: Owner-managers must keep up to speed with halal standards, exchange, and control information. Employees must take proactive steps to regulate informational flows about items, both forward and backward.

With resources such as human capital that possesses motivation, skills, education, and experience, small business owners and managers can address the issues mentioned above and weigh the costs and benefits of obtaining halal certification, as well as evaluate the potential of obtaining halal certification as a marketing tool.

METHODE

The method used is a qualitative approach with descriptive statistics from Twitter application user tweets related to halal certificates. This study uses sentiment analysis to determine public sentiment about a theme. Tweets are messages posted by Twitter users. Tweets can consist of letters, photos, and videos. For sentiment our analysts use tweets consisting of words.

Data collection is done by scraping method using Snsrape. Snsrape is a package in the Python programming language that extracts Tweets from the Twitter application without having to use the Twitter API. The data used is 18,812 using the halal certificate keyword. The data is then cleaned in the pre-processing stage, such as removing tweets that use languages other than English. Then the text is cleaned of hashtags, mentions, and links. The remaining tweet data after pre-processing is 13,824 tweets.

Opinion mining (OM) or sentiment analysis (SA) is a new and active research field that aims to automatically evaluate large amounts of unstructured texts including views, feelings, judgments, and attitudes about targets such as products and services (Brahmi, et al, 2019).). To

classify tweets, a Python library called VADER is used. VADER (Valence Aware Dictionary and Sentiment Reasoner) is a lexicon and rules-based sentiment analysis tool adapted to social media sentiment but also works on texts from other domains. VADER makes the workings of sentiment analysis engines more accessible (and thus more interpretable) to a wider human audience outside the computer science community by exposing lexicon and rule-based models (Hutto & Gilbert, 2014).

Vader will calculate a combined score, which will be used to classify tweets. The combined score is calculated by adding up the valence rating of each word in the lexicon, adjusting it according to the rules, and then normalizing it to a range of -1 (most extreme negative) to +1 (most extreme positive) (cjhutto, 2022). . Positive tweets are tweets that have a combined score of greater than 0.05. Negative tweets are tweets with a combined score of less than -0.05. Tweets with a combined score between -0.05 and 0.05 are classified as neutral tweets.

$$Tweet_{sentiment} = \begin{cases} positive & \text{if } CS_{tweet} > 0.05 \\ negative & \text{if } CS_{tweet} < -0.05 \\ neutral & \text{if } -0.05 > CS_{tweet} < 0.05 \end{cases}$$

DISCUSSION

This study tries to analyze the tweet sentiment of twitter application users discussing halal certification. This research was conducted using the python programming language library, namely vader. Vader as a tool to process data to be classified into 3 groups, namely: positive, neutral, and negative. Classification is obtained by measuring the value of each tweet. Tweets are assigned a value which will then be classified into positive, negative, and neutral based on the resulting value. The results of the sentiment analysis on the halal certificate theme can be seen in the following diagram.

Sentiment Polarity on Tweets Data

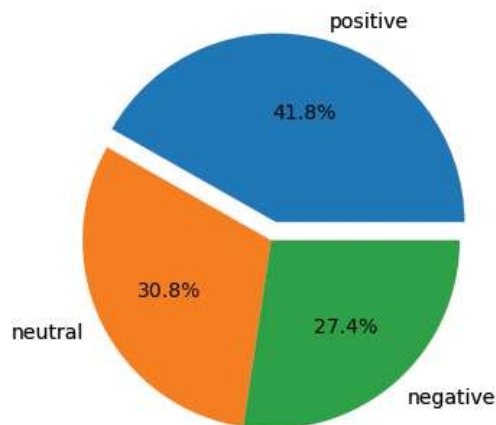


Figure 1. Sentiment Polarity on Tweets Data

From the diagram above (Figure 1), the most positive tweets related to halal certificates until february 02 2022 with a percentage of 41.8%. While neutral tweets related to halal certificates have a percentage of 30.81% of the total data. Negative tweets have the smallest percentage with 27.4% of the total data. Based on data from 13,824 tweets related to halal certificates until February 2, 2022, there are positive and negative issues. The following is a summary of the issues contained in the analyzed tweets.

1. There is the issue of forcing Islamic theology on halal and haram on non-Muslims.
2. There is a belief that halal certificates are discriminatory.
3. There is an issue that the halal certificate aims to take over the food industry.
4. There is a fairly large negative sentiment in India regarding halal certificates.
5. There is a boycott call for halal products.

Word Cloud of Tweets Data



Figure 2. Word Cloud of Tweets Data

From the the results above (Figure 2.), This study found the level of sentiment in tweets related to halal certificates. The results show positive sentiment is the most sentiment with a percentage of 41.8% and neutral sentiment as much as 30.8%. Furthermore, the classification results also show negative sentiment as much as 27.4%. The tweet data shows that there are opposing opinions regarding halal certificates.

The negative sentiment stems from the rejection of some even to the point of sending tweet messages believing that halal certificates are a form of discrimination, coercion on non-Muslims, and aims to take the food industry there. This has led to calls for a boycott of halal products in India with the hashtag #BoycottHalalProducts.

Table 1. Location of Tweet Data

No	Country	Number of Tweets
1	India	2975
2	Malaysia	846
3	United Kingdom	578
4	Sri Lanka	480
5	Singapore	450

The next important information is the location of Twitter users who send tweet messages related to halal certification. This analysis does not represent all data considering that not all users display their location in their Twitter profile or use non-specific locations such as Global, In your favorite smartphone, Earth, or other text. The table shows that India is the largest location with 2,975. This is in line with the number of tweets related to the issue of halal certificates in India. The second most location is Malaysia with 846 tweets. We can conclude that halal certificates raise pros and cons both in Muslim-majority countries and in non-Muslim-majority countries.

Neutral sentiment comes from the awareness of every consumer, especially Muslim consumers. Halalness of a product is a must-have (Cahyowati et al., 2021). Food, medicine, cosmetics, fashion, and other consumer goods are examples of products. Furthermore, halalness is evaluated in terms of raw resources, processing methods, and ways of obtaining them. Therefore, it is necessary to increase human resources and service support facilities, including the use of technology and other supporting features, in order to streamline the certification process (Al-Teinaz & Al-Mazeedi, 2020). Regulations must exist to define the message about what the halal label actually conveys, as there are many halal certification bodies (Rios et al., 2014). This is a task that has already begun to be managed at the macro level on a global scale (Botoeva, 2020).

The number of positive sentiments because halal has become a significant concern in trade and trade-related matters in recent years (Arsil et al., 2018; Cahyowati et al., 2021; Shirin Asa, 2019). Many countries believe halal as a new marketing term. The halal label is a tool for Muslim consumers to strengthen their faith. It is a mark that ensures the purity of the goods during production.

This highly prospective halal sector has received a lot of attention from around the world (Giyanti et al., 2021). Previously, Muslim countries had to verify their maximum food demand within or import it from other Muslim countries (Lestari et al., 2021). However, the number of Muslim customers is growing rapidly, outpacing the available food supply. According to reports, the supply of halal products is still quite limited. As a result, some Muslim countries have to import halal food from other industrialized countries or non-Muslim countries to meet consumer demand. This is a strong reason for countries to adopt their own halal regulations to expand their export and import markets for halal goods (Rios et al., 2014).

The term 'halal' is no longer just a matter of religion; it has entered the realm of halal trade and has developed into a global halal brand for quality assurance. To compete in the global halal market, Muslim and non-Muslim countries are building their own concerns about halal, halal certification procedures, rules and regulations. Worldwide, there are around 122 halal certification bodies involved in halal certification. JAKIM recognizes a total of 42 agencies, while the Institute for the Study of Food, Drugs and Cosmetics-Indonesian Ulema Council (LPPOM-MUI) recognizes as many as 44 institutions.

Al-Teinaz & Al-Mazeedi (2020) stated that although many halal consumers consider halal food certification a religious obligation to enable them to eat authentic halal food, it has developed into a large industry. The global halal certification market was valued at US\$12.5 billion in 2015, according to Salaam Gateway (SalaamGateway.com). According to their analysis, there are more than 400 global HCBs that are unregulated, and halal customers spend an estimated US\$1.2 trillion on food and drink every year.

Food makers and food companies looking to increase the demand and acceptance of their products can benefit from Halal certification (Slamet Rusydiana & Marlina, 2020). Furthermore, the manufacture of halal food elevates food companies to global status. Halal certification helps organize the global halal market and provides peace of mind for Muslim consumers. Moreover, it provides a great opportunity for food businesses to expand their customer base by exporting their products to around 1.6 billion halal consumers worldwide. Halal certification of food products also enables halal consumers, particularly Muslims, to gain confidence in halal food by knowing that the ingredients used and the manufacturing process comply with Islamic Sharia law.

Halal certificates provide benefits for both consumers and producers. Halal certification is a security guarantee for Muslims who want to consume food according to Islamic teachings (Nurchahyo & Hudransyah, 2017). A halal certificate provides numerous benefits. Safety and hygiene, attracting Muslim visitors, enticing more consumers, improved market signals, and business expansion are just a few of the many positives that have been discussed (Hanim Yusuf et al., 2016). Halal certification can be utilized as a product differentiation method, resulting in increased revenue and marketability for the company/restaurant, particularly among Halal consumers. (Khan & Haleem, 2016) whereas many bodies are certifying these as Halal products. The source of Halal Certification (HC. In addition to the positive role of halal certification on business. There are several challenges that small companies face when they try to apply for halal certification which their owner-managers may emphasize such as fees, regulations, and information (Rafiki & Abdul Wahab, 2016).

Each region or country has its own regulations regarding halal certificates. As for Indonesia, based on Article 4 of the Law of the Republic of Indonesia Number 33 of 2014 concerning Halal Product Guarantee, all products that enter, circulate, and are traded in Indonesia must be certified halal. The ratification of UUJPH raises the pros and cons of various parties (Agus, 2017). Meanwhile, the participation of MSMEs in implementing the mandatory halal certification policy is still low (Muhamad, 2020).

With the growing awareness of the Muslim population regarding the idea of halal, the demand for a halal certification system has increased. It is critical for customers who prefer halal products since it provides some confidence that the food was processed and produced following Sharia principles and procedures. While most people believe that halal applies to food or food products, the reality is that it encompasses all areas of Muslim life. It refers specifically to the consumption of permissible products from a religious standpoint, which includes food and beverages, cosmetics, medications, banking and finance, employment, travel, technology, and transportation services (Lestari et al., 2021; Rusydiana & Marlina, 2020; Shahid et al., 2018; Shirin Asa, 2019).

Halal-compliant items must adhere to Sharia criteria outlined in the Quran and Sunnah. Consuming halal items is a fundamental responsibility for all Muslims, regardless of their location. Every Muslim is considered responsible for adhering to the Quranic and Sunnah-based standards and values as closely as possible in their daily lives, notwithstanding the difficulty of assimilation to non-Muslim majority environments. Thus, halal certification is considered critical, particularly in the context of halal tourism, as it is viewed as a method upon which Muslim travelers can rely, particularly while visiting new,

unfamiliar locations throughout their trip (Katuk et al., 2020; Maison et al., 2018; Rachmiatie et al., 2021; Rios et al., 2014).

Halal certification arose as a means of protecting customers. Founded on Islamic principles, halal is no longer restricted to religious responsibilities among Muslims. Halal is an etymological term related to what is permissible and can be done because it is not constrained by the regulations that forbid it. It is developing as a market force and a global phenomenon for Muslims and non-Muslims alike. Not only does the halal label on a product indicate that it is permissible for Muslims to consume, but it has also evolved into a global symbol for quality assurance and lifestyle choices (Akim et al., 2019; Asnawi et al., 2018; Giyanti et al., 2021; Yama et al., 2019).

Halal certification provides a competitive edge by ensuring product differentiation and quality from a business standpoint. Halal philosophy encompasses all constructs, including branding, marketing, product creation and management, organizational behavior, ethnography, and sociology. It is more than a recognized mark or sign related to religious responsibilities; certification also serves to inform and reassure consumers about the contents of items. This undercuts contemporary branding strategies, as halal emphasizes aspirational, tacit, and intangible components and producers must demonstrate the ultimate confidence in their products through the certification's value (Abdul et al., 2013; Rafiki & Abdul Wahab, 2016; Suharko et al., 2018; Usman et al., 2021).

Governments must make this a national priority to enhance the quality of SMEs' services in the halal industry. One of the strategies that might be done is to assist SMEs in obtaining halal certification to earn consumers' trust. Halal certification guarantees the product's quality based

on the outcome of an audit during the manufacturing process (Cahyowati et al., 2021; Khairunnisa et al., 2020; Lestari et al., 2021; Putra, 2017).

Numerous halal industry operators have recognized the value of halal certification in establishing a stronger market position. Halal certification can be viewed as a marketing approach that enables businesses to differentiate themselves from their competitors' products and services. Additionally, research has shown that sales increase when food outlets in Singapore get halal certification. It was discovered that halal certification positively affects business performance and growth (Katuk et al., 2020; Lindsey, 2012; Putri et al., 2021).

Halal certification is formally issued in Indonesia by The Halal Product Guarantee Agency (BPJPH), as it is in Singapore by MUIS, Malaysia by JAKIM, Japan by MPJA, the United Kingdom HFA, and the United States by HFC. Under the authority of the Ministry of Religion, the Halal Product Guarantee Agency (BPJPH) was established. Halal items circulating in Indonesia must be guaranteed under Law No. 33 of 2014. As a result, the Halal Product Assurance Organizing Body is charged with the responsibility and role of ensuring the halalness of items entering, circulating, and trading in Indonesia (Asnawi et al., 2018; Rusydiana & Marlina, 2020; Suharko et al., 2018).

Numerous academics have identified barriers to the establishment and development of halal certification, including contradictions in the halal concept, issues with the halal emblem, antagonism toward Arabic or Islamic words, and a lack of support from current halal institutions. Several countries categorize the halal market into three sub-categories: food, non-food, and services (Arsil et al., 2018; Rasyid, 2019; Sayogo, 2018).

According to studies on the barriers to halal certification implementation, operational challenges can be classified as internal reasons relating to funding, a lack of motivation to utilize halal certification, and insufficient infrastructure for executing appropriate halal standards. External restrictions are imposed by competing industries, the government, and relevant halal agencies. Disparities in perceptions among stakeholders involved in the development of halal tourism, particularly the government and industry participants, will impede progress toward halal product implementation targets. In this situation, as the pioneer of halal certification with direct access to society, the government acts as a mediator in resolving the industry's challenges (Khasanah et al., 2021; Prabowo et al., 2015; Rachmiatie et al., 2021).

The worry regarding the halal concept's propagation and application is not about the aim but the influence of the owners' human capital. Owners and managers are synonymous in small business theory, and they confront obstacles while applying for halal certification, most notably financial restraints. They must invest regardless of whether their customers are concerned. As a result, no progress in terms of certification registration can be noticed unless the owners are properly equipped and possess the experience, knowledge, and abilities necessary to understand the significance of halal certification and to recognize that it may be viewed as a unique resource that provides a competitive advantage favorable to the firm's growth (Faidah, 2017; Faridah, 2019; Rafiki & Abdul Wahab, 2016).

Halal certification is not limited to food and consumables; it also applies to cosmetics, pharmaceuticals, and toiletries. Apart from the halal certification itself, there are several standards, such as Hazard Analysis Critical Control Point

(HACCP), Good Manufacturing Practices (GMP), Good Hygienic Practice (GHP), and ISO9000 that food manufacturers and producers must adhere to meet halal regulations. In Malaysia, manufacturers and producers who obtain JAKIM certification for halal products are said to be able to assure consumers that ingredients are processed, prepared, hygienically handled, and cleaned following halal requirements and under HACCP and other quality assurance standards (Arsil et al., 2018; Giyanti et al., 2021; Lestari et al., 2021).

Taking this a step further, the increased demand for halal criteria has impacted halal certification procedures among business operators. Halal has become a widely used phrase due to the growing desire for clean, healthy, and safe food by both the Muslim and non-Muslim communities worldwide. Apart from Sharia compliance, halal certification emphasizes the process of creating hygienic foods of high quality and safe for Muslim consumption. Besides the halal mark, Muslim shoppers rely on the product label for crucial information when purchasing selections. Consumers must be able to obtain information about the products' origins, including the components used and the processing method utilized, as these factors contribute to the halal criteria. The absence of such information on product labels will cause consumers to lose confidence in purchasing such products (Othman et al., 2016; Wahyudin et al., 2021; Wilson & Liu, 2010).

CONCLUSION

Halal certification, which is based on the halal Shariah concept, which is based on a well-known religious belief, has been recognized as a measure of quality standards about a product's content that brings considerable value

and benefits to consumers and producers, particularly within the food industry (Rafiki & Abdul Wahab, 2016). However, there are still debates and differences of opinion regarding halal certification. Halal certificates provide benefits for both consumers and producers. Halal certification is a security guarantee for Muslims who want to consume food according to Islamic teachings (Nurcahyo & Hudransyah, 2017). A halal certificate provides numerous benefits. Safety and hygiene, attracting Muslim visitors, enticing more consumers, improved market signals, and business expansion are just a few of the many positives that have been discussed (Hanim Yusuf et al., 2016). Halal certification can be utilized as a product differentiation method, resulting in increased revenue and marketability for the company/restaurant, particularly among Halal consumers. (Khan & Haleem, 2016) whereas many bodies are certifying these as Halal products. The source of Halal Certification (HC). In addition to the positive role of halal certification on business. There are several challenges that small companies face when they try to apply for halal certification which their owner-managers may emphasize such as fees, regulations, and information (Rafiki & Abdul Wahab, 2016).

The results of sentiment analysis on Halal Certification show various types of sentiment. The results showed that the perception of twitter users towards halal certification showed a positive sentiment of 41.8%, then 30.8% showed a neutral sentiment, and 27.4% showed a negative result. This shows the various kinds of sentiment generated from tweets related to halal certificates.

The sentiment results came from 13,824 tweets about halal certification from various countries, including India with 2975 tweets, Malaysia with 846 tweets, United Kingdom with 578 tweets, and Sri Lanka with 480 tweets and Singapore with 450 tweets. It should be noted that the purpose of this study is to find out the sentiments of Twitter users towards Halal certification.

In addition, the benefits of this research are as material for literacy and considerations related to halal certificates. Although research has been carried out using sentiment analysis specifically so that readers get an overview of the most critical data on this theme, there are limitations in this study, namely the data taken only tweets up to February 2, 2022, totaling 13,824. So the results are dynamic and can change as knowledge related to Islam and halal certificates in particular, economics, technology, and other variables is developed.

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