


Uncovering Halal Label Food Purchase Intention Behavior in Indonesia: A Twitter Analytics and SEM-Based Investigation

Mengungkap Perilaku Niat Pembelian Makanan Label Halal di Indonesia: Investigasi Berbasis Analisis Twitter dan SEM

Nadia Nurul Izza , Nashr Akbar 
Islamic Economics, Tazkia Islamic University College, Indonesia
nadian.izza31@gmail.com, n.akbar@tazkia.ac.id

ABSTRACT

This study examined the factors that influence the intention to buy food labeled halal among Muslim consumers in Indonesia using mixed methods, this research used qualitative analysis by identifying trending topics related to 2.665 conversations on halal labels on Twitter in Indonesia using Drone Emprit Academic (DEA) and NVivo 12 Plus to uncover the underlying perception. A quantitative hypothesis was then developed based on the qualitative investigation and the adoption literature. Survey data was collected from 407 Muslim consumers in Indonesia using SEM-PLS. The results showed that the variables halal labeled food intention, halal labeled food safety, and halal labeled food knowledge showed a significant and positive influence on the intention to buy halal labeled food and repeat purchases of halal labeled food. This shows increasing consumer awareness about product halalness, health, and perceived value, which in turn encourages consumer interest to buy food products labeled halal.

Keywords: purchase intention; halal-labelled food; mixed-methods

ABSTRAK

Penelitian ini mengkaji faktor-faktor yang memengaruhi minat beli makanan berlabel halal di kalangan konsumen muslim di Indonesia dengan menggunakan metode campuran. analisis kualitatif dengan mengidentifikasi trending topik terkait 2.665 percakapan label halal di Twitter menggunakan Drone Emprit Academic (DEA) dan NVivo 12 Plus untuk mengungkap persepsi yang mendasarinya. Hipotesis kuantitatif kemudian dikembangkan berdasarkan penyelidikan kualitatif dan literatur adopsi. Data survei dikumpulkan dari 407 konsumen muslim dan dianalisis menggunakan pendekatan SEM-PLS. Hasilnya variabel niat makanan berlabel halal, keamanan makanan berlabel halal, dan pengetahuan makanan berlabel halal menunjukkan pengaruh yang signifikan dan positif terhadap niat beli makanan berlabel halal dan pengulangan pembelian makanan berlabel halal. Hal ini menunjukkan meningkatnya kesadaran konsumen tentang kehalalan produk, kesehatan, dan nilai yang dirasakan, yang selanjutnya mendorong minat konsumen untuk membeli produk makanan berlabel halal.

Kata Kunci: niat beli; makanan berlabel halal; mixed methods

Article History

Received: 18-07-2023

Revised: 25-07-2023

Accepted: 22-11-2023

Published: 30-11-2023

**Corresponding Author:
Nadia Nurul Izza*

Open access under Creative
Commons Attribution-Non
Commercial-Share A like 4.0
International License
(CC-BY-NC-SA)



I. INTRODUCTION

The concept of halal has become a strong foothold in most industries in countries with a Muslim majority (Pradana et al., 2022). In this context, the growing global Muslim population has increased the demand for halal products (Rohman & Fadzillah, 2018; Izza, 2021). The projected global spending of Muslims is expected to increase by around 6.3% annually to reach an astounding \$2 trillion by 2024 (Dinar Standard, 2019). Capturing this phenomenon, manufacturers have started to expand their halal product lines, while market players seek to capitalize on this potential to increase revenue (Anam et al., 2018; Effendi et al., 2021). Halal certification of products has now become a vital strategy for companies looking to increase their sales. A 2022 report from The Royal Islamic Strategic Studies Center (RISSC) notes that Indonesia's Muslim population is around 237.56 million, or 86.7% of the country's total population. Globally, this figure represents about 12.30% of the total Muslim population worldwide, which stands at 1.93 billion. With this increasing demand for halal products, it is important to understand what factors influence consumers' decision to purchase halal products

On the other hand, technological advances have brought the internet and social media into a global phenomenon. According to DataReportal, as of January 2022, Indonesia has more than 204 million Internet users, about 73.7% of the country's total population (Databoks.id, 2022). This condition creates a great opportunity for businesses to communicate with their audience and increase their revenue (Zhang et al., 2023). In addition, consumer behavior has changed significantly, and entrepreneurs must understand the needs and characteristics of consumers engaged in online purchases to maintain their competitiveness in a competitive global economy (Hitt et al., 2019).

In the same context, in the industrial era 4.0, Big Data has become an important element. The data generated from various applications, including social media, has reached impressive volumes. Up to 80% of all data generated is unstructured data, including data coming from social media (Taleb, Serhani & Dssouli, 2018). Social media data, especially from Twitter, is becoming an extremely valuable source. Twitter allows access to large-scale public conversations in real-time, facilitating analysis of people's current attitudes and opinions (Das & Kumar, 2013). The advantages of Twitter as a data source include public access, informative metadata, and affordable data collection costs (He et al., 2013). It is then used in various analyses, such as descriptive analysis, network analysis, and sentiment analysis (Sinha et al., 2020). In Indonesia, Twitter has a central role as a social media platform that allows individuals to share ideas, opinions and thoughts across geographical and cultural boundaries (Aleisa, 2022). Social media has also become a major channel for conveying opinions, emotions, and information, including news whether fact-based or not (Zhang et al., 2018). In 2022, the number of Twitter users in Indonesia reached 18.45 million, equivalent to 4.23% of the total global user (Hootsuite, 2022).

Twitter data analysis is one of the most active research fields. Researchers in a number of fields realize that this methodology has advantages and makes it easy to identify public sentiment or opinion on certain issues, especially consumer behavior and preferences in consuming halal products on social media, especially Twitter (Mostafa 2020a, 2021, 2017, 2019a, 2020a, 2022; Hidayat et al., 2021). However, previous studies tend to be limited to analyzing Twitter data. The novelty of this research was to combine Twitter analysis with Structural Equation Modeling (SEM) to better understand the factors that influence the purchase intention of halal-labeled food. This approach overcomes the limitation of measuring the influence of halal-related factors based solely on sentiment on social media. The integration of social network theory also assisted in understanding consumers' online purchase intentions and their role in social networks. The approach that combines Twitter analysis and SEM provides significant advantages. This is because Twitter as a social media platform provides access to real-time data that reflects rapid responses to current issues and changes in the perception of halal-labeled products (Meel & Vishwakarma, 2020). Furthermore, SEM, as a powerful statistical method, was used to model the complex relationships between the factors influencing the purchase intention of halal-labeled products identified from the Twitter data. In addition, SEM also validated the constructs of these factors, ensuring accurate measurement in this study. The approach of combining qualitative and quantitative analysis of Twitter data allows for in-depth understanding while measuring the influence of factors on the purchase intention of halal-labeled products.

II. LITERATURE REVIEW

In Arabic, halal generally means "allowed" and relates to consumption, use, and worship activities that are allowed by sharia law (Aziz et al., 2015; Akin, 2021; Izza, 2022). In relation to

sharia law, the term *halal* has two meanings. First, *halal* refers to the permissibility of using any object or substance to fulfill physical needs, including food, drink and medicine. The second concept refers to the text-based permissibility of using, eating, drinking, and performing certain actions (Ali, 1988). In short, *halal* relates not only to food or food products but also goes beyond food products to cover all aspects of a Muslim's personal life. Hence, *halal* is motivated by principles, integrity, and trust, and it encompasses every part of a Muslim's life (Vanany et al., 2019).

Halal certification and *halal* labeling on products are different but interrelated concepts. From 2019 to 2023, the Ministry of Religious Affairs' Halal Product Guarantee Agency (BPJPH) has implemented a mandatory *halal* certification process in stages, mainly focusing on the food and beverage category (Aprilia, & Priantina, 2022). Business actors are required to immediately obtain certification for their products. This makes Muslim consumers able to identify and distinguish *halal* goods from non-*halal* products so as to avoid doubts and losses (Novita, 2022). Meanwhile, *halal* labeling is intended to provide legal stability and consumer protection (Priantina & Sopian, 2023) and increase the competitiveness of domestic products which has a positive impact on national income. This is because the senses of smell and taste cannot be used to distinguish the *halalness* of a food product, regardless of the method used to identify *halal* food products and increase awareness of *halal* (Bashir, 2019; Usman et al., 2021). Thus, *halal* certification and labeling (logo) are very important to pay attention to because it is a reference for Muslim consumers in buying *halal* products (Widyanto & Sitohang, 2022).

Furthermore, in exploring the purchasing behavior of *halal*-labeled food in Indonesia, this study adopts Social Network Theory as a conceptual framework. The linkages between *halal* certification, *halal* labeling, and the concept of Social Network Theory highlight the importance of developing marketing strategies that prioritize understanding consumer behavior in the context of *halal*-labeled food products in Indonesia. *Halal* certification and *halal* labeling form the basis of trust for Muslim consumers, make it easier for them to identify *halal* products, and help avoid doubts in choosing products that are in accordance with their beliefs (Hermawan, 2020). However, influences and information that affect purchasing decisions can also be found in online social networks, particularly on the Twitter platform. In this context, the concept of Social Network Theory can be further extended to understand how *halal*-labeled food purchasing behavior is influenced by the relationships and interactions between online consumers on these social networks. In addition, Social Network Theory can also be used to investigate relationships between consumers, analyze the characteristics of online consumer networks, and identify consumers who have important roles in these networks (Kapoor et al., 2018).

To further understand the concept of Social Network Theory, this research refers to the definition of social network theory popularized by Granovetter in 1973, which defines the structure of social relationships around individuals, groups, or organizations can influence their beliefs and behaviors (Cote, 2019). In the context of social networks, actors or nodes can be individuals, groups, organizations, countries, journal articles, or web pages, while the relationships between them are described as links or edges. These relationships can take various forms, such as cognitive (e.g., knowing, seeing as happy), affective (e.g., like, hate), kinship (e.g., mother from, sibling from), and other roles (e.g., friend from, student) (Akar & Dalgic, 2018). In this study, online consumers who use Twitter become actors in the network, and their relationships are formed when they follow or are followed by other online consumers.

It is important to note that the behavior of today's online consumers can be reflected through their digital activities on social media, including Twitter (Appel, 2020). The data generated through these online interactions is a valuable source of information for marketers. In the context of Twitter, the concept of "weak ties" can be applied, referring to relationships that may not be very close but often have the potential to connect individuals with different information and opportunities (Zorzi, 2019). In addition, social network analysis can also help in identifying sub-consumer groups or communities that share similar interests in *halal*-labeled food. The concept of "virtual communities" becomes relevant here, where individuals with similar interests may form groups or communities on Twitter to share information, experiences and opinions on *halal* products. Marketers can use the knowledge of these communities to develop more focused marketing strategies. Finally, in the context of this study, social network analysis also helps in detecting influence and opinion. When Twitter users interact and share views on *halal*-labeled food, some users may have greater influence in shaping other users' views and purchase intentions. By using social network analysis methods, such as centrality analysis and

identifying strong relationships between users. Thus, this study explains how social network analysis facilitates a deeper understanding of the relationships between individuals in the context of purchasing halal-labeled food in Indonesia, which in turn helps in the development of quantitative instruments.

III. RESEARCH METHOD

This research employed a mixed-methods approach by combining qualitative and quantitative data. As for mixed-methods research itself, there are four general models put forward by several major experts (Cresswell, 2005; Cresswell, 2009). Among the four models, this research adopted the exploratory sequential mixed-methods research model in which the chosen model is the instrument development model (Bandur, 2019) by collecting and analyzing qualitative data to inform the instrument (Guest & Fleming, 2015; Manzoor, 2020). Furthermore, in the second phase, a quantitative study was conducted on a larger sample to gain further empirical support for the theoretical framework developed in phase 1 (Tu, 2018). This is a key advantage of the exploratory design as it allows researchers to create instruments to measure new factors on a solid qualitative foundation (Ivankova & Creswell, 2009; Tilman et al., 2011).

Furthermore, the research process was organized as addressed in Figure 1 which describes the research process used to conduct the mixed-methods study using the assistance of Drone Emprit Academic (DEA) and NVivo in qualitative analysis and SmartPLS 3.29 in quantitative analysis.

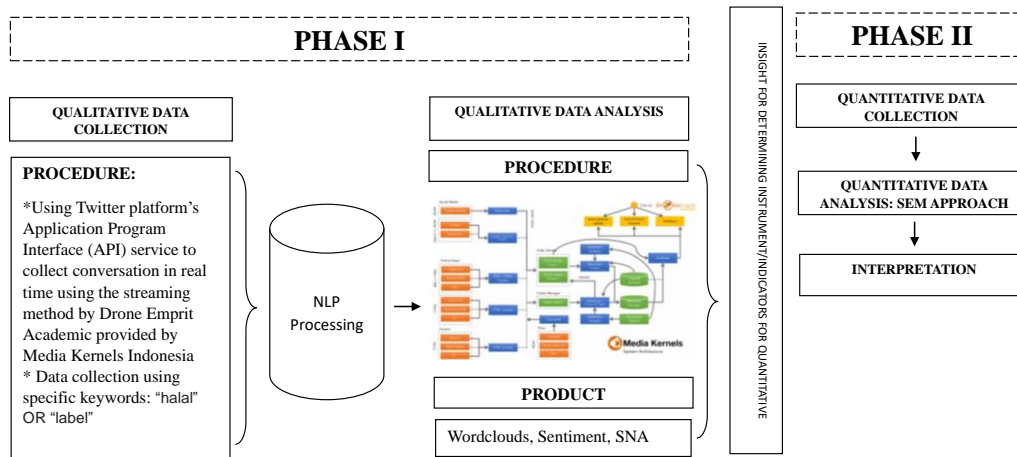


Figure 1. Research Process (Fahmi, 2016; Behghadami & Bazarghani, 2021) (modifikasi).

In step 1, in qualitative analysis, namely by collecting data from Twitter related to the specified research topic. Furthermore, sentiment analysis was carried out on the tweets that had been collected in determining general perceptions/opinions related to consumer interest in consuming or buying halal products which were then classified in sentiment analysis as positive, negative, or neutral using Drone Emprit Academic (DEA) from Media Kernels Indonesia. Drone Emprit is a big data analytics platform capable of monitoring and analyzing social media, online news, and other sources in near real-time. The findings presented consist of trending percentage, retweets, trending mentions graph, most retweeted status, and trending conversations (Izza et al., 2023). The data was an indicator that is considered in understanding various social phenomena that occur in the current period (Arianto, 2020).

From collecting tweet data through the Twitter API using keywords, "halal" AND "label" from August 19, 2022 - March 15, 2023, and obtained 2,665 conversations on Twitter. As for the main consideration, the selection of "halal" and "label" as keywords was based on an analysis of issues that consistently appear in relevant contexts. In addition, the keywords and time span chosen include conversations related to public buying interest in halal-labeled food, which at that time was rampant in the case of food industry franchises in Indonesia including Gacoan, JCO, and Mixue which became trending topics on Twitter so it was interesting to study. The selection of these keywords was based on the understanding that conversations related to them tend to focus more on the food dimension in accordance with the context of this study. Finally, the keywords used covered a holistic discussion of halal and labeling, beyond just the aspects of a particular brand, logo, or product type. As for the determination of the time span, the observation period was chosen based on the consideration that this time period has sufficient duration to track developments and trends that may emerge in discussions around halal labels, especially in the context of the food industry in Indonesia on the Twitter platform.

This approach is aligned with in-depth longitudinal analysis, which is able to present a comprehensive understanding of changes in the context of time (Sotudeh et al., 2022; Liang & Lu, 2023).

During the research process (in Figure 1), the streaming method was used, where in this case the DEA system utilized the Application Program Interface (API) service of the Twitter platform to collect conversations in real-time. Twitter developers offer the Twitter Search API, allowing access to a recent compilation of the latest tweets posted in the previous 7 days. These tweets were filtered through specific queries, focusing on pre-defined keywords as monitoring subjects (Miftahuddin et al., 2023). The next command of the API would perform a DEA search to collect the requested tweets, then the DEA Big Data architecture framework collected data from Twitter Streaming and Twitter Crawl and processed them into an index server based on the SOLR system, as shown in Figure 1.

Table 1. Respondent Demographics

Respondent Demographics	Number (N)	Percentage (%)
Sex		
Male	157	38,6%
Female	250	61,4%
Age		
18-25 Years Old	234	57,5%
26-30 Years Old	24	5,9%
31-35 Years Old	56	13,8%
36-40 Years Old	52	12,8%
>40 Years Old	41	10,1%
Education		
Middle School	0	0%
High School	191	46,9%
Bachelor	187	45,9%
Master	28	6,9%
Doctor	1	0,2%
Occupation		
College Student	211	51,8%
Entrepreneur	34	8,4%
Employe	48	11,8%
Civil Servant	31	7,6%
Army/Police	16	3,9%
Housewives	42	10,3%
Others	25	6,14%
Location		
Java	232	57%
Sumatera	113	28%
Kalimantan	13	3%
Sulawesi, Maluku	41	10%
Bali, West Nusa Tenggara	17	4%
Papua	1	0,3%

After obtaining Twitter metadata from Drone Emprit Academic (DEA), the next step was thematic analysis, which allowed modifications according to the needs of research contributions with detailed and reliable data (Nowell et al., 2017; Braun & Clarke, 2006). Thematic analysis is a method that helps in recognizing, examining, and reporting patterns in detailed data and aids in the interpretation of different aspects of the research topic (Alhojailan, 2012). In facilitating rigor and efficiency for research findings, NVivo software was extensively used during the data analysis process (Kaurav et al., 2020). NVivo 12 Plus is a qualitative data analysis software that allows the collection, categorization, mapping, analysis, and visualization of qualitative data obtained (Izza & Rusydiana, 2022). Theme categorization was carried out by coding in the nodes system. Furthermore, the visualization results depicted in the form of wordclouds and hierarchy charts are used to understand the collected and categorized data better (Izza & Rusydiana, 2023). In summary, the automation of the text analysis process in this study will show the results of the research trends in terms of words and texts in order to build the quantitative survey instrument shown in phase 2 below. The reliability and validity issues of qualitative research results can be addressed by triangulating various data sources (Jick, 1979; Shluzas & Leifer, 2014). To ensure the reliability and validity of the data analysis

Furthermore, in the visualization of the system, nodes in the form of hierarchy charts helped in categorizing the factors that influence consumers' decision in purchasing halal food. These factors included 'halal labeling,' which dominated with 62%, indicating that halal labeling has a significant influence on consumer decisions. 'Halal awareness' (18%) was also an important factor, highlighting how important consumer awareness about halal products is. 'Halal certificate' (7%) reinforced the importance of official certification in providing assurance of product halalness. 'Critical value' (7%) reflected that consumers are very selective in choosing halal food. 'Raw materials' (6%) underlined the importance of consumer understanding of the origin and quality of raw materials in halal products. The results of this analysis provide a deeper understanding of the factors that influence consumer decisions in choosing halal food, and this can be the basis for building hypotheses which will then be tested in the second phase.

This analysis presented sentiment from twitter data using Drone Emprit Academic, and obtained sentiment results dominated by positive sentiment as much as 52% (1,178 conversations), followed by 44% (1,398 conversations) with negative sentiment. Furthermore, positive sentiment is explained in the sentiment trend analysis which is a representation of sentiment from conversations in the form of mentions, retweets, and netizen replies related to halal labels that are positive in responding to halal-labeled products, especially food.

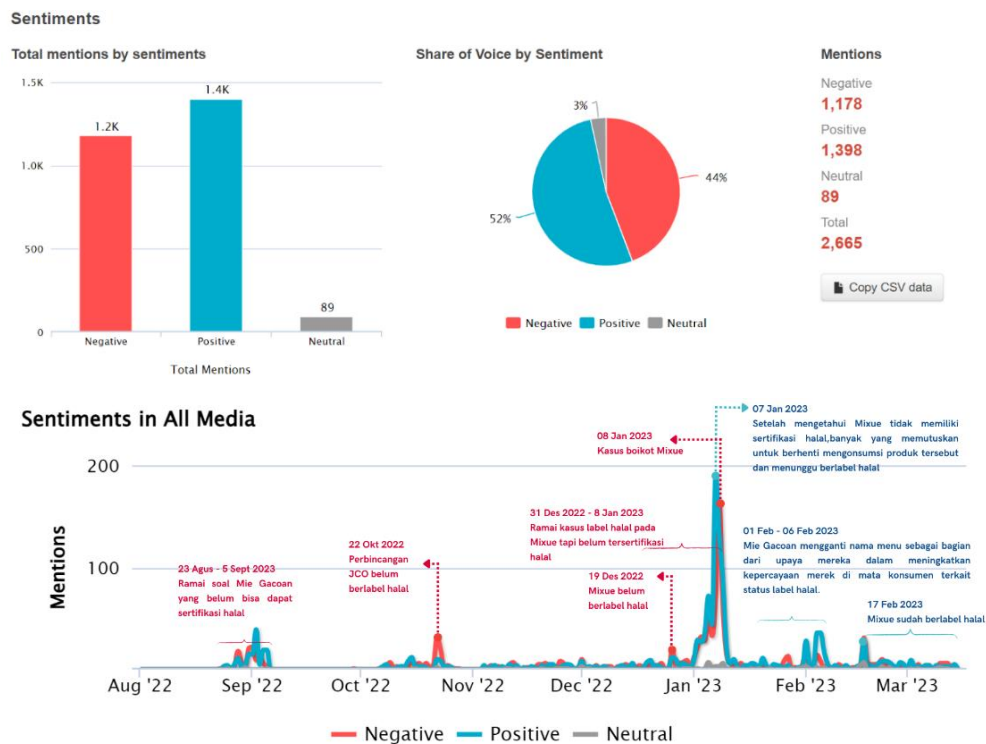


Figure 4. Sentiment Analysis and Topic Trends

Figure 4 details the sentiment based on topic trends to strengthen the categorization results visualized in the form of a hierarchical diagram. This visualization of trends based on sentiment was done to explore patterns associated with halal food purchasing decisions. The interesting aspect of this trend is manifested in the image that shows the dominance of topic trends with negative sentiments towards franchise products that do not yet have a halal label, as happened in the case of Gacoan (September 2022), JCO (November 2022), and Mixue (January 2023). Viral discussions related to Gacoan on social media that do not yet have a halal label on their products occurred because they have not met one of the 11 criteria for halal certification, namely the name of the product which is considered strange and has mystical elements (Viva.co.id, 2022). A similar scenario occurred with the JCO franchise, which also became a trend of conversation because it did not yet have a halal label. Finally, the case of Mixue at the time was also not yet halal certified, and the certification process took a long time, mostly because 90% of the raw materials were produced in Mixue's factory in China (CNBC Indonesia, 2023). Mixue products continued to be highlighted by netizens on Twitter, reaching a peak on January 8, 2023, with @BayuAngora as the most influential main actor, urging people not to

consume Mixue until it received halal certification and halal logo. These comments with positive sentiments reflect the public's awareness of the value of halal, showing caution by not buying and waiting for the halal certification process to be completed. Interestingly, in this finding, the initial negative sentiment of Gacoan and Mixue turned positive after both obtained halal certification and displayed the halal logo on their products. The results of the sentiment analysis from Twitter, which reflect consumers' positive support for halal labels and halal certification, provide a strong indication that public perception of halal has a significant role in influencing consumer behavior. These findings form the main basis for formulating research hypotheses that can provide in-depth insights into how factors such as intention, safety, knowledge, and purchase of halal products are interrelated and have the potential to influence consumer behavior in purchasing halal-labeled food products.

Based on these findings, a more in-depth exploration was carried out regarding the factors that encourage netizens to buy products that have been labeled halal, and saw which actors are involved in the Social Network analysis in Figure 5. This analysis was then used as variables and instruments that then tested quantitatively to support the previous findings.

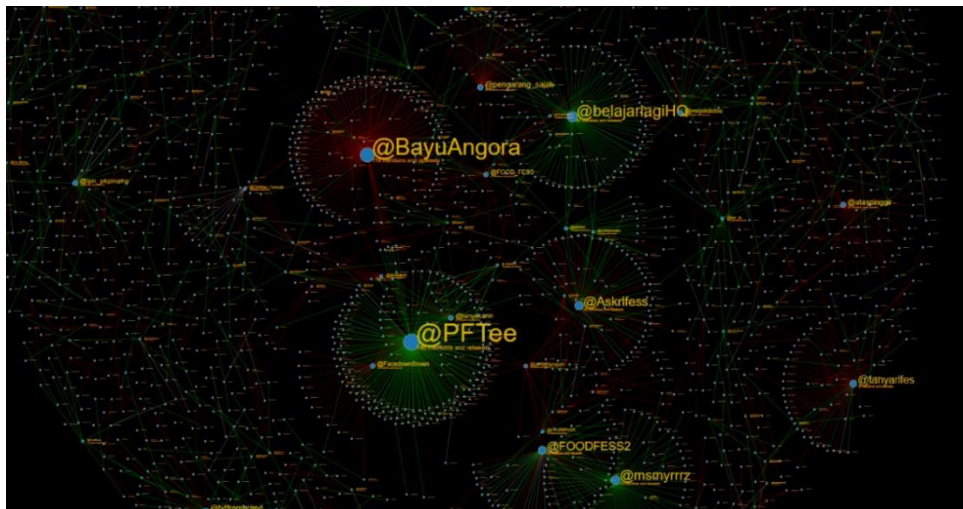


Figure 5. Social Network Analysis (SNA)

Social Network Analysis described a set of socially relevant nodes connected by one or more relationships. Nodes or network members, are units that are connected by relationships that have patterns. The network analysis approach is used to understand phenomena that occur and are interesting to examine (Scott, 2012). Figure 5, it is generally divided into 2 main parts that have node lines that have a relationship between one cluster and another:

a) Cluster 1, which focuses on the topic of halal knowledge and safety, features conversations that generally discuss knowledge around halal labels. Some of the key actors in this cluster include @belajarlagiHQ, @Askrlfess, and @FOODFESS2. In the tweets, it appears that the existence of a halal label is key in assessing the halalness of a product. The discussion in it generally discusses aspects of knowledge about the halal label and how its existence determines the halalness of a product. Tweets from various accounts provide a rich view of the understanding of halal certification criteria. For example, @novaputri said that the halal label from MUI does not only involve the halalness of raw materials, but also involves the entire production process, production equipment, and production environment. Furthermore, @belajarlagiHQ highlighted the positive impact of the halal label on consumer confidence in a brand. With a halal label, consumers tend to feel safe and comfortable in consuming the product, which in turn increases trust in the brand and helps avoid a bad image. This tweet reflects the view that the halal label goes beyond simply indicating the halalness of the product, but also plays a key role in building consumer trust in the brand. The last tweet, from @meowmeow_meow0, shows that the assessment of halalness is not only based on the ingredients used, but also involves other aspects such as the menu name. The change in menu name is one of the recognized steps in obtaining the halal label. This confirms that the halalness of a product is not only seen from the perspective of ingredients, but also from other aspects, including the name aspect that can affect consumers' perception of halalness. Overall, this cluster provides a comprehensive picture of discussions related to halal knowledge and safety on

the Twitter platform. Tweets from various actors highlight the complexities and aspects involved in evaluating the halalness of a product, forming a strong foundation of understanding in this context.

b) Cluster 2, which relates to purchase intention and repetition of halal-labeled products, highlights the role of positive sentiment towards halal-labeled products in influencing purchase intention and decision. The main actor in this cluster is @BayuAngora, who consistently shows a preference for buying products that are already labeled halal. In his tweet, @BayuAngora said that after finding out Mixue did not have a halal label, he chose not to consume it. This finding shows a link between Cluster 1 and Cluster 2, where an understanding of halal and the safety of halal-labeled products can have a positive impact on consumers' intention to buy these products. The tweet from @Eno_Bening also reflects the cautious attitude of consumers who are curious about Mixue but choose to wait until there is a halal label before buying, indicating that the halal label is a determining factor in making purchasing decisions.

Holistically, the interaction between these two clusters provides an overview of the mutually influencing dynamics between knowledge about halal (cluster 1) and purchase intentions and decisions for halal-labeled products (cluster 2) in the context of Twitter conversations. Cluster 1 is an important foundation that provides a strong basis for consumers in shaping their understanding of halal, involving in-depth understanding of certification, halal ingredients, including the safety of halal-labeled food. In this view, knowledge is not only informative but also plays a key role in shaping consumers' perceptions and attitudes towards halal-labeled products. The link between cluster 1 and cluster 2 is made clearer through the positive sentiment towards the halal label, represented by @BayuAngora. Consumers' awareness of the importance of halal labeling in choosing food products reflects the results of the knowledge they have, indicating that knowledge and purchasing decisions are interrelated in a logical sequence. Therefore, this scientific narrative details the complexity and interdependence between knowledge, safety, and consumer sentiment in the context of purchasing halal-labeled products on the Twitter platform.

Before proceeding to the quantitative phase (phase 2), in order to strengthen and validate the qualitative findings this would be the foundation for forming latent variables. The process of constructing latent variable indicators from Twitter data involved using computational methods to analyze the data and identify patterns. One approach was to use structural equation models to investigate the relationship between latent variables and indicators, as in the case of a study on subjective well-being indicators in Japan based on Twitter data (Carpi et al., 2022). Another approach would be to use machine learning techniques, such as word2vec, to construct explanatory variables for each tweet, which can then be used to construct indicators of latent variables (Denes et al., 2022). In addition, adopting the literature in building hypotheses strengthened the results of the qualitative analysis. Based on in-depth analysis of the qualitative data, developments were made to explore the potential influence of Halal-labelled Food Intention, Halal-labelled Food Safety, and Halal-labelled Food Knowledge variables, identified through Social Network Analysis (SNA), on purchase intention and repetition.

The conversation showed that halal labeling and halal certification were the main topics in the conversation on Twitter. When consumers have a positive intention towards halal-labelled food, this tends to influence the purchase intention of halal products. Aulia et al., (2023) explained that halal food intention refers to the correct intention or goal in choosing, producing, and consuming halal food according to Islamic teachings. In the context of halal food, intention is an important factor that must be considered by food producers, distributors, and consumers while for consumers, halal food intention means having the right intentions and good goals in choosing and consuming food. Identification of food labels is carried out to ensure that the food to be purchased does have a valid halal label and is produced with halal principles (Pambudi, 2022). In another study on the impact of halal labeling on halal food purchasing decisions, it was found that there was a significant influence of the halal label variable on purchase intention, which in turn influenced purchasing decisions (Millatina et al., 2022). Similarly, another study found that the intention to buy halal food affects consumer behavior regarding sustainable consumption (Bahrainizad & Abedini, 2023). Other studies have also identified the impact of Halal labeling on purchase intention, with perceived value and usefulness of Halal-labeled products, culture, and religion playing a role (Jamal & Sharifuddin, 2015).

H1: Halal-labelled Food Intention has a positive and significant effect on Halal-labelled Food Purchase Intention.

Positive sentiments and conversations that focus on halal-labelled food safety in social media can increase purchase intentions for halal products. Halal food safety refers to the actions and practices taken to ensure that halal food remains safe and free from contamination or non-halal substances throughout the chain of production, processing, distribution and consumption (Isnaeni, 2020; Aswandi, 2021). It combines the principles of halal (permissible according to Islamic law) with standard food safety regulations and practices to produce food that is safe and complies with Islamic requirements (Andriyani, 2019). In this case, the halal label has a relationship with halal food safety because it serves as a real guarantee for consumers that means food products have been produced, processed and handled in accordance with Islamic law and meet certain food safety standards to ensure food safety through its halal status (Ridhiyah, 2019). The results of research by Rezai et al., (2012) on the assessment of consumer confidence in Halal-labeled food production in Malaysia, revealed that factors such as health, hygiene, and respect for animal welfare play a role in influencing consumer confidence in the "halalness" of a product. The study by Bashir et al., (2019) highlighted the importance of food safety and quality in Halal products, recognizing that halal products act as an indicator of food safety and quality assurance. These findings were further strengthened by the research of Purwanto et al., (2021) which showed that consumers believe that the halal food products they buy are safe for consumption, and this safety factor significantly influences their purchase intentions. Similar results were found in Millatina et al.,'s research (2021), which concluded that Halal Label has a significant positive influence on purchase intention, reflecting the positive impact of halal food safety on consumer purchase intention.

H2: Halal-labelled Food Safety has a positive and significant effect on Halal-labelled Food Purchase Intention.

Based on the results of the Social Network analysis, it can also be concluded that increasing consumers' knowledge (Halal-labelled Food Knowledge) about halal labels and halal certification can affect their intention to buy halal products. Better information about halal can increase consumer confidence. This is as shown in the marketing literature, knowledge has been proposed as an important construct because it influences information search and processing so that consumers tend to make decisions after they have obtained and remembered various types of information (Hassan et al., 2014). Halal food knowledge refers to the understanding and awareness of the principles, guidelines and practices associated with halal food in Islam. This knowledge covers a range of topics, including what makes food halal, halal certification criteria, the prohibition of haram (forbidden) ingredients, and the correct method of slaughtering animals for halal meat (Ambali & Bakar, 2014). Research by Millatina et al., (2022), found that the Halal label has a significant positive effect on purchase intention, which indirectly reflects the impact of knowledge and awareness of Halal products on purchase intention. According to Bahrainizad & Abedini (2023), it was found that the intention to buy halal food affects consumer behavior regarding sustainable consumption, showing the importance of knowledge and awareness in the context of intention to buy Halal products. Öztürk's research (2022) highlighted the impact of knowledge about Halal products and awareness of Halal products on purchase intentions, emphasizing the significance of consumer knowledge and awareness in influencing purchase intentions. Similar findings were revealed by Nurhayati & Hendar (2020), who assessed the effect of intrinsic religiosity and product knowledge on purchase intentions, and highlighted the crucial role of knowledge and awareness in influencing consumer behavior regarding halal products.

H3: Halal-labelled Food Knowledge has a positive and significant effect on Halal-labelled Food Purchase Intention

If consumers have a strong intention to buy halal-labelled food (Halal-labelled Food Purchase Intention), it is likely to have an impact on repurchase actions (Halal-labelled Food Purchase Repetition). Halal purchase intention and repurchase refer to consumers' desire to buy halal products and the possibility of repurchasing these products in the future (Tanjung, 2021). Halal purchase intention is the awareness and intent of consumers to buy products that are halal certified or comply with Islamic guidelines. This reflects consumer intention to choose products that are in line with Islamic religious beliefs and values. Factors that influence halal purchase intention include religious beliefs, trust in halal certification bodies, availability of halal options, and awareness of halal products. Meanwhile, Repeat purchases of halal products reflect a situation where consumers repeatedly choose products according to halal standards, driven by a significant level of satisfaction according to their halal preferences (Padmawidjaja et al., 2021). According to Khan et al., (2021) this repeated action

not only reflects product satisfaction, but is also an indicator of a positive customer experience. This phenomenon illustrates not only momentary satisfaction, but also a deeper impact, namely the emergence of brand loyalty among Muslim consumers (Gauthier, 2016; Ali et al., 2018). In other words, the repetition of halal purchases not only creates consumer attachment to the product, but also builds a strong foundation for long-term relationships with brands, creating sustainable loyalty among Muslim consumers (Dewi et al., 2022).

H4: Halal-labelled Food Purchase Intention has a positive and significant effect on Halal-labelled Food Purchase Repetition.

Findings from qualitative analysis on social media can support the hypothesis that factors such as intention, perceived safety, knowledge, and purchase intention of halal products are interrelated and have the potential to influence consumer behavior in purchasing halal-labeled food products which then examined the relationship through SEM-PLS analysis which was used to test the relationship between variables in a conceptual model that has been built. In this study, SEM-PLS analysis was used to understand how factors such as intention, perceived safety, knowledge, and purchase intention of halal products relate to each other and how these factors influence consumer behavior in purchasing halal-labeled food products as follows:

1. **Conceptual Model:** The research begins by building a conceptual model that describes the relationship between the variables being tested. In this case, the conceptual model includes the variables of intention, perceived safety, knowledge, and purchase intention of halal products, as well as the relationship between them obtain in sentiment analysis using Drone Emprit Academic.
2. **Confirmatory Factor Analysis (CFA):** Before conducting SEM analysis, confirmatory factor analysis (CFA) is often conducted to check the validity and reliability of the variables in the model. This aims to ensure that the variables measure the intended construct accurately.
3. **PLS SEM Analysis:** The PLS SEM technique works by examining the relationships between the variables in the conceptual model. This involves testing pre-constructed hypotheses about the extent to which these variables influence each other.
4. **Path Modeling:** In PLS SEM analysis, path models will be used to describe and test the relationships between the variables in the model. This path model will show the direction and significance of the relationship between variables.
5. **Model Measurement:** During PLS SEM analysis, the model will be measured to see the extent to which the model fits the existing data. The model will be evaluated based on criteria such as R-squared.
6. **Interpretation of Results:** The results of the PLS SEM analysis will be used to understand the extent to which certain factors contribute to consumer behavior in purchasing halal-labeled food products. Interpretation of these results can provide insight into factors that need to be considered in the development of more effective marketing strategies or policies.

SEM PLS analysis was used to quantitatively test this study to prove the extent to which factors such as intention, perceived safety, knowledge, and purchase intention of halal products, are interconnected and have an impact on consumer behavior in purchasing halal-labeled food products. This analysis helps in understanding the relative contribution of each factor in influencing consumer purchasing behavior. This means that the results of the positive sentiment analysis on the Twitter platform have become a foundation that supports the formation of hypotheses. This shows that positive perceptions and a deeper understanding of halal products can have a positive influence on the intention and behavior of purchasing halal-labeled products, including repeat purchases. Positive sentiment, in this context, shows a significant relationship with the intention to purchase a product.

Several previous scientific studies have investigated the relationship between positive sentiment and purchase intention in various contexts. For one, an analysis of emotional interactions and purchase intentions in social commerce revealed that levels of familiarity and intimacy have a positive impact on purchase intentions (Zupan et al., 2023). Other research exploring consumer purchase intentions in traditional cultural contexts, with reference to the theory of planned behavior, found that factors such as nationalism and a sense of patriotism contribute positively to consumers' purchase intentions (Wang et al., 2021). Research examining the evolution of consumer purchase intent through the analysis of online reviews and opinion dynamics highlighted the role of sentiment analysis in understanding the opinion value of online reviews and their impact on purchase intent (Zhang, 2022). As such, these findings signify that positive sentiment, whether derived from emotional aspects, cultural influences, or online reviews, plays an important role in shaping consumers' purchase intentions.

Phase 2: Research Model Testing Results of Qualitative Studies and Literature

Quantitative research model construction was built based on literature review and comparison with qualitative research results. Based on the results of qualitative research and supported by existing literature, exogenous latent variables were obtained, namely Perceptions of Halal Labeled Food (ξ_1), Halal Labeled Food Safety (ξ_2), Halal Labeled Food Knowledge (ξ_3). Meanwhile, the endogenous latent variables are Halal Labeled Food Purchase Intention (η_1), and Repeat Purchase of Halal Labeled Food (η_2). Indicators of variables are determined as the following table:

Table 2. Research Variables and Indicators

Variable	Code	Indicator	Source
Halal-labelled Food Intention	HFI1	Halal labeled food is safer than non-halal labeled food	Khalek (2014),
	HFI2	Food labeled halal is cleaner than food not labeled halal	Khalek & Ismail (2015), Maichum et al. (2017),
	HFI3	Food labeled halal is healthier than food not labeled halal	Bashir et al. (2019)
Halal-labelled Food Safety	HFS1	Halal food is not contaminated	Bashir et al. (2019)
	HFS2	Halal labeled food does not contain non-halal ingredients	Jamal et al. (2015) Mohtar et al. (2014)
	HFS3	Food labeled halal is clean and not dirty	Aziz et al. (2015) Maichum et al. (2017)
Halal-labelled Food Knowledge	HFK1	I understand related procedures, and raw materials in the process of making halal food	
	HFK2	I understand about halal labeling and certification on halal food before buying	Khalek & Ismail (2015)
	HFK3	Understand in depth about the input, process, and impact of halal food before buying	Khalek (2014) Maichum et al. (2017)
	HFK4	I prefer to get substantial information about halal labeled food before buying	
Halal-labelled Food Purchase Intention	HFPI1	I have the intention to buy halal labeled food	Khalek & Ismail (2015) Khalek (2014)
	HFPI2	I usually consume halal food	Aziz et al. (2015)
	HFPI3	I always tend to buy halal labeled food	Maichum et al. (2017) Siah et al. (2017)
Halal-labelled Food Purchase Repetition	HFPR1	I will continue to consume halal labeled food in the long term / continuously	Khalek & Ismail (2015) Khalek (2014)
	HFPR2	I will invite my relatives/family/nearest people to consume halal-labeled food	Aziz et al. (2015) Maichum et al. (2017) Siah et al. (2017)

The research framework using SEM-PLS for this study is as follows:

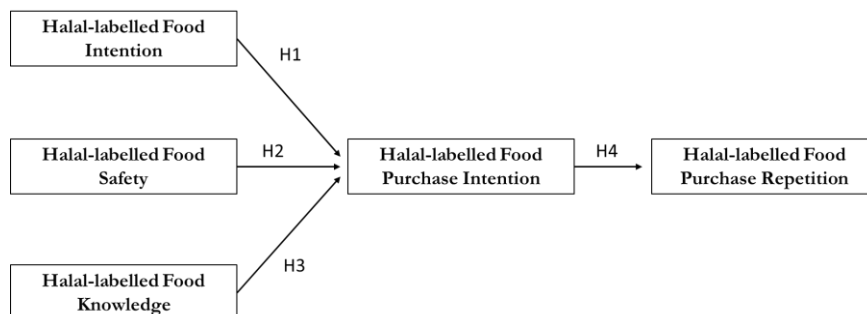


Figure 4. Research Framework

SEM-PLS model analysis was carried out through 2 stages. The first step was model specification which consists of Evaluation of Measurement Model (Outer Model) and Evaluation of Structural Model (Inner Model). According to Hussein (2015), Evaluation of Measurement Model also known as the outer model, is carried out to ensure that the measurements in this study are appropriate and reliable. In addition, this evaluation analyzes how each indicator (manifest variable), relates to its latent variable.

First, the convergent validity test is considered to meet the category if the outer loading value is more than 0.7. However, a value of 0.5 can be considered acceptable as long as there are several other factors in the same construct (Chin, 1998; Hair et al 2014; Keil et al 2000; Vinzi et al 2010). Figure 5 shows the results of the path model output along with loading factor values using SmartPLS 3.29. Based on the results of the analysis in table 2, it can be seen that the total number of indicators of all variables is 15 indicators. The loading factor value of each indicator > 0.7.

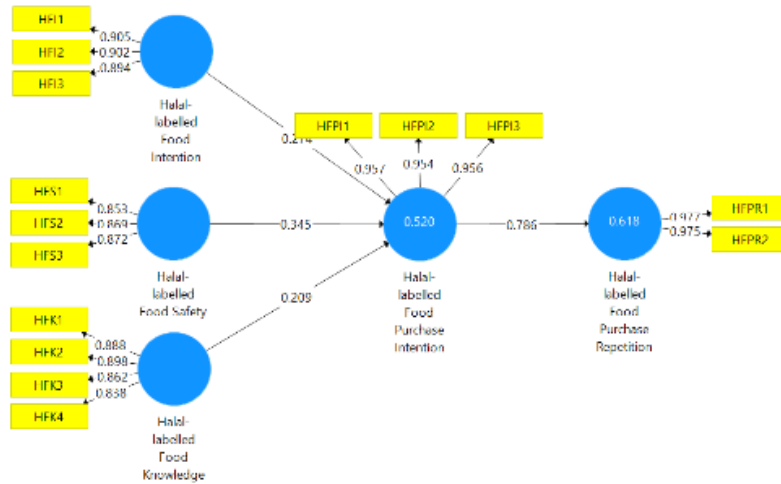


Figure 5. Convergent Validity Test

Furthermore, testing the reliability of the instrument was evaluated using the Composite Reliability (CR) and Cronbach's alpha (CA) values. In the CFA approach, any latent variable with CR and CA values >0.70 is considered reliable. Convergence validity was measured using the Average Variance Extracted (AVE) value which must be more than 0.50.

Table 3. Discriminant Test of Composite Validity and Reliability

Variable	Code	Loadings	Cronbach's Alpha	CR	AVE
Halal-labelled Food Intention	HFI1	0.905	0.884	0.928	0.811
	HFI2	0.902			
	HFI3	0.894			
Halal-labelled Food Safety	HFS1	0.853	0.834	0.899	0.748
	HFS2	0.869			
	HFS3	0.872			
Halal-labelled Food Knowledge	HFK1	0.888	0.895	0.927	0.760
	HFK2	0.898			
	HFK3	0.862			
	HFK4	0.838			
Halal-labelled Food Purchase Intention	HFPI1	0.957	0.953	0.969	0.913
	HFPI2	0.954			
	HFPI3	0.956			
Halal-labelled Food Purchase Repetition	HFPR1	0.977	0.950	0.976	0.952
	HFPR2	0.975			

In table 3 all indicator items in this study had a loading factor value > 0.70, indicating that all indicators involved represent the construct appropriately. The CR and CA values of each latent variable in this study were > 0.70. The AVE value of each latent variable in this study was also > 0.50. The ratio values above indicate that the instruments built from these latent variables and indicators are reliable and valid.

Table 4. Discriminant Test of Composite Validity and Reliability

	R-square	R-square adjusted
Halal Labelled Food Purchase Intention	0,520	0,516
Halal Labelled Food Purchase Repetition	0,618	0,617

The inner model evaluation in this study aimed to show the specifications of the causal relationship between latent variables (Ghozali, 2006). There were two parameters to be tested, namely, R-Square aimed at knowing the percentage contribution of influence or change in the dependent variable (endogenous) to the independent variable (exogenous), as well as predicting the level of proportion or goodness of a model (Lin et al., 2020).

Table 4 presents the R-Square test results of 0.520 and 0.618. It can be concluded that exogenous variables contribute 52% and 61.8% to the influence of endogenous variables. The remaining percentage is influenced by other variables that have not been tested. An R-Square value was larger than 0.67 indicates a strong influence, a value greater than 0.33 is considered moderate, and a value greater than 0.19 but less than 0.33 indicates a weak influence (Chin, 1998).

Table 5. Discriminant Test of Composite Validity and Reliability

Model	Original Sample	T Statistics	P Values	Decision
Halal-labelled Food Intention → Halal-labelled Food Purchase Intention	0.274	5.276	0.000	Supported
Halal-labelled Food Safety → Halal-labelled Food Purchase Intention	0.345	6.109	0.000	Supported
Halal-labelled Food Knowledge → Halal-labelled Food Purchase Intention	0.209	5.002	0.000	Supported
Halal-labelled Food Purchase Intention → Halal-labelled Food Purchase Repetition	0.786	17.758	0.000	Supported

Table 5 is the result of testing the path coefficient. The analysis test was carried out using bootstrapping analysis techniques through the path coefficient and p-value. The path coefficient is a value that explains the direction of the relationship between variables in answering the research hypothesis by testing T-statistics and p-value. Based on the path coefficient criteria, the hypothesis can be accepted if T-statistics > 1.96 as an additional indicator of determining significance and p-values < 0.05 (Vinzi et al., 2010).

According to Sarstedt et al., (2020) A positive path coefficient observed in the original sample (O) indicates a one-way effect of a variable on another variable. When the exogenous variable increases, the value of the endogenous variable also increases in response (Vinzi et al., 2010). However, if the path coefficient value is negative, it indicates that the effect of a variable on another variable is in the opposite direction. If the value of exogenous variables increases, the value of endogenous variables will decrease. The results of the relationship test between constructs show that all hypotheses have a positive relationship direction and a significant effect.

The findings of this study are reinforced by research conducted by Ishak et al., (2016) which stated that halal perceptions are related to respondents' purchasing decisions. In addition, Bashir et al., (2019) concluded that halal functions as more than just a commercial trademark in a global market that covers various dimensions, including health and hygiene considerations. From a psychological standpoint, halal signifies trust, comfort, and safety. Consequently, consumers experience a feeling of peace when consuming halal-labeled food products (Rektiansyah & Ilmiawan Auwalin, 2022). This provides a sense of calm for consumers when consuming halal-labeled food products. Elseidi's research (2018) showed that perceptions of product safety and health are able to influence attitudes towards the use of halal products. Other studies have also found that consumers have high confidence in the safety and hygiene of halal-certified food products (Darmawan & Fathurrohman, 2023). As a result, interest in buying halal products tends to increase (Ambali & Bakar, 2014). Halal certification provides assurance to consumers that the product has gone through a process that complies with halal principles, including aspects of safety and hygiene. In practice, Muslim consumers will look for halal labels as an indication that the product has met halal standards (Ambali & Bakar, 2014). No less important, the knowledge aspect of halal food has a major impact on the purchasing decisions of Muslim consumers (Faradina & Muslichah, 2022), including the ability to understand the concept of halal in making choices (Billah, Rahman & Hossain, 2020) and have knowledge of the production process, halal certification, and allowed ingredients. Muslim consumers carefully read labels and look for reputable halal certification authorities to ensure they buy products that are truly halal (Nurhayati & Hendar, 2020).

Based on the results of qualitative data analysis in stage I, it was revealed that the predominantly positive sentiment results indicated that the decision to buy products was based on factors including choosing halal-labeled (62%) and halal-certified (7%) products which were validated by halal-labeled food knowledge variables with CA 0.895. The halal awareness factor (18%) was validated by the halal-labeled food intention variable with CA 0.884. Finally, critical value (7%) and raw materials (6%) were validated with the halal-labeled food safety variable with a CA of 0.834. Thus, the results show that the qualitative findings in phase I can be generalized through quantitative research. This means that the mixed research approach of this study successfully bridged the gap between qualitative

and quantitative research and synchronized the advantages of both research methods. Empirical findings in both research methods can also be cross-referenced to enhance understanding of the research topic. Thus, the mixed research method of this study provides a deeper understanding of the purchase intention of halal-labeled food for Muslim consumers in Indonesia.

Furthermore, the findings of the study highlighting the importance of halal perception, trust, safety, and consumer knowledge of halal food products from the sentiment analysis results are highly relevant to Social Network Theory. First, Social Network theory refers to the relationships and interactions between individuals or entities in the network. In this context, the research findings showing that consumers experience feelings of trust, comfort, and safety when consuming halal-labeled food products are related to how individuals in online social networks feel and share their views about halal products. This creates a relationship of trust and comfort among similar consumers on platforms such as Twitter, where they may share information, recommendations, or opinions about halal products.

Secondly, knowledge about halal food and consumers' ability to understand the concept of halal, the production process, halal certification, and allowed ingredients are key factors in Muslim consumers' purchasing decisions. In Social Network theory, this reflects how individuals in the network exchange information, discuss their views, and provide input on halal food products. Individuals who have deeper knowledge about halal may become authorities in the network and help spread their knowledge to others. In addition, the finding that consumers look for reputable halal labels and halal certifications as an indication of product safety and hygiene is directly related to how individuals within the online social network provide recommendations and support to each other in selecting halal products that conform to certain standards creating strong relationships among consumers with similar interests in the selection of halal food products. Thus, the research findings focusing on consumer perceptions, trust, safety, and knowledge regarding halal food products are naturally related to how individuals interact in online social networks, share information, and form mutually supportive relationships in the context of halal-labeled food products in Indonesia. This knowledge can be used by marketers to develop better marketing strategies and understand consumer behavior in social networks.

Finally, this study also has significant practical implications for the food industry, especially franchises in Indonesia, in understanding online consumer behavior and developing successful marketing strategies. Franchise companies need to improve their understanding and engagement with their consumers or customers on digital platforms, such as Twitter. Especially in the context of halal, where issues related to halal can quickly spread as the dominant population in Indonesia is Muslim, and halal food is integral in practicing their religious values. Therefore, it is important for franchise companies to ensure that their products and services have obtained halal certification as their commitment to customers. In addition, businesses in this digital era have learned how to utilize the digital environment for marketing and growth (Schneider & Kokshagina, 2021). The ability to interact with customers through social platforms such as Twitter is becoming increasingly important (Qurniawati, 2018). Furthermore, Chung et al., (2020) emphasized that actively communicating with consumers, listening to feedback, and answering questions or concerns that may arise will help build closer relationships with customers and strengthen their brand image in the eyes of consumers. Thus, understanding online consumer behavior, especially in the halal context, and effective use of digital platforms to communicate with customers can help franchise companies grow and succeed in the food industry in Indonesia.

V. CONCLUSION

This study mainly aimed to investigate the purchase intention of halal-labeled food by applying a mixed research method that combines Twitter data and SEM-PLS approaches. This mixed approach provides a more comprehensive insight in understanding the factors that influence consumer decisions in purchasing halal products. The results show that variables such as intention to purchase halal-labeled food, perceived safety of halal products, and knowledge about halal food have a positive and significant influence on the purchase intention of halal-labeled food as well as the tendency to purchase halal products repeatedly. These findings reflect that consumers are increasingly aware of the quality and halalness of products, which in turn motivates them to choose halal-labeled products.

The practical implications of this research are highly relevant, especially for the food and franchising industries in Indonesia. Franchise companies need to understand online consumer behavior and develop effective marketing strategies in the digital era, especially in the context of halal.

As a country with a majority Muslim population, halal certification and consumer understanding of halal products are very important. Therefore, franchise companies need to ensure that their products have obtained halal certification to win customer trust. In addition, strengthening the regulation of the halal food industry is also necessary to strengthen consumer confidence and facilitate industry growth. Academia can also play a role in advancing digital literacy, research, and innovation in the halal industry, so that it can make a significant contribution to a dynamic and innovative digital ecosystem in the halal value chain. However, this study had limitations, including limited data sources on Twitter and the variables used. Therefore, future research can consider using data from other social media platforms and expand the variables considered for more comprehensive results. The results of this research and recommendations are expected to serve as a guide for stakeholders and authorities in supporting the halal food industry in Indonesia, as well as realizing Indonesia as the center of the halal economy in the world.

ACKNOWLEDGMENT

I thank all the individuals for their expertise and assistance throughout all aspects of this research and for their help in writing the manuscript. Moreover, I thank Editorial Team of JESTT Unair for the valuable insight for the improvement of the manuscript

REFERENCES

- Akar, E., & Dalgic, T. (2018). Understanding online consumers' purchase intentions: A contribution from social network theory. *Behaviour and Information Technology*, 37(5), 473-487. doi:10.1080/0144929X.2018.1456563
- Akin, E. (2021). The Role of Halal Food in Healthy Lifestyle. *Asian Journal of Traditional, Complementary and Alternatives Medicines*, 4(1-2), 53-60. doi:10.22040/ATCAM.2019.108135
- Aleisa, N. A. A. (2022). Graduate student's use of social media as a learning space. *Cogent Education*, 9(1). doi:10.1080/2331186X.2021.2010486
- Ali, A., Xiaoling, G., Sherwani, M., & Ali, A. (2018). Antecedents of consumers' halal brand purchase intention: An integrated approach. *Management Decision*, 56(4), 715-735. doi:10.1108/MD-11-2016-0785
- Ambali, A. R., & Bakar, A. N. (2014). People's awareness on halal foods and products: Potential issues for policy-makers. *Procedia-Social and Behavioral Sciences*, 121, 3-25. doi:10.1016/j.sbspro.2014.01.1104
- Anam, J., Sany Sanuri, B. M. M., & Ismail, B. L. O. (2018). Conceptualizing the relation between halal logo, perceived product quality and the role of consumer knowledge. *Journal of Islamic Marketing*, 9(4), 727-746. doi:10.1108/JIMA-02-2017-0019
- Andriyani, A. (2019). Kajian literatur pada makanan dalam perspektif Islam dan kesehatan. *Jurnal Kedokteran dan Kesehatan*, 15(2), 178-198.
- Appel, G., Grewal, L., Hadi, R., & Stephen, A. T. (2020). The future of social media in marketing. *Journal of the Academy of Marketing science*, 48(1), 79-95.
- Aprilia, S., & Priantina, A. (2022). Analisa strategi peningkatan sertifikasi halal sektor kuliner di Bangka Selatan. *International Journal Mathla'ul Anwar of Halal Issues*, 2(1), 50-71. doi: 10.30653/ijma.202221.46
- Arianto, B. (2020). Pemanfaatan aplikasi Drone Emprit Academic dalam menganalisis opini publik di media sosial. *Journal of Social Politics and Governance*, 2(2), 177-191. doi: 10.24076/JSPG.2020v2i2.415
- Aziz, N. N. A., Omar, Z., & Hassan, W. H. A. W. (2015). A review on the emergence and growth of halal studies. *Procedia Economics and Finance*, 31, 325-332. doi:10.1016/s2212-5671(15)01204-6
- Aswandi, R. (2021). *Pengaruh keamanan pangan kesadaran kesehatan terhadap keputusan pembelian melalui labelisasi halal (Studi pada konsumen restoran Gunung Salju Banda Aceh)*. Thesis of undergraduate, Universitas Islam Negeri Ar-Raniry.
- Aulia, F. N., Adinugraha, H. H., & Setiawan, D. (2023). Analisis faktor-faktor yang mempengaruhi niat beli produk halal di Indonesia. *TSARWAH: Jurnal Ekonomi dan Bisnis Islam*, 8(1), 13-21.

doi:10.32678/tsarwah.v8i1.8484

- Bahrainizad, M., & Abedini, F. (2023). Investigating the interaction effects of halal label and green label by price on the purchase intention of halal organic food. *Journal of Foodservice Business Research*, 1-30. doi:10.1080/15378020.2023.2265797
- Bandur, A. (2019). Penelitian Kualitatif studi multi disiplin keilmuan dengan NVivo 12 plus. Jakarta: Mitra Wacana Media
- Bashir, A. M. (2019). Effect of halal awareness, halal logo and attitude on foreign consumers' purchase intention. *British Food Journal*, 121(9), 1998- 2015. doi:10.1108/BFJ-01-2019-0011
- Bashir, A. M., Bayat, A., Olutuase, S. O., & Latiff, Z. A. A. (2019). Factors affecting consumers' intention towards purchasing halal food in South Africa: A structural equation modelling. *Journal of food products marketing*, 25(1), 26-48. doi:10.1080/10454446.2018.1452813
- Billah, A., Rahman, M. A., & Hossain, M. T. B. (2020). Factors influencing Muslim and non-Muslim consumers' consumption behavior: A case study on halal food. *Journal of Foodservice Business Research*, 23(4), 324-349. doi:10.1080/15378020.2020.1768040
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. doi:10.1191/1478088706qp063oa
- Carpi, T., Hino, A., Iacus, S. M., & Porro, G. (2022). A Japanese subjective well-being indicator based on Twitter data. *Social Science Japan Journal*, 25(2), 273-296. doi:10.1093/ssjj/jyac002
- Chung, M., Ko, E., Joung, H., & Kim, S. J. (2020). Chatbot e-service and customer satisfaction regarding luxury brands. *Journal of Business Research*, 117, 587-595. doi:10.1016/j.jbusres.2018.10.004
- Cote, R. (2019). The evolution of social network theory: Perceived impact on developing networking relationships. *American Journal of Management*, 19(3), 19-34. doi:10.33423/ajm.v19i3.2187
- Darmawan, F. M. G., & Fathurrohman, M. S. (2023). The impact of awareness, certification, and quality of halal food on consumer purchase intentions at Asia Kintan Buffet Restaurant. *Jurnal Ekonomi Syariah Teori dan Terapan*, 10(2), 177-187. doi:10.20473/vol10iss20232pp177-187
- Das, T. K., & Kumar, P. M. (2013). Big data analytics: A framework for unstructured data analysis. *International Journal of Engineering Science and Technology*, 5(1), 155-158.
- Denes, J., Lestrade, A., & Richardet, L. (2022). Using twitter data to measure inflation perception. *Bank for International Settlements*, 57.
- Dewi, W. W. A., Febriani, N., Destrity, N. A., Tamitiadini, D., Illahi, A. K., Syauki, W. R., & Prasetyo, B. D. (2022). *Teori perilaku konsumen*. Malang: Universitas Brawijaya Press.
- Dinar Standard. (2019). State of the global Islamic economy report: Driving the Islamic economy revolution 4.0. Retrieved from <https://cdn.salaamgateway.com/special-coverage/sgie19-20/full-report.pdf>
- Effendi, D., Rosadi, A., Prasetyo, Y., Susilawati, C., & Athoillah, M. A. (2021). Preparing halal tourism regulations in Indonesia. *International Journal of Religious Tourism and Pilgrimage*, 9(1), 58-69. doi:10.21427/gt5w-sy51
- Faradina, N. F., & Muslichah, I. (2022). Antecedents of Muslims' intention to buy halal Korean food: Study In Indonesia. *Jurnal Ekonomi Syariah Teori dan Terapan*, 9(3), 310-324. doi:10.20473/vol9iss20223pp310-324
- Gauthier, F. (2016). Religion in consumer society: Brands, consumers and markets. London: Routledge.
- Guest, G., & Fleming, P. (2015). Mixed methods research. *Public health research methods*, (5), 581-614.
- Hair, J.F., Risher, J.J., Sarstedt, M., & Ringle, C.M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24. doi:10.1108/EBR-11-2018-0203
- Hakim, B. A. H., Mujahidah, A. S., & Rusydiana, A. S. (2022). Sentiment analysis on halal certification. *Harmoni: Journal Multicultural and Multireligius*, 21(1), 78-93. doi:10.32488/harmoni.v21i1.609
- He, W., Zha, S., & Li, L. (2013). Social media competitive analysis and text mining: A case study in the pizza industry. *International Journal of Information Management*, 33(3), 464-472. doi:10.1016/j.ijinfomgt.2013.01.001
- Hermawan, A. (2020). Consumer protection perception of halal food products in Indonesia. *KnE Social Sciences*, 235-246. doi:10.18502/kss.v4i9.7329

- Hitt, M. A., Ireland, R. D., & Hoskisson, R. E. (2019). *Strategic management: Concepts and cases: Competitiveness and globalization*. Singapore: Cengage Learning.
- Hootsuite, & We Are Social. (2022). Digital 2022 global overview report. Retrieved from <https://datareportal.com/reports/digital-2022-global-overview-report>
- Cnbc. 2023. Lima fakta seputar logo halal mixue Indonesia wajib tahu. Retrieved from <https://www.cnbcindonesia.com/lifestyle/20230112144621-33-405001/5-fakta-seputar-logo-halal-mixue-indonesia-wajib-tahu>
- Ishak, S., Awang, A. H., Hussain, M. Y., Ramli, Z., Sum, S. M., Saad, S., & Manaf, Z. A. (2016). A study on the mediating role of halal perception: Determinants and consequence reflections. *Journal of Islamic Marketing*, 7(3), 288-302. doi:10.1108/JIMA-02-2015-0010
- Isnaeni, A. (2020). Implementasi halal supply chain management pada industri pengolahan makanan (Studi kasus: Restoran Taman Pringsewu Yogyakarta). Undergraduate thesis of Islamic Economics, Faculty of Islamic Studies. Universitas Islam Indonesia
- Ivankova, N. V., & Creswell, J. W. (2009). Mixed methods. In *Qualitative Research in Applied Linguistics: A Practical Introduction*, 135-161. Basingstoke: Palgrave Macmillan
- Izza, N. N. (2021). A Scientometric Analysis on Halal Awareness. *Halal Tourism and Pilgrimage*, 2(1). doi:10.58968/htp.v2i1.89
- Izza, N. N. (2022). Bibliometric mapping of halal fashion research development with scopus index. *Journal of Islamic Economic Literatures*, 3(2). doi:10.58968/jiel.v3i2.88
- Izza, N. N., & Rusydiana, A. S. (2022). What Scopus Metadata Says About 32 Years of Islamic Accounting. *Annual International Conference on Islamic Economics and Business (AICIEB)*, 2(1), 323–338.
- Izza, N. N., Rusydiana, A. S., & Avedta, S. (2021). A qualitative review on halal food: NVivo approach. *Halal Tourism and Pilgrimage*. 1(1). doi:10.58968/htp.v1i1.87
- Izza, N. N., Sari, M., Kahila, M., & Al-ayubi, S. (2023). A twitter sentiments analysis on Islamic banking using Drone Emprit Academic (DEA): Evidence from Indonesia. *Jurnal Ekonomi Syariah Teori dan Terapan*, 10(5), 496-510. doi: 10.20473/vol10iss20235pp496-510.
- Jamal, A., & Sharifuddin, J. (2015). Perceived value and perceived usefulness of halal labeling: The role of religion and culture. *Journal of Business research*, 68(5), 933-941. doi:10.1016/j.jbusres.2014.09.020
- Kapoor, K. K., Tamilmani, K., Rana, N. P., Patil, P., Dwivedi, Y. K., & Nerur, S. (2018). Advances in social media research: Past, present and future. *Information Systems Frontiers*, 20, 531-558. doi:10.1007/s10796-017-9810-y
- Kaurav, R. P. S., Suresh, K. G., Narula, S., & Baber, R. (2020). New education policy: Qualitative (contents) analysis and twitter mining (sentimen analysis). *Journal of Content, Community and Communication*, 12, 4–13. doi:10.31620/JCCC.12.20/02
- Khalek, A. A., & Ismail, S. H. S. (2015). Why are we eating halal—using the theory of planned behavior in predicting halal food consumption among generation Y in Malaysia. *International journal of social science and humanity*, 5(7), 608-612. doi:10.7763/IJSSH.2015.V5.526
- Khalek, A. A. 2014. Young Consumers' Attitude towards Halal Food Outlets and JAKIM's Halal Certification in Malaysia. *Procedia – Social and Behavioural Sciences*, 121, 26-34. doi:10.1016/j.sbspro.2014.01.1105
- Khan, A., Mohammad, A. S., & Muhammad, S. (2021). An integrated model of brand experience and brand love for halal brands: Survey of halal fast food consumers in Malaysia. *Journal of Islamic Marketing*, 12(8), 1492-1520. doi:10.1108/JIMA-11-2019-0236
- Latan, H., & Ramli, N. A. (2013). The results of partial least squares-structural equation modelling analyses (PLS-SEM). *Paper SSRN*, 1-35. doi:10.2139/ssrn.2364191
- Liang, F., & Lu, S. (2023). The dynamics of event-based political influencers on Twitter: A longitudinal analysis of influential accounts during chinese political events. *Social Media + Society*, 1-12. doi:10.1177/20563051231177946
- Maichum, K., Parichatnon, S., & Peng, K. (2017). The influence of attitude, knowledge and quality on purchase intention towards halal food: A case study of young non-Muslim consumers in Thailand. *International Journal of Management & Social Sciences*, 6 (3), 354-364. doi:10.21013/JMSS.V6.N3.P3
- Manzoor, A. (2020). Designs of mixed method research. In *Cognitive Analytics: Concepts,*

- Methodologies, Tools, and Applications*, 95-121. Pennsylvania: IGI Global.
- Meel, P., & Vishwakarma, D. K. (2020). Fake news, rumor, information pollution in social media and web: A contemporary survey of state-of-the-arts, challenges and opportunities. *Expert Systems with Applications*, 153. doi:10.1016/j.eswa.2019.112986
- Miftahuddin, A., Perdana, Y., Suryana, & Sandjaya, T. (2023). Persepsi masyarakat terhadap tren perkembangan industri halal di media sosial: Analisis respons di Indonesia. *Responsive: Jurnal Pemikiran dan Penelitian Bidang Administrasi, Sosial, Humaniora, dan Kebijakan Publik*, 5(4), 233–238.
- Millatina, A. N., Hakimi, F., Budiantoro, R. A., & Arifandi, M. R. (2022). The impact of halal label in halal food buying decisions. *Journal of Islamic Economic Laws*, 5(1), 159-176. doi:10.23917/jisel.v5i1.17139
- Mostafa, M M. (2020). Global halal food discourse on social media: A text mining approach. *The Journal of International Communication*, 26(2), 211–237. doi:10.1080/13216597.2020.1795702
- Mostafa, Mohamed M. (2019). Clustering halal food consumers: A Twitter sentiment analysis. *International Journal of Market Research*, 61(3), 320–337. doi:10.1177/1470785318771451
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, 16(1), 1–13. doi:10.1177/1609406917733847
- Nurhayati, T., & Hendar, H. (2020). Personal intrinsic religiosity and product knowledge on halal product purchase intention: Role of halal product awareness. *Journal of Islamic Marketing*, 11(3), 603-620.
- Öztürk, A. (2022). The effect of halal product knowledge, halal awareness, perceived psychological risk and halal product attitude on purchasing intention. *Business and Economics Research Journal*, 11(3), 603-620. doi:10.1108/JIMA-11-2018-0220
- Padmawidjaja, L., Negara, R. S. S., & Herdinata, C. (2021). The effect of innovation product and halal labelization on buying repurchase special food in Blitar City. *Business and Finance Journal*, 6(2), 167-174. doi:10.33086/bfj.v6i2.2126
- Pambudi, N. F. (2022). Pengaruh digital marketing dan labelisasi halal terhadap minat beli dengan brand image sebagai variabel intervening (Studi pada produk Ultra Milk). Undergraduate thesis management program, Faculty of Economy. Universitas Islam Sultan Agung Semarang.
- Pradana, M., Wardhana, A., Rubiyanti, N., Syahputra, S., & Utami, D. G. (2022). Halal food purchase intention of Muslim students in Spain: testing the moderating effect of need-for-cognition. *Journal of Islamic Marketing*, 13(2), 434–445. doi:10.1108/JIMA-05-2020-0122
- Priantina, A., & Sopian, S. M. (2023). Sertifikasi halal di Indonesia: Dari voluntary menjadi mandatory. *Tasyri': Journal of Islamic Law*, 2(1), 95-118. doi:10.53038/tsyr.v2i1.48
- Purwanto, A., Ardiyanto, J., & Sudargini, Y. (2021). Intention factors of halal food purchase among student consumers: An explanatory sequential mixed methods study. *Journal of Industrial Engineering & Management Research*, 2(2), 21-34. doi:10.7777/jiemar.v2i2.124
- Qurniawati, R. S. (2018). Theoretical review: Pemasaran media sosial. *Among Makarti*, 11(1), 17-27. doi:10.52353/ama.v11i1.159
- Rektiansyah, R. R., & Auwalin, I. (2022). Analysis of the Impact of halal awareness and halal labels to the purchase intention of korean instant noodles on adolescents in Sumenep through attitude. *Jurnal Ekonomi Syariah Teori dan Terapan*, 9(5), 600–616. doi:10.20473/vol9iss20225pp600-616
- Rezai, G., Mohamed, Z., & Shamsudin, M. N. (2012). Assessment of consumers' confidence on halal labelled manufactured food in Malaysia. *Pertanika Journal of Social Science & Humanity*, 20(1), 33-42.
- Ridhiyah, N. (2019). Sertifikasi halal oleh Badan Penyelenggara Jaminan Produk Halal Pasca diterbitkannya undang-undang nomor 33 tahun 2014 tentang jaminan produk halal. Bachelor's thesis of Sharia Economic Law Study Program, Faculty of Sharia And Law. Universitas Islam Negeri Syarif Hidayatullah Jakarta.
- Rohman, A., & Fadzillah, N. A. (2018). Lipid-based techniques used for halal and kosher food authentication. *Preparation and Processing of Religious and Cultural Foods*, 393-407. doi:10.1016/B978-0-08-101892-7.00021-3

- Rusyadiana, A. S., & Izza, N. N. (2022). Women entrepreneurship: A sentiment analysis. *Review of Islamic Social Finance and Entrepreneurship*, 1(2), 109–120. doi:10.20885/RISFE.vol1.iss2.art2
- Schneider, S., & Kokshagina, O. (2021). Digital transformation: What we have learned (thus far) and what is next. *Creativity and innovation management*, 30(2), 384-411. doi:10.1111/caim.12414
- Scott, J. (2012). *What is social network analysis?* London: Bloomsbury Publishing Plc
- Sinha, N., Singh, P., Gupta, M., & Singh, P. (2020). Robotics at workplace: An integrated Twitter analytics–SEM based approach for behavioral intention to accept. *International Journal of Information Management*, 55. doi:10.1016/j.ijinfomgt.2020.102210
- Sotudeh, H., Saber, Z., Aloni, F. G., Mirzabeigi, M., & Khunjush, F. (2022). A longitudinal study of the evolution of opinions about open access and its main features: A twitter sentiment analysis.
- Taleb, I., Serhani, M. A., & Dssouli, R. (2018). Big data quality assessment model for unstructured data. In *International Conference on Innovations in Information Technology (IIT)*, pp. 69-74.
- Tanjung, G. (2021). Pengaruh youtube beauty vlogger terhadap minat beli konsumen dan dampaknya terhadap keputusan pembelian produk (Studi pada viewers Youtube Wardah channel Suhay Salim). Undergraduate thesis of management program. Sekolah Tinggi Ilmu Ekonomi Indonesia Jakarta.
- Usman, H., Chairy, C., & Projo, N. W. K. (2021). Between awareness of halal food products and awareness of halal-certified food products. *Journal of Islamic Marketing*, 14(3), 851-870. doi:10.1108/JIMA-07-2021-0233
- Vanany, I., Soon, J. M., Maryani, A., & Wibawa, B. M. (2019). Determinants of halal-food consumption in Indonesia. *Journal of Islamic Marketing*, 11(2), 507-521. doi:10.1108/JIMA-09-2018-0177
- Wang, M., Sun, L. L., & Hou, J. D. (2021). How emotional interaction affects purchase intention in social commerce: The role of perceived usefulness and product type. *Psychology Research and Behavior Management*, 14, 467-481. doi:10.2147/PRBM.S301286
- Widyanto, H. A., & Sitohang, I. A. T. (2022). Muslim millennial's purchase intention of halal-certified cosmetics and pharmaceutical products: The mediating effect of attitude. *Journal of Islamic Marketing*, 13(6), 1373-1394. doi:10.1108/JIMA-04-2020-0117
- Wold HOA. (1982). Soft modeling: The basic design and some extensions. In: *Jöreskog KG and Wold HOA (eds) Systems Under Indirect Observations: Part II*, 1-54. Amsterdam: North Holland.
- Zeinita, A., & Otok, B. W. (2010). Pengembangan structural equation modeling pada moderasi kepribadian terhadap indeks prestasi dosen menggunakan metode split (Score Factor). *Statistika: Forum Teori dan Aplikasi Statistika*. 10(2), 79–91.
- Zhang, L., Wang, S., & Liu, B. (2018). Deep learning for sentiment analysis: A survey. *Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery*, 8(4), 1–25. doi:10.1002/widm.1253
- Zhang, Na, Ping Yu, Yupeng Li, and Wei Gao. (2022). Research on the evolution of consumers' purchase intention based on online reviews and opinion dynamics. *Sustainability*, 14(24). doi:10.3390/su142416510
- Zhang, Y., Nguyen, H. W., Jung, Y. H., & Ren, I. Y. (2023). The social media industry: where is it heading?. *Journal of Business Strategy*. doi:10.1108/JBS-12-2022-0209
- Zorzi, O. (2019). Granovetter (1983): The strength of weak ties: A network theory revisited. *Schlüsselwerke der Netzwerkforschung*, 243-246. doi:10.1007/978-3-658-21742-6_55