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MORALITY BEFORE KNOWLEDGE

The impact of halal certification and halal awareness on consumer intentions to purchase skincare products online

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ABSTRACT

Background: The growing awareness of halal products, particularly in the skincare industry, has prompted a need to understand the factors influencing Generation Z's purchasing intentions for halal skincare products through e-commerce platforms. Halal certification and halal awareness are critical factors in shaping consumer behavior. This study aims to examine the role of halal certification and halal awareness in influencing the purchasing intentions of Generation Z consumers for halal skincare products. **Methods**: This research employed a quantitative approach with a descriptive and cross-sectional design. Data was collected through surveys distributed to Generation Z consumers who had experience with halal skincare products. Structural Equation Modeling (SEM) was used to analyze the relationships between halal certification, halal awareness, and purchasing intentions. **Findings**: The results revealed that halal certification had a significant positive impact on consumers' intentions to purchase halal skincare products online, whereas halal awareness did not significantly predict purchasing intentions. This suggests that consumers' perceptions of halal certification are more influential than their awareness of halal products in driving their purchasing behavior. **Conclusion**: The study concludes that while halal certification plays a crucial role in influencing Generation Z's purchasing intentions, halal awareness alone does not significantly affect their decisions. Therefore, businesses in the halal skincare industry should focus on promoting halal certification to enhance consumer confidence and drive purchases. **Novelty/Originality of this article**: This article contributes to the understanding of consumer behavior in the context of halal skincare products, particularly by focusing on Generation Z and their online purchasing intentions. It provides new insights into the relative importance of halal certification over halal awareness in influencing purchasing decisions. Additionally, the study highlights the need for further research to explore the effects of religiosity and specific educational interventions on halal consumer behavior.

KEYWORDS: consumer intentions; halal awareness; halal certification; online purchasing; skincare products.

1. Introduction

In 2023, Indonesia is listed as the country with the largest Muslim population in the world, with a population of 231 million according to World Population Review (2023). Followed by Pakistan and India, each with a Muslim population of around 200 million, Indonesia is the country with the largest number of Muslims. Based on the 2020 census data from the Central Statistics Agency (BPS), around 87% of Indonesia's total population of 270 million adheres to Islam (Badan Pusat Statistik, 2021). With such a large Muslim population,

the need for products that are in accordance with their religious teachings and beliefs is very important. This creates a huge market potential for halal products in Indonesia, both in terms of demand and the growing industry. The Indonesian Muslim community is increasingly aware of the importance of consuming products that are in accordance with religious rules. The need for halal products in Indonesia is increasing, both in the food sector, cosmetics, and other services (Warto & Samsuri, 2020). The demand for halal products opens opportunities for the Indonesian halal industry to grow and compete in the global market.

The concept of halal and haram comes from the teachings of Islam, which is based on the principles contained in the Quran and Hadith (Jallad, 2008). The term 'halal' in Arabic means something that is allowed or permitted, while 'haram' refers to things that are prohibited or not allowed. The understanding of halal and haram is not only related to religious aspects, but also to health and safety aspects (Ambali & Bakar, 2014). Halal products must not only fulfill religious requirements, but must also contain ingredients that are good and provide benefits to consumers (Ab Talib, 2017). This makes the concept of halal not only a religious issue, but also a guarantee that the product is safe and does not harm its users (Amin & Aziz, 2015). For example, halal products must be free from ingredients that could potentially damage the body, such as harmful or prohibited substances in Islam (Sugibayashi et al., 2019). Every product sold in Indonesia must comply with halal standards in order to meet the needs of the majority Muslim consumers (Prayuti, 2020).

For Indonesian Muslim consumers, the concept of halal is a very important factor in the decision to shop and consume a product (Djunaidi et al., 2021). In addition to religiosity reasons, safety factors are also a major concern. Consumers tend to choose products that are guaranteed halal to ensure that what they consume or use is in accordance with religious teachings (Vanany et al., 2020). In this case, halal products are not only viewed in terms of religious legality, but also in terms of health and safety benefits. Research shows that Muslim consumers are increasingly aware of the importance of choosing halal products as a form of responsibility to their religion and health. The halal industry in Indonesia has a great opportunity to grow, both domestically and in the international market (Syamsiyah & Ardana, 2022). The high demand for halal products in Indonesia also encourages innovation and sustainability of this industry. The halal product sector has the potential to grow rapidly along with the increasing public awareness of the importance of consumption in accordance with Islamic religious principles.

The Indonesian government has begun to implement regulations that require halal certification for products circulating in the market with the aim of protecting consumers regarding product halalness. In Government Regulation No. 39 of 2021, it is stipulated that all products marketed in Indonesia must obtain halal certification verified and authorized through a halal fatwa hearing by the Indonesian Ulema Council (MUI), with a deadline of no later than October 2026. This regulation also includes various provisions detailing the halal certification process, such as inspection of raw materials, composition, location, production process, and product washing and cleaning processes. In addition, this regulation also regulates the distribution, sale, and presentation of products. MUI itself states that the halal certification they provide has been internationally recognized and meets global standards. This shows that halal certification not only serves to guarantee the halalness of the product, but also relates to international standards of hygiene, safety, and quality. Cosmetic products that have been certified halal will be given a label containing the logo and certificate number as an indicator that the product meets high hygiene and safety standards. Therefore, the demand for halal cosmetic products is increasing among both Muslim and non-Muslim consumers, as halal is considered a guarantee of better quality and health.

In addition to food and beverages, halal products also include a variety of other goods and services, such as cosmetics, medicines, toiletries, as well as financial and banking services. In this case, cosmetic products are one of the most widely used categories in daily life, both by Muslim and non-Muslim consumers. Cosmetics are defined as materials or products used on the body for the purpose of cleansing, beautifying, enhancing

attractiveness, or changing appearance, which can be in the form of products that are rubbed, sprayed, or applied directly to the body. The development of the halal cosmetics market shows that these products are increasingly in demand by consumers who pay attention to religious and health aspects (Shahid et al, 2018). Halal cosmetic products not only provide a guarantee of compliance with Islamic law, but also guarantee better hygiene and product safety (Hussain, 2022). Therefore, halal cosmetics have more appeal in the Indonesian market, where the majority of the population is Muslim. In addition, the existence of halal cosmetic products also provides a solution for non-Muslim consumers who are more concerned about quality and hygiene aspects in choosing self-care products.

In the context of halal cosmetics, halal certification not only serves to meet the needs of Muslim consumers, but also as an internationally recognized standard in terms of hygiene, safety, and quality. Halal certification on cosmetic products has been aligned with various global standards such as Hazard Analysis and Critical Control Point (HACCP) and Current Good Manufacturing Practice (cGMP), which aim to ensure that the products meet stringent quality requirements. As a result, halal cosmetic products have greater appeal as they are considered safer and more quality assured. Muslim consumers feel more at ease when using halal-verified products, as it ensures that the products do not contain ingredients that are prohibited in their religion (Ismail et al., 2024). In addition, non-Muslim consumers are also starting to pay attention to the halal label as an indicator that the product meets high health standards. This trend shows that the market for halal products is growing, with halal cosmetics being one of the most in-demand categories. As consumers become more aware of the importance of safety and quality, the demand for halal cosmetic products is expected to continue to grow in the coming years.

Halal cosmetics must meet the requirements of Islamic sharia, where products must not contain any prohibited ingredients, such as alcohol, pork, reptiles, insects, blood, or illegal drug ingredients (Kamali, 2013). In addition, halal cosmetic products must also be free from germs or bacteria that can be harmful to health, and adhere to high hygiene standards during the production and distribution process. Animal ingredients used must come from animals that are slaughtered in accordance with Islamic teachings, i.e. by mentioning the name of Allah during slaughter and ensuring the animal is not subjected to suffering. The processing, manufacturing, storage and distribution of halal cosmetic products must always maintain cleanliness and purity. Therefore, it is important for consumers to choose halal cosmetic products because of their quality and safety assurance that has been verified by internationally recognized institutions. For Muslim consumers, these products provide peace of mind and confidence that they are caring for their bodies in accordance with religious teachings. It is also an important symbol of obedience and religiosity in daily life. Thus, halal cosmetic products not only fulfill safety and hygiene aspects, but also support consumers in practicing religious values (Khan et al., 2021).

The development of digital technology has changed the way consumers search and purchase cosmetic products, opening up wider access through online platforms. The internet allows consumers to more easily find information about the products they want, as well as make purchases quickly and efficiently. This change has also affected consumer behavior, which is increasingly turning to e-commerce as the primary means of meeting their needs. According to a report from Populix (2023), around 72% of Indonesians now utilize the internet to shop online, with most using smartphones as the main tool to purchase products. This shows that e-commerce is increasingly becoming the main choice for Indonesian consumers in shopping for various products, including cosmetics. In addition, e-commerce apps are also growing in popularity, with 59% of Indonesians using these platforms to fulfill their needs. People are increasingly relying on e-commerce applications for their ease and convenience in making online purchases (Suparno, 2020). Thus, this online shopping trend strengthens the market potential for halal cosmetic products that can be easily reached by consumers through digital platforms.

According to data from Katadata, in the first quarter of 2023, Shopee was recorded as the most visited e-commerce platform by Indonesians, with an average of 157.9 million visits per month. This shows that e-commerce is increasingly becoming the main choice for

consumers in shopping for products, including halal cosmetics. Shopee and other e-commerce platforms provide convenience and ease for consumers in finding the cosmetic products they are looking for, including those that meet halal criteria. With the increasing number of internet users and e-commerce application users in Indonesia, the halal cosmetics market has a great opportunity to grow. Consumers can now more easily access halal cosmetic products, thanks to technological advances and the shift in shopping behavior towards digital platforms. Therefore, it is important for halal cosmetic industry players to capitalize on this development by strengthening their presence on e-commerce platforms. This will not only boost sales but also expand their market reach, especially among consumers who increasingly rely on online shopping.

Many skincare product sellers do not include halal keywords or logos on their products, as there is no direct obligation from e-commerce platforms to do so. In fact, even though some sellers include the halal certification number in the product description, its veracity is often difficult to verify, as it requires further checking through the halal certification verification page of LPPOM MUI (LPPOM MUI, 2017). This makes it difficult for consumers who want to ensure the halalness of cosmetic products, especially when the logo or certification number is not available for inspection. This lack of clarity causes uncertainty for consumers in assessing the halalness of products, which should be a top priority when purchasing cosmetics. Therefore, it is important for e-commerce platforms and sellers to adhere to a clear and verifiable standard of halal information inclusion. This not only helps Muslim consumers in choosing products that are in accordance with religious teachings, but also increases transparency and trust in the market. As the demand for halal products increases, clear information is essential to ensure consumer safety and trust.

The halalness of cosmetic products plays a very important role in consumer purchasing decisions. Cosmetic products that have halal certificates are not only considered to be in accordance with religious teachings, but also guarantee hygiene and safety, which is an added value for non-Muslim consumers in Indonesia. Septiarini et al. (2022) noted that many consumers are now more actively seeking halal cosmetic products and are even willing to pay higher prices for them. In consumer behavior theory, purchase intention is influenced by evaluative attitudes towards products, as well as social norms that prevail around consumers (Spears & Singh, 2004). Other factors that influence purchase decisions include the type of product, uncertain situational factors, and consumer characteristics, including sociodemographics and values (Schiffman & Wisenblit, 2019). Therefore, a better understanding of the halalness of cosmetic products can increase purchase intentions, especially for consumers who prioritize quality and safety in shopping.

Various studies show that factors such as religiosity, halal awareness, halal certification, and consumer education affect the intention to buy halal cosmetics. Halal awareness is one of the main factors that encourage consumers to choose products that are in accordance with their religious principles, especially Muslim consumers who want to ensure that the products they consume comply with religious teachings. Research shows that non-Muslim consumers are also influenced by halal awareness, as they consider halal products as an additional guarantee of safety and hygiene. In addition, halal certification also plays an important role in determining purchase intention, as it provides assurance that the product has been tested and verified by a competent institution, and processed in accordance with Islamic law. The halal label on cosmetic products is an indicator that is trusted by consumers, showing that the product has undergone a rigorous inspection process by the Indonesian Ulema Council (MUI), and provides confidence that the product is safe and halal to use.

A study by Handriana et al. (2021) states that trust, positive attitudes towards products, and halal awareness strongly influence the purchase intention of halal cosmetics, especially among female millennials. The study by Haro (2018) also revealed that attitudes towards halal cosmetics, halal awareness, as well as prevailing social norms, are factors that influence the decision to buy halal cosmetics among Indonesian Muslim women. On the other hand, Bashir (2019) study in Malaysia showed that for non-Muslim consumers, halal awareness, the presence of halal logos, as well as positive attitudes towards halal products,

have a significant influence on the purchase intention of halal cosmetic products. These factors indicate that both Muslim and non-Muslim consumers consider various aspects before deciding to buy halal products, with safety and quality being the main reasons.

A recent study conducted by Septiarini et al. (2022) found that halal logo, halal awareness, and halal brand image are factors that influence the decision to buy halal cosmetics in Indonesia, Singapore, and Malaysia. This research shows that not only Muslim consumers, but also non-Muslim consumers in these regions are increasingly paying attention to these elements in choosing cosmetic products. Therefore, cosmetics companies need to pay attention to the importance of communication about halal certification and ensure their products meet the standards that consumers expect. With the increasing awareness of the importance of halal products, consumers are increasingly demanding clarity regarding the halal status of a product. This indicates a change in consumer behavior that is increasingly concerned about halal factors, both in the context of religion and in the search for products that guarantee safety and quality.

Research on the intention to purchase halal skincare products through e-commerce among the general population is still very limited, especially those that focus on halal awareness and halal certification variables. One of the main challenges for consumers in shopping for halal cosmetic products online is the lack of clear information regarding halal certification on e-commerce platforms, such as halal logos or certification numbers that are difficult to verify. Despite the growing demand for halal skincare products, as well as the rapid development of the halal industry and government-mandated halal certification policies, there are still information gaps that may affect consumers' purchasing decisions. Given the increasing online shopping activities through e-commerce, research on the factors that influence consumer intention to buy halal skincare products is becoming increasingly relevant. This is mainly related to the large market potential in Indonesia, both among Muslim and non-Muslim consumers who are increasingly concerned about the quality and halalness of the products they consume.

Given the importance of factors such as halal awareness and halal certification, this study aims to analyze the influence of these two variables on the intention to purchase halal skincare products online among generation Z consumers. Halal awareness plays a key role in influencing consumer decisions to choose products that meet halal principles. A clear and trustworthy halal certification gives consumers a sense of security that the products they buy have met halal standards authorized by authoritative institutions, such as the Indonesian Ulema Council (MUI). In addition, education about halal cosmetics is an important aspect that can increase the level of consumer awareness about the benefits and importance of choosing halal products, not only for Muslim consumers, but also for non-Muslim consumers. With proper education, generation Z consumers are expected to better understand and appreciate the concept of halal in cosmetic products, which in turn will affect their purchasing behavior. This study aims to assess whether more complete information on halal awareness and halal certification through e-commerce platforms can encourage generation Z consumers to be more likely to purchase halal skincare products.

2. Methods

2.1 Research design

This study uses a quantitative approach that produces data in the form of numbers, which are then analyzed using statistical techniques to draw conclusions and provide interpretations of the data obtained (Gravetter & Forzano, 2012). The research design applied is experimental with randomized techniques, where the research objective is to examine the cause-and-effect relationship between the independent variables (halal awareness and halal certification) and the dependent variable (intention to buy halal cosmetics). By using this approach, researchers aim to identify how these variables influence consumer decisions to purchase halal cosmetic products. This experimental research involves random assignment, which is the random distribution of participants into

two groups: one group that is given experimental treatment and one control group that does not get treatment (Gravetter & Forzano, 2012). This is done to ensure that the results obtained can be influenced by the variable being tested, not by other external factors. This design allows researchers to obtain more valid and reliable data regarding the effect of halal awareness and halal certification on consumer behavior.

This research is also a cross-sectional study, where data is collected at only one specific point in time, not over a long period of time. This approach allows researchers to observe and analyze the relationship between variables in the current context, without requiring longitudinal monitoring. By using a cross-sectional design, researchers can get a clear picture of how the variables being tested are interconnected at any given time. Researchers will analyze data obtained from diverse participants, both those who have more knowledge about halal awareness and those who lack such awareness, and how both affect the intention to buy halal skincare products. In this way, this study can provide a deeper insight into the factors that influence consumers' decision to buy halal cosmetic products online.

2.2 Research participants

The participants in this study are Indonesian women aged between 18 to 24 years old who have experienced shopping for skincare products online through the Shopee e-commerce platform. This age range was chosen because generation Z is known as a group that is very active in using the internet (Francis & Hoefel, 2018), and also belongs to the young adult category according to Arnett (2014). In addition, data from Shopee shows that consumers aged 18 to 24 make up the majority of active users of this e-commerce platform. The selection of female participants is based on the same findings, which show that female consumers dominate the use of e-commerce to purchase skincare products in the beauty category (Detik, 2023). Therefore, this research focuses more on this group as it is considered to represent a demographic that is relevant to the study objectives. It also reflects consumer trends in the purchase of beauty products in e-commerce.

To select participants, this study used non-probability sampling techniques, which are used when the researcher does not know the exact size of the population and cannot determine the probability of selecting participants (Gravetter & Forzano, 2012). Specifically, the researcher applied convenience sampling, which is a technique that utilizes easy access to participants who are available and willing to participate in the study. This method was chosen because it is more practical and efficient in terms of time and cost (Gravetter & Forzano, 2012). Convenience sampling allows researchers to obtain data from relevant groups more quickly without requiring complicated selection procedures. However, this method has limitations related to the representativeness of the sample which may not cover all variations in the larger population.

The sample selection in this study was conducted online by distributing questionnaires through Google Forms that were shared on various social media, such as Instagram, LINE, Twitter, Whatsapp, and Telegram. There were two types of questionnaires distributed: treated and untreated, which were randomly distributed to participants using the randomizer website at https://www.allocate.monster. This randomization process resulted in two different sample groups, depending on the type of questionnaire received by participants. As a token of appreciation, participants were given the opportunity to enter an e-wallet balance prize draw with a total of Rp300,000, which will be awarded to 15 randomly selected winners. This approach aims to increase participation and attract more respondents. Thus, researchers can obtain a representative and balanced sample.

To determine the number of participants required, the researcher conducted a sample size analysis using the GPower version 3.1 statistical application. Based on the results of the a priori analysis for the t-test with an effect size of 0.5 and a power of 0.8, it is known that the minimum number of participants needed is 51 participants per group, with a total of 102 participants. Effect size of 0.5 was chosen because it is considered a standard size for obtaining moderate effects (Gravetter & Forzano, 2015). To anticipate the possibility of missing or incomplete data, the researcher aimed to recruit a total of 140 participants, with

70 people in each control and experimental group. This target is greater than the minimum number required to ensure quality data that can be used for further analysis.

2.3 Research instruments

The measurement tools used in this study were contained in an online questionnaire distributed to participants. The questionnaire consists of three measuring instruments, each of which is used to measure the variables under study, namely the intention to buy halal cosmetic products (Anubha et al., 2021) as well as halal awareness and halal certification (Aziz & Chok, 2013). The three measuring instruments use a Likert scale to assess the respondent's level of agreement with the statements given. This scale provides answer options that cover various levels of response intensity, ranging from strongly agree to strongly disagree. This measurement tool was chosen because of its ease of data collection and its ability to effectively capture variations in respondents' opinions. In addition, the use of Likert scales also allows for a more in-depth analysis of participants' perceptions and attitudes.

The process of adapting and translating the measurement tool was carried out with careful steps to ensure that the questions in the questionnaire could be well understood by Indonesian respondents. The translations were done by three competent bilingual people, and then double-checked by lecturers from the UI Faculty of Psychology who have expertise in consumer psychology. After the translation was completed, the researcher conducted a readability test on 35 students who were selected using the convenience sampling method. This process aims to ensure that the items in the measuring instrument are easy to understand and unambiguous for participants. If items were found that did not pass the readability test, revisions were made with the help of supervisors who are competent in the field of consumer psychology. This revision aims to ensure the validity and clarity of the measuring instrument before it is used on research participants.

2.4 Data processing and analysis

The descriptive statistical analysis method was used to provide an overview of the demographic characteristics of the participants in this study. According to Gravetter and Forzano (2012), descriptive analysis aims to present information in a narrative manner that describes the data obtained. In this study, descriptive analysis was conducted using Microsoft Excel and IBM SPSS version 26 to calculate mean values, percentages, and standard deviations of various demographic aspects, such as the total number of participants, age, religion, province of residence, and occupation. By using these tools, the researcher was able to identify the distribution of participant characteristics and provide an initial understanding of the profile of the respondents involved in this study.

In addition, the t-test analysis method was applied to test whether there was a significant difference between the Muslim and non-Muslim groups and between the treatment and control groups. The t-test analysis, as explained by Gravetter and Forzano (2012), is suitable for normally distributed data and can help identify mean differences between two groups being compared. This test will determine whether the differences between the groups are statistically significant. Furthermore, to test the research hypothesis regarding the effect of halal awareness and halal certification on the purchase intention of halal skincare products, multiple regression analysis is used. This analysis will measure how far the halal awareness and halal certification variables can predict the purchase intention of consumers.

3. Results and Discussion

3.1 General characteristics of participants

To provide a clearer picture of the profile of participants in this study, information on demographic characteristics including age, domicile, religion, and occupation is presented. The following table shows the distribution of respondents based on these categories.

Table 1. Descriptive statistics of demographic characteristics (N=318)

Demographic Characteristics	Total	
	n	%
Age (mean. SD)	20.12	1.58
18	43	13.5
19	81	25.5
20	91	28.6
21	52	16.4
22	18	5.7
23	17	5.3
24	15	4.7
25	1	0.3
Domicile		
Central Java	79	24.8
DKI Jakarta	76	23.9
West Java	57	17.9
DI Yogyakarta	39	12.3
East Java	31	9.7
North Sumatra	9	2.8
Banten	9	2.8
Bali	5	1.6
Riau Islands	3	0.9
East Kalimantan	3	0.9
South Sumatra	2	0.6
North Sulawesi	2	0.6
South Sulawesi	2	0.6
West Sumatra	1	0.3
Religion		
Islam	223	70.1
Protestant Christian	58	18.2
Catholic Christian	24	7.5
Hinduism	11	3.5
Buddhism	1	0.3
Confucianism	1	0.3
Jobs		
Student	264	83
Private Employee	17	5.3
Freelancers	9	2.8
SOE Employee	8	2.5
Self-employed	7	2.2
Housewife	6	1.9
Not Employed	4	1.3
Civil Servant / PNS	3	0.9

The age aspect shows a relatively even variation with an age range between 18 to 25 years old, which reflects the sample from generation Z that is the focus of this research. In addition, the data on domicile shows the diversity of the participants' living locations, which are spread across various provinces in Indonesia. Religion was also one of the variables recorded, with the majority of participants being Muslim, but still including other religious groups. Finally, information on occupation shows the various professional backgrounds of

the respondents, from students to workers in the private and public sectors. Table 1 provides a comprehensive overview of the participant characteristics relevant for analysis in this study.

After looking at the table showing the demographic characteristics of the participants, it can be concluded that the sample of this study includes respondents who are quite diverse from various ages, domiciles, religions, and occupations. The average age of the participants is 20.12 years old with a standard deviation of 1.58, which indicates that most of the respondents are in the age range of generation Z. Most participants came from the Central Java region (24.8%), followed by other provinces, reflecting the geographical diversity that exists. The majority of participants were Muslim (70%), while the other 30% were from religions other than Islam or were non-Muslims. These demographic characteristics indicate that the respondents have a diverse religious background, which is relevant to the research topic on halal products.

In addition, most of the respondents are students (83%), which reflects an age group that is relevant for research on the intention to buy halal skincare products online. This diversity of demographic characteristics provides a more complete picture of the sample that is the object of research, as well as the potential influence of these factors on consumer behavior. Thus, this demographic data will be very useful in analyzing how age, religion, and occupation factors influence consumer decisions to buy halal skincare products online.

3.2 Overview of the main research variables

Before looking at the results of the analysis presented in the following table, it should be noted that the main variables examined in this study are halal awareness, halal certification, and purchase intention. The researcher compared two groups, namely the Muslim and Non-Muslim groups, to see the average difference of the three variables. This table illustrates the mean and standard deviation (SD) for each variable in both groups. In addition, the t-test results are also presented to evaluate whether there is a significant difference between the Muslim and Non-Muslim groups regarding the three main variables. This t-test provides an overview of how much difference there is between one group and another in terms of halal awareness, halal certification, and purchase intention.

Table 2. Overview of the main research variables (N=318)

Main Variable Characteristics	Muslim		Non-Muslim		Total		t-test
	Mean	SD	Mean	SD	Mean	SD	
Halal Awareness	13.27	1.77	11.94	2.76	12.87	2.2	4.36
Halal Certification	21.79	2.73	20.16	3.99	21.3	3.24	3.64
Purchase Intention	12.86	1.96	11.82	2.75	12.55	2.27	3.33

Notes. M = Muslim, NM = Non-Muslim, $p < 0.05$

This study aims to identify the factors that influence the decision of consumers, both Muslim and non-Muslim, to buy halal products. Thus, table 2 provides initial insight into important findings that will be analyzed further. The t-test results show a significant difference between Muslim and Non-Muslim groups on each of the main variables: halal awareness, halal certification, and purchase intention. However, before proceeding with further analysis, it is important to note that Levene's equality of variance test showed a violation in all three variables ($p < 0.05$). This means that the assumption of homogeneity of variance is not met, and indicates that there is significant variation between the two groups, Muslims and Non-Muslims. In other words, the differences that exist in the variance between the two groups affect the comparison results.

Table 2 shows that the mean halal awareness score of the Muslim group (M = 13.27, SD = 1.77) is significantly higher than that of the Non-Muslim group (M = 11.94, SD = 2.76). The t-test resulted in a value of t(128) = 4.36, $p < 0.05$, indicating a significant difference in the level of halal awareness between the two groups. The same difference was also found in the perception of halal certification, where the mean score in the Muslim group (M = 21.79, SD

= 2.73) was higher than the Non-Muslim group (M = 20.16, SD = 3.99), with t(133) = 3.64, p < 0.05. This indicates that the Muslim group has a better understanding of halal certification than the Non-Muslim group.

In addition, there is a significant difference in purchase intention between the two groups. The mean purchase intention score in the Muslim group (M = 12.86, SD = 1.96) was found to be higher compared to the Non-Muslim group (M = 11.82, SD = 2.75), with t(136) = 3.33, p < 0.05. This finding indicates that halal awareness and halal certification factors play an important role in influencing purchase intention of halal products, especially in the Muslim group. Overall, the results of this analysis suggest that religion can be a factor that influences consumers' perception of halal products and intention to purchase them, with Muslim groups showing higher levels of awareness and purchase intention than Non-Muslims.

3.3 Results of t-test between variables

To test the differences between the treatment and non-treatment groups in this study, a t-test analysis was conducted on the main variable, halal awareness. The following table shows the results of the comparison between the treatment group and the non-treatment group. The treatment provided relates to certain information or interventions that affect participants' perceptions of halal awareness. This analysis aims to see if there is a significant difference in the level of halal awareness between the two groups. The test was conducted using a t-test to identify the average difference between the two groups. The results of this t-test are important to determine the effectiveness of the treatment given on changes in behavior or perceptions measured in this study. Table 3 below presents the results of the comparison between the treatment and non-treatment groups for the halal awareness variable.

Table 3. Treatment effect check (N=318)

	Treatment		Non-Treatment		t-test
	Mean	SD	Mean	SD	
Halal Awareness	12.64	2.13	13.17	2.25	2.15

The results of the analysis in table 3 show that the non-treatment group has an average halal awareness score (M = 13.17, SD = 2.25) which is significantly higher than the treatment group which has an average halal awareness score (M = 12.64, SD = 2.25). The t-test conducted between these two groups resulted in a value of t(316) = 2.15 with p < 0.05, indicating a significant difference between the two. Although the treated group should have experienced an increase in halal awareness, the non-treated group actually showed a higher score. This may be due to the larger population distribution of non-Muslims in the treatment group, which may affect the final result.

The decrease in halal awareness in the treatment group can be explained by looking at the previous t-test results between the Muslim and non-Muslim groups, which showed that the Muslim group had a higher mean for the halal awareness variable. As the treatment group had more non-Muslim participants compared to the non-treatment group, this difference in the level of halal awareness may have arisen as a result of differences in demographic characteristics between the groups involved. This adds an interesting dimension for further research, given that non-Muslim groups tend to have different perceptions and attitudes towards halal products compared to Muslim groups. In addition, this difference shows that although the treatment aims to increase halal awareness, other factors such as religious background and understanding of halal products also play an important role in the results obtained.

To test whether the treatment has an effect on purchase intention, a comparative analysis was conducted between the treatment group and the non-treatment group. This study aims to determine whether the treatment can increase the purchase intention of halal products among participants. Using the t-test method, a comparison between the two

groups was conducted to see if there was a significant difference in the average purchase intention score. The following table shows the results of the analysis, which includes the mean scores and standard deviations (SD) for both groups that have been measured on the purchase intention variable. The results obtained will provide further insight into how much influence the treatment has on purchase intention compared to no treatment. This test is important to assess the effectiveness of the treatment given in increasing interest in halal products. Table 4 below shows the results of the comparison between the treatment and non-treatment groups regarding the purchase intention variable.

Table 4. Treatment effect on purchase intention (N=318)

	Treatment		Non-Treatment		t-test
	Mean	SD	Mean	SD	
Purchase Intention	12.36	2.26	12.78	2.27	0.1

Table 4 shows the comparison between the group of participants who received treatment to increase halal awareness and the group who did not receive treatment (non-treatment) on purchase intention. The average purchase intention score in the treatment group is M = 12.36 with a standard deviation of 2.26, while in the non-treatment group, the average score is M = 12.78 with a standard deviation of 2.27. Although there was a mean difference between the two groups, the t-test results showed that this difference was not significant ($t(316) = 0.1$, $p > 0.05$). This shows that the treatment given to increase halal awareness does not have a significant impact on the purchase intention of halal products in this study.

In addition, although participants in the treatment group were expected to have a higher level of halal awareness, this effect was not shown to significantly affect the change in purchase intention. In other words, although there was a difference in the average halal awareness score between the treated and untreated groups, this did not contribute to an increase in purchase intention. This finding suggests that other factors may be more influential in shaping the purchase intention of halal products, or the treatment provided has not been strong enough to influence participants' attitudes and purchase intentions. Therefore, for future research, it may be necessary to develop more specific treatments or consider other variables that may influence purchase intention.

3.5 Regression analysis

The following table presents the results of the regression analysis that examines the effect of several variables on the purchase intention of halal products. The variables tested include religion, halal awareness, and halal certification as predictors of buying halal products. This test aims to determine whether these factors have a significant impact on purchase intention, focusing on how much each variable contributes. The results of this analysis will provide further insight into the influence of these variables on consumer decisions to purchase halal products. In addition, it is important to pay attention to the coefficient value, standard error (SE), t value, and p value for each predictor to assess the significance of the relationship between the independent and dependent variables. In the following table, variables that show a significant relationship will be marked with a p value that is less than 0.05, indicating a reliable influence. Let's take a more detailed look at the analysis results in the table below.

Table 5. Regression analysis (N=318)

DV: Purchase Intention	b	SE	β	t	p
Constant	1.2	0.6		2.01	0.05
Religion	-0.17	0.18	-0.03	-0.92	0.36
Halal Awarenessb	0.06	0.17	0.01	0.34	0.73
Halal Certification	0.53	0.03	0.76	20.36	0

a 0 = Muslim. 1 = Non Muslim
b 0 = Non Treatment. 1 = Treatment

The results of the regression analysis show that the proposed model can explain the intention to buy halal products significantly, with an F value of 151.06 and p = 0.00, and R^2 = 0.59. This shows that this model can explain 59% of the variance in purchase intention, which according to Cohen (1990) is included in the large effect size category. This finding indicates that the factors included in the model, such as religion, halal awareness, and halal certification, have a considerable impact on consumer decisions to buy halal products. However, the results of the analysis show that the variable that most significantly affects purchase intention is halal certification, with t = 20.36 and p < 0.05, which indicates a very strong contribution to the purchase decision.

4. Conclusions

Halal certification significantly affects consumer intention to buy halal skincare through e-commerce, while the halal awareness variable cannot predict the intention to buy halal skincare. This means that the higher one's perception of halal certification, the higher the intention to buy halal skincare products. These results indicate that the first hypothesis is only partially accepted where only perceptions of halal certification can significantly influence the intention of generation Z consumers to buy halal skincare online through e-commerce. The results found that education about halal cosmetics does not have a significant effect on the level of halal awareness in relation to predicting the intention of generation Z consumers to buy halal skincare. This means that the second hypothesis which predicts that there is a difference in the level of halal awareness between consumer groups who receive education about halal cosmetics and consumer groups who do not receive halal cosmetic education is rejected.

Future research on halal products can expand the research by including religiosity as one of the variables to see statistically how a person's level of belief in religion can affect halal awareness variables, perceptions of halal certification, and intention to buy halal skincare. In addition, future research can specifically investigate how education about halal and halal certification can affect halal awareness, perception of halal certification, and intention to buy halal skincare. Further research can also conduct experiments with educational poster stimulus each to Muslim and non-Muslim religious groups separately in order to see the treatment effect more clearly. In particular, future research related to halal cosmetics can examine various other skincare and/or makeup products so that they can be perceived literally as halal cosmetics. In addition to suggestions regarding future research, this study also provides practical advice that can be used for business actors and cosmetic brand owners, namely to participate in the mandatory halal certification policy implemented by the Indonesian government. This research and various other studies have proven that halal certification can influence consumer purchase intention towards halal skincare products so that cosmetic brand owners can take advantage of this government policy momentum to increase consumer interest in buying and using the promoted products.

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The authors declare no conflict of interest.

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