

Perception of Counterfeit Cosmetics among Muslim Consumers in Putrajaya

Farah Lynn Amira Nor Zaidi^{1*}, Mohammad Aizat Jamaludin¹, Nur Azira Tukiran¹

¹*International Institute for Halal Research and Training (INHART)
International Islamic University Malaysia (IIUM)*

Abstract

This research aims to study the perception of counterfeit cosmetics among Muslim consumers in Putrajaya. This study aims to identify whether demographic backgrounds, especially age, gender, and income level, show a significant difference in the perception of counterfeit cosmetic products among Muslim consumers in Putrajaya. In addition, this study also identifies whether religiosity and brand consciousness show a significant difference in the perception of counterfeit cosmetic products among Muslim consumers in Putrajaya. Two hundred seventy-seven questionnaires were collected from Muslim consumers living in Putrajaya using the convenience sampling method, which was then analyzed using SPSS software. The study's findings showed that age, level of income, and brand consciousness have a significant relationship with the perception of Muslim consumers in Putrajaya towards counterfeit cosmetics. Meanwhile, the findings also showed that there is no statistical difference between gender and religiosity towards the perception of Muslim consumers on counterfeit cosmetics in Putrajaya. This study contributes to expanding future works of literature of research in the Halal cosmetics area and provides insight to the authorities on the perception of Muslim consumers towards counterfeit cosmetic products, which in turn, helps the authorities further strengthen the administration of the halal cosmetic industry.

Keywords: brand consciousness, counterfeit cosmetics, halal, perception, religiosity

1.0 Introduction

Today, Muslim consumers spend more money on cosmetic and care products. The increasing Muslim population and purchasing power have encouraged the growing demand for global halal cosmetics (Zaidun & Hashim, 2018). According to the Future of World Religions: Populations Growth Projections 2010-2050, the global Muslim



population is expected to increase by 80 percent in 2050, from 1.5 billion in 2010. The Muslim population's growth indicates a global demand for halal cosmetic products. The State of the Global Islamic Economy Report 2018/19 says that the halal pharmaceuticals and cosmetics sectors continue to expand as more products are produced, and ingredients are increasingly halal certified. It states that Muslims' spending on cosmetics was estimated at US\$61 billion in 2017 and is estimated to increase to US\$90 billion by 2023 (Badarudin, 2019).

Despite the growing potential of the halal cosmetic industry, consumers need to be more exposed to halal brands. Consumers also have a relatively low level of responsiveness towards halal cosmetic products. The issues of Halal in the cosmetic sector remain a minor concern among consumers compared to the Halal issues in food consumption (Mohezar et al., 2016). According to a senior lecturer and a researcher at International Medical School, Management and Science University (MSU), Dr. Muhd Ridzuan Pauzi, one of the main issues affecting the Halal cosmetic industry is the production of counterfeit cosmetic products. The rapid emergence of counterfeit and fake cosmetic products in the local markets is worrisome (BH Online, 2020).

Several studies have been conducted to study the attitude, purchase intention, and awareness of counterfeit products among consumers of various demographic backgrounds (Hussain et al., 2017; Jashim et al., 2020; Yaakop et al., 2021; Bhatia, 2018; Moon et al., 2018; Quoquab et al., 2017). However, there is a dearth in the studies of perception towards counterfeit cosmetics among Muslim consumers.

Religiosity plays a vital role in shaping an individual's life. It is an important aspect that affects the ethical beliefs of consumers positively. According to a study by Quoquab et al. (2013), religiosity, directly and indirectly, affected customers' purchase intention toward counterfeit products. However, in a study of counterfeits purchase in Kuwait, Riquelme et al. (2012) contend that even in a religious environment, people do not perceive their purchase of counterfeits as unethical behaviors, whereas, in this study, the consumers had a positive attitude towards intention to purchase counterfeit products. This phenomenon can also be seen in Malaysia, where many Muslim consumers still buy and use counterfeit cosmetics containing harmful ingredients despite warnings from NPRA (Berita Harian Online, 2020). It also shows the lack of understanding of the concept of halal and *tayyib* in cosmetic products among Muslim consumers, as the issue of counterfeit



cosmetics is closely related to the concept of *halalan tayyiban*. In this respect, this research will attempt to analyze the relationship between religiosity and the perception of counterfeit cosmetics among Muslim consumers in Putrajaya.

The more prestige and status of a brand, the higher the desire of a consumer to purchase counterfeit luxury brands if the desire for flaunting and showing off is fulfilled (Bhatia, 2018). There is no doubt that the use of a branded cosmetic product can boost an individual's self-esteem, and those consumers who are high in brand consciousness are less likely to purchase counterfeit products. However, famous and branded cosmetics often come at a higher price, resulting in consumers opting to buy counterfeit cosmetics at a lower price. A study mentioned that women users prefer to use artificial products that are sold freely at the market because a famous "brand" is attached to them even though those products may cause adverse effects on their facial skin (Othman et al., 2020; Adreena 2018). It indicates that the growing fascination with leading cosmetic labels has driven even brand-conscious beauty addicts in Malaysia to resort to counterfeit cosmetic products that are readily available and cheap. Therefore, this study will examine the relationship between brand consciousness and the perception of counterfeit cosmetics among Muslim consumers in Putrajaya.

2.0 Literature Review

2.1 Halal Cosmetics

The definition of cosmetics or beauty products is articles intended to be applied to the human body for cleansing, beautifying, promoting attractiveness, or altering the appearance. Products such as skin moisturizers, lipstick, facial makeup preparations, sunscreen, perfumes, and shampoo, as well as any articles intended to be used as a component of a cosmetic product, are included in the definition of cosmetics (USA Food, Drug, and Cosmetic Act 2012, n.d.).

Muslims are obligated to consume only halal and *tayyib* products daily. In a modern and globalized industry, 'halal' does not necessarily mean food products anymore. Nowadays, 'halal' encompasses other non-food products such as cosmetics and care products, tourism, pharmaceuticals, biotechnology, and many others. The term 'halal cosmetics' includes all aspects of the production of cosmetic products, which includes the raw material ingredients,



manufacturing process, storing, packaging, and delivering that conform to the Shariah requirements (Suparno, 2021). Halal cosmetic products must not contain ingredients derived from pigs, blood, human body parts, and others prohibited by Shariah. To be considered halal, ingredients from animals that are permissible in Islam must be slaughtered under Islamic law. Hygiene and purity must be ensured during halal cosmetic products' preparation, processing, manufacturing, storage, and transportation (Kenji et al., 2019).

2.2 Issues in Halal Cosmetic Industry

Despite the apparent potential of the halal cosmetics industry, consumers are yet to be exposed entirely to the brands that produce halal cosmetics. Consumers also have a relatively low level of responsiveness towards halal cosmetics products. The halal issues in the cosmetics industry are still relatively minor compared to the halal issues in food products (Mohezar et al., 2016). According to Zaidun & Hashim (2018), the global cosmetics industry is dominated and, to a certain degree, monopolized by non-Muslim countries. These issues pose serious challenges in ensuring that halal ingredients are used in the manufacturing process of cosmetic products.

Halal products in the industry have often been competing against kosher goods and other socially conscious products in different religions and countries. Halal cosmetics have also been competing against well-established cosmetic brands in other countries, including the producers of kosher goods. Muslim consumers can only rely on the certification from the authorities to determine whether the cosmetic products they use are halal. This has been proven difficult after porcine DNA was discovered in Cadbury products in 2014. Albeit the accusation is false, the lack of confidence among Muslim consumers towards the status of halal products remains to this day (Abu Bakar et al., 2017).

2.3 Counterfeiting in Cosmetic Industry

Counterfeiting is defined as imitating a brand's products and selling them in the market illegally. Counterfeit products or fake products can also be known as "knockoffs". According to Evans (2019), counterfeits develop their identity by mirroring authentic and original brands, thus intricately linking the fake to legitimate goods or brands to mislead the consumers as if it is the result of an original product. Any



products that violate the trademarks infringe the copyright, and packaging, label, and brand regulations are considered counterfeiting. Counterfeiting can occur in various types of branded products in the market, such as clothes, handbags, watches, accessories, cosmetics, pharmaceuticals, perfumes, CDs, DVDs, computer software, games, and many others. Luxury brands are proven to be easily counterfeited due to easy marketing and low manufacturing costs (Harun et al., 2020).

While counterfeiting is an extensive issue affecting various industries and sectors, counterfeit cosmetics occupy a uniquely dangerous segment of the counterfeit market (Sachs, 2019). Although counterfeit handbags, watches, sneakers, or electronic devices may support dangerous black-market activity and a global crime internationally, consumers do not often fall ill or suffer injuries from consuming these counterfeit products. On the other hand, cosmetic and pharmaceutical products can cause harm and damage to consumers. Just like counterfeit medications that may contain even little active ingredients or dangerous contaminants that could result in serious harm, counterfeit cosmetics also carry a serious health and safety risk to consumers when not manufactured properly (Morse & Repsha, 2020).

2.4 Risk of Counterfeit Cosmetic Products

The Ministry of Health Malaysia (MKN) defines counterfeit or fake cosmetics as products that contain illegal, poisonous, or dangerous substances that could risk the body and health. Uncontrolled usage of counterfeit cosmetic products can pose a serious risk to consumers' health. In recent seizures of counterfeit cosmetic products, National Pharmaceutical Regulatory Agency (NPRA) managed to seize about 15 counterfeit cosmetic products in the local market, all of which contained illegal and harmful substances such as hydroquinone, mercury, and tretinoin (BH Online, 2020). Hydroquinone, mercury, and tretinoin are classified as drugs that require registration with the Drug Control Authority and can only be used under the advice of healthcare professionals.

Hydroquinone is a skin-bleaching agent often used to lighten darkened areas such as freckles, melasma, age spots, and acne scars (Ma et al., 2019). Usage of hydroquinone in a cosmetic product to lighten the skin and reduce pigmentation problems without proper supervision from a healthcare professional can cause thinning of skin



structure, redness, and itching on the skin. Uncontrolled hydroquinone usage could also lead to severe problems such as inflammatory reactions, chronic rash, and a high possibility of developing skin cancer (Cherney & Wilson, 2020; Cunha, n.d.). Unsupervised usage of tretinoin can cause redness to the skin, discomfort, stinging, peeling, and sensitivity to sunlight. Meanwhile, mercury is a prohibited substance in cosmetic products due to its hazardous effects on human health. Slight exposure to mercury can cause skin rashes, memory loss, and muscle weakness, while high mercury exposure may damage the brain, kidneys, and nerves (Jay, 2019).

2.5 Theory of Planned Behavior

Icek Azjen first proposed the Theory of Planned Behavior (TPB) in 1991. It is an extension of a previously known theory, the Theory of Reasoned Action (TRA), which Fishbein and Azjen formulated in 1975. TRA and TPB were built on the premise of the ability of individuals to make logical, reasoned decisions when engaging in specific behaviors by evaluating all sorts of information available to them. Both models were also formulated to reach an individual's intention in performing a particular behavior. TRA aims more to explain the linkage between attitude and behavior, whereas TPB connects one's belief with one's behavior and improves on the TRA model. TPB is a well-researched intention model successfully used by researchers in predicting and describing behavior across a wide variety of domains. The succession of TRA to TPB was due to the discovery that an individual's behavior cannot always be controlled and is not entirely voluntary. Therefore, perceived behavioral control was added to the model. Thus, the theory was renamed The Theory of Planned Behavior (Arafat & Mohamed Ibrahim, 2018).

Several studies on counterfeit cosmetic consumption utilized TPB as their theoretical framework in determining consumers' intention to purchase and use counterfeit cosmetic products (Bupalan et al., 2019; Samaddar & Menon, 2020; Souiden et al., 2018; Quoquab et al., 2016). The TPB applies to many consumers' perceptions. However, its ability to Muslim consumers' perceptions of counterfeit cosmetics seems to be limited. Therefore, further research must be conducted to test the ability of other theories to predict consumers' perceptions so that they may be incorporated into the development of the cosmetic industry.



2.5.1 Theoretical Framework

This study adopts the Theory of Planned Behavior by Azjen (2002) with some modifications. According to Wang et al. (2020), the Theory of Planned Behavior is based on the connections between human psychology and behaviors. The fundamental premise of this current study is to find the relationship between demographic background, religiosity, and brand consciousness toward Muslim consumers' perceptions of counterfeit cosmetics. Muslim consumers' perceptions of counterfeit cosmetics may be influenced by external factors such as religiosity, brand consciousness, and demographic background. Figure 1.1 shows the model of the influencing factors on Muslim consumers' perceptions. (Source: Adapted and modified model from Azjen (2002) and Wang et al., 2020).

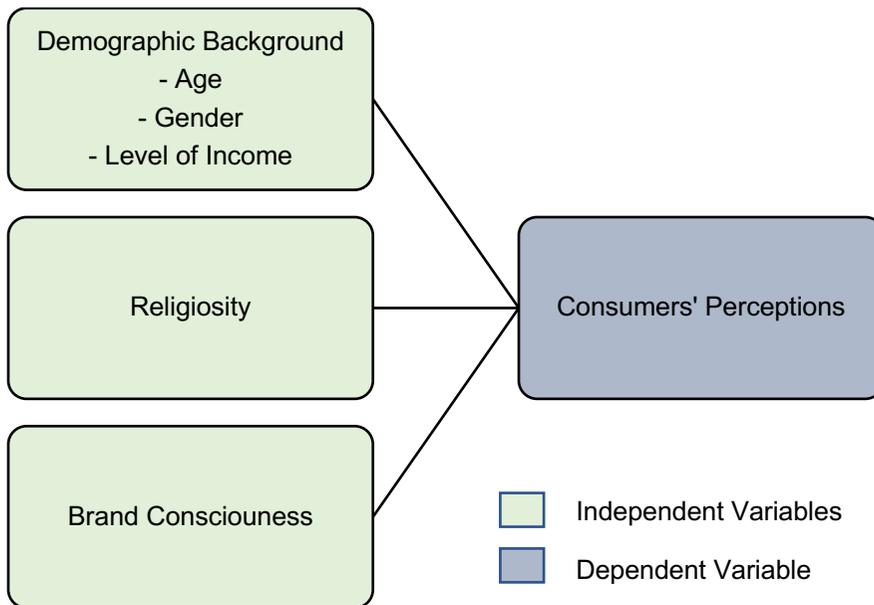


Figure 1 : Framework Model for Muslim Consumers' Perceptions of Counterfeit Cosmetics

The research model shown above in Figure 1 indicates the research framework of this study. The consumers' demographic background, including age, gender, and level of income, together with religiosity and brand consciousness, was chosen to be the independent variables. Meanwhile, consumers' perceptions will act as the dependent variable for this study.

2.6 Demographic Background and Influence towards Consumers' Perceptions

The study of the human population is called Demographic. Demographic includes individuals' personal information such as age, race, gender, family size, ethnicity, education level, income level, and location (Akram et al., 2016). Consumers with heterogenous demographic backgrounds, such as age, gender, education, income level, marital status, and occupation, can influence consumers' perceptions with varying degrees of difference (Mohammed Ibrahim & Hassan, 2018). A study of consumer moralism in China by Li et al. (2018) shows that age, gender, and occupation play significant roles in consuming counterfeit products and that younger consumers, especially students, do not perceive counterfeiting as a morally wrongful act.

Another study by Harun et al. (2020) shows that the gender of the respondents has a significant relationship with the repurchase intentions of counterfeit products. In contrast, age and monthly income play no significant role in consumers' repurchase intention of counterfeit products. Therefore, this study was conducted to analyze the relationship between age, gender, and level of income towards the perception of counterfeit cosmetics among Muslim consumers in Putrajaya. Hence, the following hypotheses were developed:

- H1: There is a significant relationship between age and the perception of counterfeit cosmetics among Muslim consumers.
- H2: There is a significant relationship between gender and the perception of counterfeit cosmetics among Muslim consumers.
- H3: There is a significant relationship between income level and the perception of counterfeit cosmetics among Muslim consumers.

2.7 Religiosity and Influence towards Consumers' Perceptions

Religion is a system of beliefs and practices by which groups of people interpret and respond to what they feel is supernatural and sacred. According to a study by Quoquab et al. (2017), it was found that religiosity, directly and indirectly, affects customers' purchase intention toward counterfeit products. Both religion and the degree of an individual's religious fervor have a positive impact on their ethics. Meanwhile, unethical behavior is negatively related to the severity of



penalties, such as the ones in the afterlife. Therefore, fear of God's punishment in life and the hereafter causes religious people to maintain morality and virtue. Another study by Yaakop et al. (2021) shows that religiosity positively affected the consumers' attitudes in developing their purchase intentions towards buying counterfeit products.

However, in research done by Jashim et al. (2020), it was found that there is an insignificant relationship between consumers' religiosity and intention to purchase counterfeit products. In another study by Riquelme et al. (2012), it was found that consumers did not perceive counterfeit products as morally wrong. The study also contended that even in a religious environment, people do not perceive their purchase of counterfeit products as unethical behavior. Therefore, this study attempt to discover the relationship between religiosity and the perception of counterfeit cosmetics among Muslim consumers in Putrajaya. Thus, the following hypotheses were developed:

H4: There is a significant relationship between religiosity and the perception of counterfeit cosmetics among Muslim consumers.

2.8 Brand Consciousness and Influence towards Consumers' Perceptions

Brand consciousness refers to the psychological orientation of brand-name products in the consumers' prepurchase process. Consumers who are brand conscious prefer to indulge in the purchase of a specific line of products from brands that are incredibly famous and have distinguished names and fame in the market. According to a study by (Leong et al., 2017), branded items possess a great chance of being counterfeited as brand-conscious consumers are more concerned about having the same reputation as the original, and branded products and counterfeits are the easiest way for them to achieve that.

In a study on consumers' intention to purchase counterfeit sporting goods by Chiu & Leng (2016), it was found that consumers who are brand conscious are less likely to purchase counterfeit sporting goods. It proves that brand consciousness influences the purchase intention of counterfeit goods. Another study by Tseng et al. (2021) also found that brand consciousness negatively influences consumers' attitudes toward purchasing counterfeit products. Brands are essential in the purchase of a product, as it is a symbol of quality and elicits trust from consumers, proving that consumers who are brand conscious are less likely to purchase counterfeit products.



However, in a study by Bhatia (2018), it was found that sometimes, even brand-conscious consumers cannot afford original branded products and will eventually have the desire to purchase counterfeit products. Therefore, this study attempt to discover the relationship between religiosity and the perception of counterfeit cosmetics among Muslim consumers in Putrajaya. Thus, the following hypotheses were developed:

H5: There is a significant relationship between brand consciousness and the perception of counterfeit cosmetics among Muslim consumers.

3.0 Methods

Research methodology is a fundamental tool to elaborate a scientific document, such as a manuscript, dissertation, or university course's work. Rutberg & Bouikidis (2018) in their study, stated that quantitative research is often used by researchers when there is a lack of research exists on a particular topic. The quantitative research method can also be used in a study if there are unanswered research questions or if the research topic under consideration could make a meaningful impact on society. Data in quantitative research can be quantified as the samples are generally large and considered representative of a population.

Meanwhile, Hameed (2020) stated that the qualitative approach is highly chosen as a research method among researchers. Some researchers claimed that the qualitative approach should be the preferred method, especially in social sciences, as qualitative methods may collect data about human behavior that is impossible to achieve by the many quantitative techniques.

Hence, this study adopted both qualitative and quantitative research methods. The qualitative research method in this study is used by adapting the method of a literature review using the content analysis approach (Snyder, 2019). Data for this study were extracted from an extensive literature review from previous studies, including thesis, journal articles, research papers, and online articles, by looking at content concerning these keywords, i.e., counterfeit products, perception, demographic background, religiosity, brand consciousness, and halal. These data were then analyzed comparatively and descriptively, and the result is presented in this paper.



On the other hand, the quantitative research method in this study is used to identify the relationship between the variables, such as the relationship between demographic variables and Muslim consumers' perceptions of counterfeit cosmetics, the relationship between religiosity and Muslim consumers' perceptions of counterfeit cosmetics and relationship between brand consciousness and Muslim consumers' perceptions on counterfeit cosmetics.

Putrajaya, officially known as the Federal Territory of Putrajaya, is a planned city and the federal administrative center of the Malaysian capital. Countless Malaysian citizens with different demographic backgrounds have taken the opportunity to work in the various government agencies and departments, also in the private sectors in Putrajaya, and therefore have chosen to reside in this city. Hence Putrajaya was chosen as the location of this study.

This study employs questionnaires as the research instrument. The primary data collection for this study is a self-administered questionnaire and survey. Questionnaires were distributed to 277 respondents who are Muslim consumers in Putrajaya, ranging from the age of 18 and above. Respondents of this study are selected using the convenience sampling method.

Data collected from the questionnaire were then analyzed using the Statistical Package for Social Science (SPSS) software. Firstly, data were analyzed using descriptive analysis. Descriptive statistics were computed to measure the mean, standard deviation, frequency, and percentage of the data. Secondly, the one-way analysis of variance (ANOVA) and Mann Whitney U Test were used to find the difference in the three elements of demographic for this study, namely age, gender, and level of income. Then, standard multiple linear regression was applied in this study. Multiple linear regression is one of the tests available in SPSS, which analyzes the role that several independent variables play in the variance of a dependent variable (Nathans et al., 2012). Multiple linear regression was used to analyze the relationship between religiosity and brand consciousness with Muslim consumers' perception of counterfeit cosmetics. Therefore, these analysis techniques were used to decide whether the hypotheses were accepted.



4.0 Results and Discussions

4.1 Demographics

Table 1 : Respondents' Demographics

Variables	Demographic Characteristics	Frequency (%) (N=277)
Age	Under 20	30 (10.8%)
	21 - 30	90 (32.5%)
	31 - 40	83 (30.0%)
	41 - 50	53 (19.1%)
	51 and above	21 (7.6%)
Gender	Male	115 (41.5%)
	Female	162 (58.5%)
Level of Study	SPM	15 (5.4%)
	STPM / STAM / DIPLOMA	46 (16.6%)
	Matriculation / Foundation	14 (5.1%)
	Undergraduate (Bachelor's Degree)	171 (61.7%)
	Postgraduate (Master / Ph.D.)	31 (11.2%)
Marital Status	Single	117 (42.2%)
	Married	154 (55.6%)
	Divorcee	6 (2.2%)
Occupation	Government Employee	154 (55.6%)
	Private Sector Employee	41 (14.8%)
	Retiree	6 (2.2%)
	Self-employed	8 (2.9%)
	Student	55 (19.6%)
	Unemployed	13 (4.7%)
Monthly Income	B40 (Monthly household income less than RM4849)	99 (35.7%)
	M40 (Monthly household income between RM4850 - RM10,959)	147 (53.1%)
	T20 (Monthly household income of more than RM10,960)	31 (11.2%)
Awareness	No	6 (2.2%)
	Yes	271 (97.8%)
Usage of Counterfeit Cosmetics	No	240 (86.6%)
	Yes	37 (13.4%)



Convenience sampling was chosen for selecting the respondents for this study. Convenience sampling is a non-probability sampling technique where respondents are chosen based on their accessibility and proximity to the research characteristics, unlike the population-based sampling technique (Bornstein et al., 2013).

Blanca et al. (2018) reveal that group variances often come unequal in size. This inequality may be because of a priori differences in naturally formed groups, or it is an effect of an experimental treatment that produces differences not only in means but also in variances. During data analysis, the inequality of the sample sizes is considered and calculated in the SPSS Software. Hence, the unequal sample size of each group does not affect the analysis and its results.

Table 1 shows the frequencies and percentages of the respondents for the study by age, gender, level of study, marital status, occupation, and monthly income. Data from the table shows that 97.8%, or 271 out of 277 respondents, were aware of counterfeit cosmetics in the market. Data from table 1 also shows that 37 or 13.4 percent of respondents have previously admitted to using counterfeit cosmetics. Meanwhile, 240 respondents have never used a counterfeit cosmetic product in their daily lives.

4.2 Age and Level of Income

In terms of age and level of income, a one-way analysis of variance (ANOVA) is performed to compare the differences between each category with the perception of counterfeit cosmetics among Muslim consumers in Putrajaya.

Table 2 : ANOVA: Age and Level of Income

Variables	F	Sig.
Age	7.384	<.001
Level of Income	3.060	0.049

From Table 2 above, it was found that there were statistically significant differences between group means as determined by one-way ANOVA, $F(4,272) = 7.384$, $p < .001$, the value of the alpha is less than .05. Post hoc comparison with the use of Hochberg test. This test functions to assume equal variances among the five age categories. There was a significant difference in the means between the age categories 51 years old and above and under 20 years old, and under 20 years old and 41 to 50 years old. Muslim consumers 51 years



old and above showed the most positive perception towards counterfeit cosmetics. Consumers aged 51 years old and above have a higher perception of counterfeit cosmetics because older consumers have more awareness, experience, and knowledge in the counterfeit areas compared to the younger generation.

The result reflects a study by Mohammed et al. (2021), which found that consumers aged 50 years and above have higher perceptions and attitudes than the younger population. It would suggest the beginning of increased self-consciousness and body dysmorphia in the younger generation resulting from the pressure to display a perfect image on social media (Li et al., 2022). It leads to them being preyed on their insecurities and being pushed to purchase products that falsely address the issues in body images by the manufacturers.

Therefore, the result reflects a study by Adiprima et al. (2018), which found that respondents, especially students aged 20 – 22 years old, are most likely to purchase counterfeit fashion products. It was also revealed that one of the typical traits of the young generation is to have behaviors and thoughts that oppose their surroundings. The thoughts and behaviors of the older generation are thought to be more grounded and depend entirely on their understanding and belief from the religious perspective.

Table 2 also indicates that the ANOVA for the level of income is statistically significant $F(2,274) = 3.060, p = .049$ at a .05 alpha level. There is a significant difference in the means between the low and the medium levels of income but no difference between other income levels. Muslim consumers in Putrajaya from a low level of household income have been shown to have a higher perception of counterfeit cosmetic products. The finding also shows that Muslim consumers from a medium level of household income have a lower perception of counterfeit cosmetic products.

It would suggest that Muslim consumers in Putrajaya from a low level of household income would instead not engage in counterfeit cosmetics purchases than deal with the pricey consequences of using poorly manufactured counterfeit cosmetic products. In contrast, Muslim consumers in Putrajaya from a medium level of household income, prefer counterfeit cosmetic products. They would later look for ways to counter the side effects rather than discard the counterfeit cosmetic products despite being aware of their adverse side effects (Atari et al., 2016).



This result reflects a past study by Gani et al. (2019), which found that consumers' level of income is more likely to influence the decision to purchase counterfeit luxury items in Bangladesh. Another study by Lwesya (2017) also found that level of income can influence the purchase of counterfeit products in Tanzania.

4.3 Gender

Mann Whitney U Test is conducted to compare the difference between the two categories in gender, namely male and female, with their perception towards counterfeit cosmetics.

Table 3 : Mann Whitney U Test: Gender

Gender	N	Mean Rank	Sum of Ranks	Z	Sig.
Male	115	141.21	16239.50	-.389	.697
Female	162	137.43	22263.50		
Total	277				

Table 3 above shows the inspection results of the Mann-Whitney U Test. This test is used to study the difference between two categories of male and female Muslim consumers in Putrajaya regarding their perceptions of counterfeit cosmetics. The results showed no statistical difference ($Z = -.389$; $p = .697 > .05$) between Male and Female consumers. These results indicate that gender of the consumers does not influence the perception of Muslim consumers towards counterfeit cosmetics. However, it can also be seen from the results that Male consumers, with a mean rank of 141.21, have a higher perception of counterfeit cosmetics than Female consumers, with a mean rank of 137.43.

This result reflects a study by Gani et al. (2019), which revealed an insignificant relationship between gender and the purchasing decisions to buy counterfeit luxury items in Bangladesh. Carpenter & Lear (2011) also revealed that the research analysis indicates no statistical difference in the perception of counterfeit fashion products and gender. It was also found that female consumers in the U.S. have weaker ethical beliefs and are less likely to view the sale of counterfeit fashion products as a crime. This result also reflects a study by Wu & Zhao (2021), which shows those female consumers presented with a higher tendency to purchase counterfeit luxury goods than male consumers.



Although the findings of this study show that gender and Muslim consumers' perceptions of counterfeit cosmetics are not statistically significant, there are previous studies that found that gender has a positive impact on consumers' attitudes toward counterfeit cosmetics. For example, Harun et al. (2020) study reveal a significant relationship between gender and intention to purchase counterfeit products.

4.4 Religiosity and Brand Consciousness

Regression analysis is carried out to examine the relationship between multiple independent variables with one dependent variable. The independent variables examined in this analysis are religiosity and brand consciousness. Meanwhile, the dependent variable is Muslim consumers' perceptions of counterfeit cosmetics.

Table 4 : Multiple Regression Analysis Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.328 ^a	.108	.101	.51628

a. Predictors: (Constant), Religiosity, Brand Consciousness

The value of the Standardized Coefficient beta is shown in Table 4. According to Glen (2016), a standardized beta coefficient is used to compare the strength of the influence of each independent variable to the dependent variable. The higher the absolute value of the beta coefficient, the stronger the influence of the independent variable on the dependent variable. The findings indicate that the most significant beta coefficient is .309 for brand consciousness and its influence on the perception of counterfeit cosmetic products. Meanwhile, the beta coefficient for religiosity displayed less contribution toward the perception of counterfeit cosmetic products.

Table 5 below shows the *p*-value, indicating whether the independent variables significantly contribute to the dependent variable. According to Nurhayati & Hendar (2020), a *p*-value less than .05 indicates the high validity of the relationship between the independent variables and the dependent variables. If the *p*-value is higher than .05, the relationship between the independent and dependent variables is not statistically significant.



Table 5 : Regression Analysis

Model	Unstandardized	Coefficients	Standardized	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.021	.301		3.396	<.001
Religiosity	.106	.069	.088	1.540	.125
Brand Consciousness	.323	.060	.309	5.387	<.001

a. Dependent Variable: Perception

Table 5 shows that the p -value of religiosity and perception is p .125, which is greater than .05. This means that the relationship between religiosity towards the perception of Muslim consumers in Putrajaya on counterfeit cosmetics is not statistically significant. This is in line with a study by Adiprima et al. (2018), which found that religiosity has a minor impact on a person's attitude toward counterfeit fashion products. This phenomenon suggests that the teachings regarding the prohibition of counterfeiting activities have yet to be adequately implemented. Another study by Budiman (2012) shows that consumers in Indonesia do not perceive the act of counterfeiting as sinful but instead view the act of counterfeiting only as an activity that breaks the law of the country.

On the other hand, previous studies found that religiosity has a positive impact on consumers' attitudes toward counterfeit cosmetics. For example, Quoquab et al. (2016) found that a person with higher religiosity will exhibit a more ethical attitude towards counterfeit products.

Meanwhile, the p -value of brand consciousness and perception is $p < .001$, which is less than .05, indicating that brand consciousness has a positive relationship with the perception of Muslim consumers in Putrajaya on counterfeit cosmetics and is statistically significant. This result reflects a study by Tseng et al. (2021), which found that in some studies, brand consciousness has no impact on the purchasing intention of counterfeit goods, and some did not influence consumers to purchase counterfeit goods. This result also reflects a study by Nik Hashim et al. (2018), revealing that brand consciousness does not lead to counterfeit products' involvement and purchase intentions. Brands with prominent images will attract a large group of devoted customers. Therefore, consumers tend not to fall for counterfeit products and would even avoid being engaged in the purchase of counterfeit products.



Consumers preferred to purchase luxury brands to reflect their consumption power.

This result contradicts a past study by Bupalan et al. (2019), which found that brand consciousness positively influences consumers to purchase counterfeit products. Another study by Saha & Mathew (2019) where the research findings revealed that brand consciousness has a positive impact on consumers' counterfeit purchase attitude. It is because even brand-conscious consumers in India have little to no awareness of counterfeit products.

4.5 Discussions

Applying the Theory of Planned Behavior to the findings of this study, it was found that Muslim consumers' perceptions of counterfeit cosmetics were influenced by some external factors, namely, age, level of income, and brand consciousness. Meanwhile, gender and religiosity are not factors influencing Muslim consumers' perceptions of counterfeit cosmetics.

5.0 Conclusions

In conclusion, the primary purpose of this research is to study the perception of counterfeit cosmetics among Muslim consumers in Putrajaya. The findings of this study revealed that age, level of income, and brand consciousness have a significant relationship with the perception of Muslim consumers in Putrajaya towards counterfeit cosmetics. Meanwhile, gender and religiosity have no significant relationship with the perception of Muslim consumers in Putrajaya towards counterfeit cosmetics. The result from this study also shows that Muslim consumers in Putrajaya are very much aware of the existence of counterfeit cosmetic products in the local market. Thirty-seven of the total respondents even admitted having been using them before in their lives.

The findings of this study are expected to help consumers, sellers, manufacturers of cosmetic products, and even government agencies to have more awareness of counterfeit cosmetic products. It is essential for Muslim consumers to be educated on the importance of *halalan tayyiban* in cosmetic products and to be reminded of the dangers of counterfeit cosmetic products so that they will not be easily persuaded to buy and use counterfeit cosmetic products. Sellers and manufacturers of cosmetics brands are expected to be stricter in



choosing the ingredients, the manufacturing process, packing, and delivering a cosmetic product to ensure the quality of the cosmetic products.

Acknowledgment

The authors thank International Institute for Halal Research and Training (INHART) and International Islamic University Malaysia (IIUM) for their continuous support in completing this paper.

References

- Abu Bakar, E., Rosslee, N., Muhammad Ariff, A., Othman, M., & Hashim, P. (2017). Consumers' Trust and Values Towards Halal Cosmetics and Personal Care Products. *Malaysian Journal of Consumer and Family Economics*, 21-35.
- Adiprima, D., Indraswari, K., & Kasri, R. (2018). Too Broke for the Hype: Intention to Purchase Counterfeit Fashion Products among Muslim Students. *Unimed International Conference on Economics Education and Social Science*, 1323-1335.
- Adreena, I. (2018, March 18). *The Fake Makeup Dilemma: Save a few Ringgit, or End Up Spending More Fixing Your Skin?* Retrieved from Gempak Rojak Daily: <https://gempak.com/rojakdaily/lifestyle/fake-makeup-dilemma-save-few-ringgit-or-end-spending-more-fixing-your-skin-61401>
- Akram, U., Peng, H., Khan, M., Hashim, M., & Rasheed, S. (2016). Impact of Store Atmosphere on Impulse Buying Behaviour: Moderating Effect of Demographic Variables. *International Journal of u- and e-Service, Science and Technology*, 43-60.
- Arafat, Y., & Mohamed Ibrahim, M. (2018). The Use of Measurements and Health Behavioral Models to Improve Medication Adherence. In M. Mohamed Ibrahim, A. Wertheimer, & Z.-U.-D. Babar, *Social and Administrative Aspects of Pharmacy in Low- and Middle-Income Countries* (pp. 53-69). Academic Press.
- Atari, M., Chegeni, R., & Fathi, L. (2016). Women who are Interested in Cosmetic Surgery Want it all: the Association between Considering Cosmetic Surgery and women's Mate Preferences. *Adaptive Human Behavior and Physiology*, 61-70.
- Badarudin, N. (2019, May 29). *Halal Beauty: The next big thing*. Retrieved from New Straits Times: <https://www.nst.com.my/lifestyle/flair/2019/05/492252/halal-beauty-next-big-thing>



- Bergeaud-Blackler, F., Fischer, J., & Lever, J. (2016). Studying the politics of global halal markets. In F. Bergeaud-Blackler, J. Fischer, & J. Lever, *Halal Matters Islam, Politics, and Markets in Global Perspective* (pp. 1-18). New York: Taylor & Francis Books.
- BH Online. (2020, November 7). Retrieved from Bahana produk kosmetik 'timbang kilo': <https://www.bharian.com.my/hujungminggu/sihat/2020/11/751229/bahana-produk-kosmetik-timbang-kilo>
- Bhatia, V. (2018). Examining consumers' attitude towards purchase of counterfeit fashion products. *Journal of Indian Business Research*, 193-207.
- Blanca, M., Alarcon, R., Arnau, J., Bono, R., & Bendayan, R. (2018). Effect of variance ratio on ANOVA robustness: Might 1.5 be the limit? *Psychonomic Society, Inc. 2017*, 937-962.
- Budiman, S. (2012). Analysis of Consumer Attitudes to Purchase Intentions of Counterfeiting Bag Products in Indonesia. *International Journal of Management, Economics and Social Sciences*, 1-12.
- Bupalan, K., Abdul Rahim, S., Ahmi, A., & Abdul Rahman, N. (2019). Consumers' Repurchase Intention towards Counterfeit Products. *International Journal of Supply Chain Management*, 973-981.
- Carpenter, J., & Lear, K. (2011). Consumer Attitudes toward Counterfeit Fashion Products: Does Gender Matter? *Journal of Textile and Apparel, Technology and Management*, 1-16.
- Cherney, K., & Wilson, D. R. (2020, June 21). *Everything You Need to Know About Hydroquinone*. Retrieved from HealthLine: <https://www.healthline.com/health/beauty-skin-care/hydroquinone>
- Chiu, W., & Leng, H. (2016). Consumers' Intention to Purchase Counterfeit Sporting Goods in Singapore and Taiwan. *Asia Pacific Journal of Marketing and Logistics*, 23-36.
- Cunha, J. P. (n.d.). *Hydroquinone*. Retrieved from RxList: https://www.rxlist.com/consumer_hydroquinone_melquin_3/drugs-condition.htm
- Evans, B. P. (2019). Counterfeiting: conceptual issues and implications for branding. *Journal of Product & Brand Management*, 707-719.



- Fathullah Harun, H., Ruzulan, Z., Mohd Ali, A., Mansor, S., Saidon, R., & Azra'e, M. (2016). Halal Immunization Concept Through Vaccination for Infants and Children Based on Maqasid Shariah Framework. *Proceedings of the 3rd International Halal Conference (INHAC 2016)* (pp. 107-115). Springer Nature.
- Gani, M., Alam, M., Al-Islam, M., Chowdhury, S., & Faruq, M. (2019). Factors Affecting Consumers' Purchase Intention for Counterfeit Luxury Goods in Bangladesh. *Innovative Marketing*, 27-41.
- Glen, S. (2016, February 15). *Standardized Beta Coefficient: definition & Example*. Retrieved from StatisticsHowTo.com: statisticshowto.com/standardized-beta-coefficient/
- Hameed, H. (2020). Quantitative and qualitative research methods: Considerations and issues in qualitative research. *The Maldives National Journal of Research*, 8-17.
- Harun, A., Mahmud, M., Othman, B., Ali, R., & Ismael, D. (2020). Understanding experienced consumers towards repeat purchase of counterfeit products: The mediating effect of attitude. *Management Science Letters*, 13-28.
- Hussain, A., Kofinas, A., & Win, S. (2017). Intention to Purchase Counterfeit Luxury Products: A Comparative Study Between Pakistani and UK Consumers. *Journal of International Consumer Marketing*, 331-346.
- Jashim, M., Kartar Singh, J., & Chan, B. Y.-F. (2020, February). Influence of Religiosity and Attitude Towards Intention to Purchase Counterfeit Products. An Empirical Study in Dhaka, Bangladesh. *International Journal of Psychosocial Rehabilitation*, 24(2), 1137-1148.
doi:10.37200/IJPR/V24I2/PR200416
- Jay, B. (2019, May 24). *Stay away from these 12 beauty products*. Retrieved from New Straits Times: <https://www.nst.com.my/news/nation/2019/05/490930/stay-away-these-12-beauty-products>
- Kenji, S., Yusuf, E., Hiroaki, T., Dahlizar, S., Sak diset, P., Arce, F., & Lee See, G. (2019). Halal Cosmetics: A Review on Ingredients, Production, and Testing Methods. *MDPI*, 1-17.
- Leong, M., Osman, S., & Abu Bakar, N. (2017). Relationship of Personality Factors and Purchase Intention of Counterfeit Products among College Students. *Malaysian Journal of Consumer and Family Economics*, 106-122.
- Li, E., Lam, M., & Liu, W.-s. (2018). Consuming Counterfeit: A Study of Consumer Moralism in China. *International Journal of Consumer Studies*, 367-377.



- Li, F., Spektor, F., Xia, M., Huh, M., Cederberg, P., Gong, Y., . . . Carrington, P. (2022). "It Feels Like Taking a Gamble": Exploring Perceptions, Practices, and Challenges of Using Makeup and Cosmetics for People with Visual Impairments. *CHI Conference on Human Factors in Computing System*, (pp. 1-15). New Orleans, LA, USA.
- Lwesya, F. (2017). Factors Influencing the Marketability of Counterfeit and Pirated Products in Dar-Es-Salaam Region, Tanzania- A Factorial Analysis. *Saudi Journal of Humanities and Social Sciences*, 95-105.
- Ma, C., He, N., Zhao, Y., Xia, D., Wei, J., & Kang, W. (2019). Antimicrobial mechanism of hydroquinone. *Applied Biochemistry and Biotechnology*, 1291-1303.
- Mohajan, H. (2018). Qualitative Research Methodology in Social Sciences and Related Subjects. *Journal of Economic Development, Environment, and People*, 23-48.
- Mohammed Ibrahim, A., & Hassan, M. (2018). Consumers' demographic factors influencing perceived service quality in e-Shopping: Some evidence from Nigerian online shopping. *Journal of Social Sciences and Humanities*, 1335-1369.
- Mohammed, A., Blebil, A., Dujaili, J., & Hassan, B. (2021). Perception and attitude of adults toward cosmetic products amid COVID-19 pandemic in Malaysia. *Journal of Cosmetic Dermatology*, 1992-2000.
- Mohezar, S., Zailani, S., & Zainuddin, Z. (2016, June). Halal Cosmetics Adoption Among Young Muslim Consumers in Malaysia: Religiosity Concern. *Global Journal Al Thaqafah*, 6(1), 47-59.
- Moon, M., Javaid, B., Kiran, M., Awan, H., & Farooq, A. (2018). Consumer perceptions of counterfeit clothing and apparel products attributes. *Marketing Intelligence & Planning*.
- Morse, B. L., & Repsha, C. L. (2020). Pretty Poisonous How Counterfeit Cosmetics can be Toxic to Student Skin. *NASN School Nurse*, 58-61.
- Nathans, L. L., Oswald, F. L., & Nimon, K. (2012). Interpreting Multiple Linear Regression: A Guidebook of Variable Importance. *Practical Assessment, Research, and Evaluation*, 1-19.
- Nik Hashim, N., Shah, N., & Omar, N. (2018). Does Counterfeit Product Quality Lead to Involvement and Purchase Intentions? The Moderating Effects of Brand Image and Social Interactions. *International Journal of Economics and Management*, 607-620.



- Nurhayati, T., & Hendar, H. (2019). Personal intrinsic religiosity and product knowledge on halal product purchase intention. *Journal of Islamic Marketing*, 603-620.
- Othman, N., Zakaria, Z., & Aziz, A. (2020). Legal Control for the Safety of Cosmetic Products Application Use in Malaysia. *Journal of Halal Industry and Services*, 1-6.
- Queirós, A., Faria, D., & Almeida, F. (2017). Strengths And Limitations Of Qualitative And Quantitative Research Methods. *European Journal of Education Studies*, 369-387.
- Quoquab, F., Hussin, N., & Pahlevan, S. (2016). Counterfeit Product Purchase: What Counts - Materialism or Religiosity? *Advanced Science Letters*, 1303-1307.
- Quoquab, F., Pahlevan, S., Mohammad, J., & Thurasamy, R. (2017). Factors affecting consumers' intention to purchase a counterfeit product: Empirical study in the Malaysian market. *Asia Pacific Journal of Marketing and Logistics*, 837-853.
- Riquelme, H., Sayed Abbas, E., & Rios, R. (2012). Intention to purchase fake products in an Islamic country. *Education, Business and Society: Contemporary Middle Eastern Issues*, 6-22.
- Rutberg, S., & Bouikidis, C. (2018). Focusing on the Fundamentals: A Simplistic Differentiation Between Qualitative and Quantitative Research. *Nephrology Nursing Journal*, 209-212.
- Sachs, R. (2019, April 9). 'Fake' Makeup Isn't So Pretty: Revising the Vicarious Liability Standard for Consumers Injured by Counterfeit Cosmetics. 1-40.
- Saha, I., & Mathew, D. (2019). Ethical Ideologies in Purchasing Attitudes Towards Counterfeit Fashion Brands. In A. Chakrabarti, *Research into Design for a Connected World* (pp. 211-222). Singapore: Springer Nature Singapore Pte Ltd.
- Samaddar, K., & Menon, P. (2020). Non-deceptive Counterfeit Products: A Morphological Analysis of Literature and Future Research Agenda. *Journal of Strategic Marketing*, 1-24.
- Singh, D., & Rana, R. (2018). Effect of Demographic Factors on Consumers' Perception of Online Shopping. *Global Journal of Management and Business Research: E-Marketing*, 27-38.
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 333-339.



- Souiden, N., Ladhari, R., & Zarrouk Amri, A. (2018). Is buying counterfeit sinful? Investigation of attitudes and purchase intentions of counterfeit products in a Muslim country. *International Journal Of Consumer Studies*, 687-703.
- Suparno, C. (2021). Online purchase intention of halal cosmetics: S-O-R framework application. *Journal of Islamic Marketing*, 1665-1681.
- Tseng, W.-Y., Chiu, W., & Leng, H. (2021). A comparative study of consumers' intention to purchase counterfeit outdoor products in Taiwan and Hong Kong. *Journal of Asian Business and Economic Studies*, 162-176.
- USA Food, Drug and Cosmetic Act 2012. (n.d.). Retrieved June 2020, from US Food and Drugs Administration (FDA): <https://www.fda.gov/cosmetics/cosmetics-laws-regulations/cosmetics-us-law#:~:text=The%20Federal%20Food%2C%20Drug%20%26%20Cosmetic,in%20this%20definition%20are%20products>
- Wu, Q., & Zhao, S. (2021). Determinants of Consumers' Willingness to Buy Counterfeit Luxury Products: An Empirical Test of Linear and Inverted U-Shaped Relationship. *Sustainability*, 1-19.
- Yaakop, A., Muhammad Hafeez, H., Muhammad Faisal, M., Muhammad Munir, & Majid Ali. (2021). Impact of religiosity on purchase intentions towards counterfeit products: investigating the mediating role of attitude and moderating role of hedonic benefits. *Heliyon*, 1-7.
- Zaidun, N., & Hashim, N. (2018). Halal Cosmetics: Current Issues and Future Opportunities. *Jurnal Pengguna Malaysia*, 74-80.

