INCOMAR 2023
The 9ᵗʰ International Conference on Marketing and Retailing

ATTITUDE ON CUSTOMER PURCHASE INTENTION TOWARDS ADULTERANT COSMETIC PRODUCTS IN MALAYSIA

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Abstract

The issue of adulteration within the cosmetics industry in Malaysia has been a persistent problem that has raised concerns among consumers and the authorities. The high demand for cosmetic products and the suppliers' tendency to provide them without proper quality control has led to the presence of undeclared ingredients or substances such as mercury, hydroquinone, and tretinoin. To address this issue, a recent study was conducted to determine the effect of attitudes among female consumers in the Klang Valley towards adulterated cosmetic products. The researcher used a descriptive study approach to collect data from 100 female respondents using a structured questionnaire. The Statistical Package for Social Science (SPSS) was used to analyze the data collected. The findings showed that the most significant relationship was between perceived price and purchase intention. The regression analysis revealed that perceived price is the most dominant factor influencing consumer attitudes towards adulterated cosmetic products compared to the other three factors (social motivation, status consumption, and brand consciousness). The study has highlighted the importance of consumer awareness and the need for stricter regulations and quality control measures in the cosmetics industry. The results of this study can be used by manufacturers and policymakers to develop effective strategies to curb the issue of adulteration and ensure the safety of cosmetic products. Future researchers can expand the sample size and location to obtain more comprehensive results and identify the factors influencing consumer attitudes towards adulterated cosmetic products in other regions of Malaysia.

Keywords: Adulterant cosmetic, brand consciousness, perceived price, social motivation, status consumption

1. Introduction

Cosmetic products are women's best friends, even becoming popular among men. Cosmetic products are essential to make a person look good and boost self-confidence. New cosmetic products from various local and imported brands are introduced daily. On top of that, the companies of famous cosmetic brands are constantly launching new products that claim to be better and more effective than their previous products (Hadi et al., 2020). Numerous testimonies and research results are published to support the product's efficiencies, which are then used in the advertisements to attract consumers (Actionline, 2018). However, how safe is the product? Will it have long-term negative effects on consumers? What makes the product effective? Is it due to the highly effective ingredients in the product or the presence of contaminants? A cosmetic product is said to be adulterated when it contains heavy metals such as mercury (Pramanik et al., 2021; Wan Mohamed Radzi & Nordin, 2022) or substances listed as Scheduled Poisons such as hydroquinone, tretinoin, antibiotics or steroids. Adulterants are added to a cosmetic product to show that it is effective for its intended purpose. For instance, hydroquinone is usually added to whitening products for a fairer complexion or to treat pigmentation problems and tretinoin or antibiotics are usually used for acne treatment. Companies that sell or manufacture adulterated products are deemed irresponsible because such products may cause adverse effects to users.

The use of cosmetic products adulterated with mercury can cause damage to the kidneys and nervous system. It may also interfere with the brain development of unborn and very young children. Furthermore, mercury exposure may also affect surrounding people, especially children, as mercury can get into their bodies by inhaling mercury vapours. Infants and children can also accidentally ingest mercury when they touch a cosmetic product containing it or their parents, who have used these products. Cosmetic products that contain mercury can cause skin rashes and irritation, while cosmetic products with hydroquinone can cause skin redness, discomfort, discoloration, hypersensitivity and blue-black darkening. Hydroquinone inhibits the pigmentation process and reduces the skin's ability to protect our body from harmful U.V. rays and excessive sunlight, which can increase the risk of skin cancer. Excessive depigmentation is dangerous for those living in tropical regions (N. N. Othman et al., 2020; Zota & Shamasunder, 2017).

In Malaysia, the National Pharmaceutical Regulatory Agency (NPRA) regulates cosmetics products under the Control of Drugs and Cosmetics Regulations (2020). NPRA is an agency under the Ministry of Health. NPRA monitors the safety and quality of cosmetic products on the market through an active surveillance programme to ensure the cosmetic products are free of prohibited substances or adulterants as shown in Figure 1. Although an agency such as NPRA monitors the cosmetic products on the market, consumers should always be careful and choose the correct product wisely before purchasing and using a cosmetic product. Many irresponsible online sellers use social media to sell unnotified products openly.
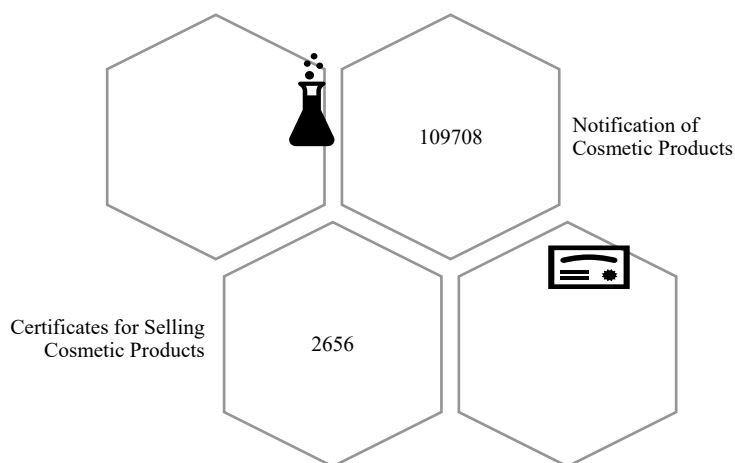
Figure 1. Statistics on Cosmetic Notification and Certificates for Selling Cosmetic Products, (Source: National Pharmaceutical Regulatory Agency, 2020)

Before making any purchase, consumers are encouraged to verify the notification status of the cosmetic product via the NPRA's website. A list of cosmetic products tested and found to contain adulterated substances is also available on the website. Advertisements and promotions on the recent developments in pursuing beauty and perfection should not easily mislead consumers. Instead, practising a healthy lifestyle and using safe products should be the way forward. In addition, the consumer should avoid being easily lured by advertisements and promotions promoting extreme claims and promising positive effects.

Any experience with adverse events (allergic reactions or adverse effects) while using a cosmetic product or encountering any suspicious products is encouraged to be reported. Customers should have sufficient information before purchasing a cosmetic product. They should not buy or use cosmetic products from dubious sources such as the night market, street sellers or online purchases. Although there are some explicit provisions forbidding and controlling the production and sale of these harmful products, there are still some issues regarding the sale and production of products mixed with toxic chemicals and the sale of unregistered cosmetic products (N. N. Othman et al., 2020).

According to Krishnan et al. (2017) 15% of Malaysian consumers prioritise purchasing cosmetic products such as BB/ CC cream, makeup remover, sunscreen/ sunblock, concealer and others. Figure 2 summarizes the usage percentages of cosmetic categories among Malaysian customers. The primary demographic is women who want to look beautiful with quick and maximum results. They tend to buy cosmetic products readily available at low prices that are still sold freely in the market, which may cause adverse effects on their facial skin. Because the packaging was the same, the customer assumed that purchasing a low cost brand with a high-profile brand name was not considered high risk.
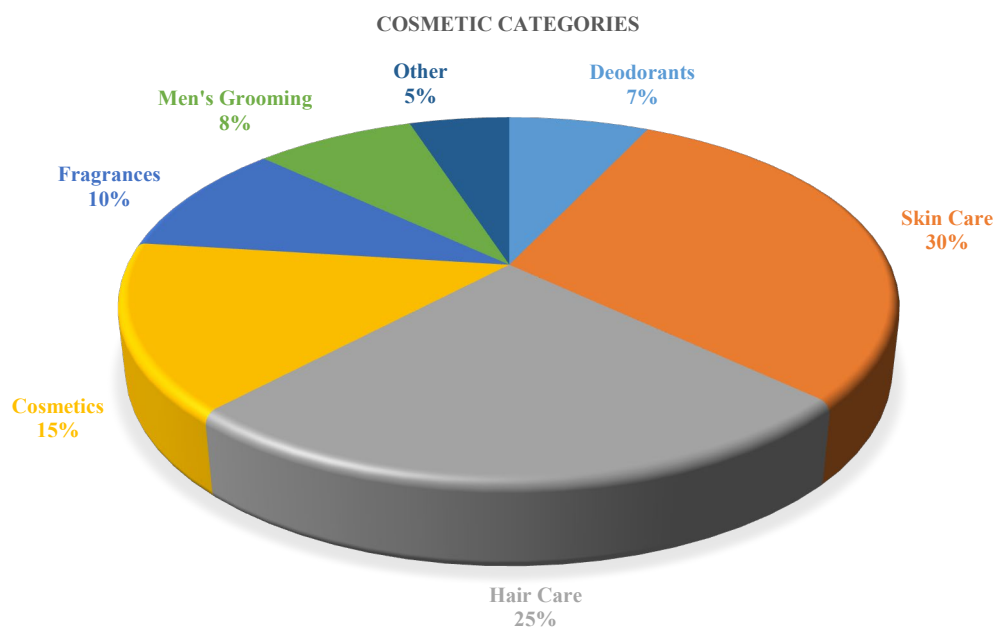
COSMETIC CATEGORIES

Figure 2. Statistic according to Cosmetic Categories (Krishnan et al., 2017)

This study aims to examine the relationship between customer purchase intention and consumer attitudes; including perceived price, social motivation, status consumption and brand consciousness. Customers' willingness to buy certain products or services for their own consumption is distinct from their purchase intention. This study also aims to determine the dominant factor influencing consumer attitudes toward adulterant cosmetic products. Their attitudes influence their purchase intention because it can prevent them from buying adulterants or fake cosmetic products. Usually, purchase intention can be influenced by internal and external factors relating to consumer behaviour, perceptions and attitudes. In addition, through purchase intention, some consumers will consider and evaluate before making the purchase. Most users need to be made aware and need more information regarding the adulterants' cosmetic products. This study also hopes to educate and spread knowledge among the users of adulterant cosmetic products. In addition, the users focus wholly on the short-term result of their skin's appearance rather than the long-term effects. Moreover, the market currently offers a short-term result of being fairer and having flawless skin by ignoring the harmful side effects in the future.

2. Literature Review

Correlations between consumers' behaviour, attitude, perception, and purchase intention has been found widely in consumer studies (Hermanda et al., 2019; Hadi et al., 2020). Attitude toward the behaviour is "the degree to which a person has a favourable or unfavourable evaluation of the behavior in question". Attitude is also related to an "individual's judgement and perceived consequences whether the act on a specific behaviour is good or bad" (Schiffman & Wisenblit, 2021). It has been proposed that a positive attitude toward a particular product is a crucial predictor of consumers' propensity to purchase (Lim et al., 2017). In this study, assessing their knowledge and attitude about cosmetics results in a favourable attitude toward cosmetics and influences their purchase. Purchase intention is "consumer

willingness to purchase a product or service" (Sanny et al., 2020). The set of consumers' behaviour, attitude and perception is also related to consumers' purchase intention (Hermanda et al., 2019). Numerous studies (Chetioui et al., 2020; Dash et al., 2021) explain purchase intention using the theory of planned behaviour, which includes factors such as perceived credibility, trust, perceived risk, subjective norms, and societal norms (Shukla et al., 2020). Another explanation of consumer purchase intention is the elements that motivate and drive customers' purchases of goods and services (Sulu et al., 2016). After a perceived need is met, the next intention will occur (Sulu et al., 2016). Consumers today have access to a diverse range of cosmetics items and brands, implying that hundreds of cosmetic alternatives are available, requiring a more rigorous evaluation process before purchasing the product (Putri & Wandebori, 2016). Thus, it is critical for marketing experts and cosmetics producers to understand and serve the demands and desires of their target consumers (A. S. Othman et al., 2022). As a result, it is crucial to comprehend the expectations of the targeted consumer by evaluating their buying intention on cosmetic products because consumers with higher purchasing enthusiasm who want a product are more likely to purchase it (A. S. Othman et al., 2022).

Previously, researchers linked a various factor with the purchase intention towards adulterant products. For instance, Haque et al. (2011) stated that there is a significant positive relationship between consumers' perception towards adulterant or counterfeit products and other antecedents like pricing, personality, economy, and social (Ng et al., 2021; Verma et al., 2018; Wang et al., 2015). The purchase intention is affected by many aspects, but this study will examine only four variables: perceived price, social motivation, status consumption and brand consciousness.

2.1. Perceived Price

Price has long been regarded as a significant indicator of consumer preference. A previous study identified that price has always been seen as either a financial cost to purchase a good or an indicator of its quality (Kim et al., 2012). Considering that price can affect how customers perceive product quality, it can reflect product quality and alter their purchasing habits (Zhong & Moon, 2020). In the case of an adulterant product, consumers are more inclined to purchase adulterant products when the price of the original is much higher than the price of the adulterant, the quality of the adulteration is adequate, and the consumer perceives no need to promote the company that manufactures the original product (Poddar et al., 2012). Adulterant cosmetics replicate the packaging of the actual product without trying to imitate its quality, so they can present the violating product as a cheap alternative to genuine cosmetics and save money by using inferior ingredients that can compromise consumer health and safety (Levin, 2020). Previous research agreed that price was the most crucial aspect that motivated consumers to buy adulterated products (Gerard Tocquer & Annop Tanlamai, 2014). Moreover, consumers trying to save money will turn to makeup dupes or adulterant cosmetics, whether they do it deliberately or inadvertently (Levin, 2020).

2.2. Social Motivation

Past research identified several social elements, including social acceptance, peer support, and a sense of belonging, that have a part in buying adulterant products. Consumers with a high price

consciousness also acquire adulterant goods to raise their social standing (Elsantil & Bedair, 2022). People also tend to follow others because social pressure helps them maintain relationships and avoid discrimination (Ong et al., 2015). Interaction with family and peers was the most crucial factor driving consumers to purchase adulterant products (Alfia & Kusumawati, 2017; Ong et al., 2015). On the other hand, another researcher suggests that friends and relatives collectively influence adulterant product purchases (Hanzaee & Jalalian, 2012). Consumers who buy adulterant products are typically a vulnerable group, vulnerable to social pressures (Alfia & Kusumawati, 2017; Haque et al., 2011).

2.3. Status consumption

Status consumption is the motivating process through which an individual strives to improve their social position through conspicuous consumption of consumer goods that reflect status for the individual and those around them (Gray et al., 2017). Other researchers identified status consumption as the acquisitions possessed by the consumers who yearn for high-end status brands because the usage of these brands has significance in society (Husain et al., 2022). According to prior studies, consumers enjoy using international brands to demonstrate their status, and buying foreign goods and brands has been associated with consumption of status (Ganbold & Gantulga, 2021). A previous study also found that status consumption is positively associated with customer purchase intention for adulterant cosmetic items (Gray et al., 2017).

2.4. Brand consciousness

Brand consciousness is the psychological attitude toward a brand name that customers have when they are considering making a purchase, and it not only relates to brand knowledge or brand selection among other brands, but also to the value of the brand itself, where the brand has a distinctive image, quality, and attributes that set it apart from competing brands (Valerie & Hariandja, 2022). The previous researcher stated that consumers always choose brands based on their image (Schiffman & Wisenblit, 2021). If a customer has no experience with a product, they are more likely to "trust" the preferred or well-known brand (Isyanto et al., 2020). Also, consumers who are unaware of the benefits of a product are more likely to experience or see little difference between the authentic product and the adulterant brand, making them more willing to purchase a cheaper one. Nevertheless, low-income consumers are more likely to buy genuine versions of adulterant products if they have a high degree of knowledge through suitable consumer education and information programmes (Hamelin et al., 2013).

2.5. Theoretical framework

Below is the proposed theoretical framework for factors that affect customers' purchase intention and attitudes towards adulterant cosmetic products as shown in Figure 3.
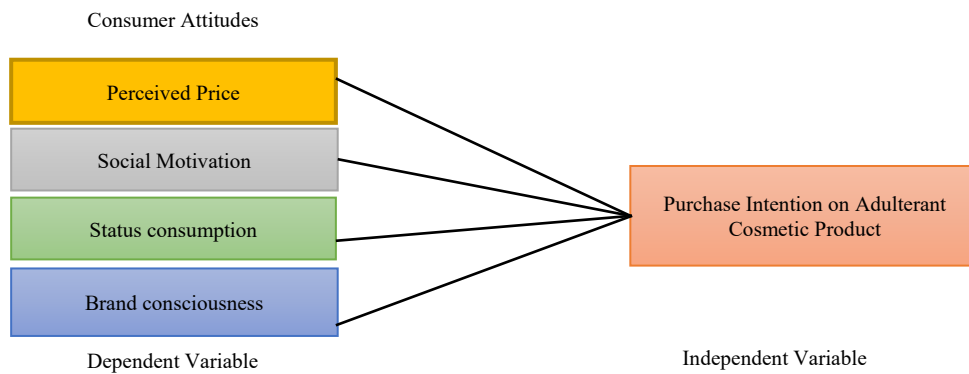
Consumer Attitudes

| Perceived Price |
| Social Motivation |
| Status consumption |
| Brand consciousness |

Purchase Intention on Adulterant Cosmetic Product

Dependent Variable   Independent Variable

Figure 3. Proposed Theoretical Framework for Purchase Intention Towards Adulterant Cosmetic Products

3.   Methodology and Instruments

The study adopted a descriptive method through primary data. The data were collected using convenience sampling by distributing questionnaires personally to the female respondents in the Klang Valley area. Respondents were asked whether they lived in the Klang Valley area before the questionnaire was distributed to them to ensure the correct respondents answered the survey. The study's target population is female consumers aged 17–40 who stay in the Klang Valley area. A minimum sample size of the intended population is essential to ensuring a generalised result (Taherdoost, 2016).

Consequently, based on the 17 items the study assessed, a minimum sample size of 85 was needed. The survey questions were filtered to verify accurate respondents, and a small elimination of outliers after data screening resulted in one hundred responses. According to a prior study, five samples are needed for each item examined using the Statistical Package for Social Sciences (SPSS) (Hair et al., 2019). The data analysis showed acceptable responses. The primary data were strengthened and supported by secondary data taken from journals. The instruments used in this study consist of perceived price (5 items), social motivation (3 items), status consumption (3 items), brand consciousness (4 items) and purchase intentions (4 items). The survey also used a 5-point Likert scale with a range of (1) strongly disagree to (5) strongly agree. The Statistical Packages for Social Science (SPSS) software version 22 was applied to analyse the variables in this study. The tables and charts illustrate the findings from the questionnaires.

4.   Results

4.1. Demographic Profile

Respondents aged between 17 to 25 years old represent 50%, and another 50% are 26 years old and older. Single respondents make up for 94% and married respondents make up for 6%. The majority of respondents, 59% have a bachelor's degree or higher. Moreover, many respondents are employees (53%) and students (44%). In terms of monthly earnings, 24% earn more than RM2000, 32% earn between RM1000 to RM1500 and 44% earn less than RM500. 95% of respondents are aware of the adulterant's

cosmetic products. 75% of them usually buy cosmetics online and are mainly influenced by social media influencers (40%) and friends (44%).

4.2. Reliability and Pearson's Correlation Analysis

Table 1 displays Cronbach's alpha and Pearson's correlation matrix for the variables of perceived price (PP), social motivation (SM), status consumption (SC), brand consciousness (BC) and purchase intention (PI). Status consumption shows the highest value of Cronbach's Alpha at 0.849, followed by brand consciousness at 0.830, social motivation at 0.798 and perceived price at 0.745, respectively. Therefore, all the variables indicated good inter-item consistency in the measures with coefficients varying between 0.745 and 0.849.

The correlations among all the independent variables, perceived price (0.965), social motivation (0.891), status consumption (0.767) and brand consciousness (0.948), were moderate to strong, had a significant relationship and were positively correlated with the dependent variable, purchase intention (1) toward adulterant cosmetic products. These data further indicate that all variables are correlated and can be analysed using multiple regression analysis.

Table 1. Reliability and Pearson's Correlation Coefficient Summary

VARIABLES	N OF ITEMS	CRONBACH'S ALPHA	PEARSON'S CORRELATION				
			PP	SM	SC	BC	PI
Perceived Price (PP)	3	0.745	1	0.814	0.776	0.909	0.965
Social Motivation (SM)	3	0.798	0.814	1	0.892	0.791	0.891
Status Consumption (SC)	3	0.849	0.776	0.892	1	0.657	0.767
Brand Consciousness (BC)	4	0.830	0.909	0.791	0.657	1	0.948
Purchase Intention (PI)	4	0.790	0.965	0.891	0.767	0.948	1

Correlation is significant at the 0.01 level (2-tailed)

4.3. Multiple Regression Analysis

The summary model results for the multiple regression are shown in Table 2. The value of the adjusted R^2 (.990) implies that the independent variables, which are perceived price, social motivation, status consumption and brand consciousness, explain 99.0% of the customer purchase intention towards adulterant cosmetic products. Meanwhile, this research did not include or explain another 1% of other factors.

Table 2 reports the Beta value determining the dominant factor influencing consumer attitudes toward adulterant cosmetic products. The dominant factor influencing customer attitudes is perceived price, with a Beta value of 0.580 (p value= 0.000). The second dominant factor is social motivation, with

a Beta value of 0.454 (p value= 0.000), followed by brand consciousness, with a Beta value of 0.211 (p value= 0.000). Meanwhile, the lowest one is status consumption with a Beta value of -0.227 (p value= 0.000).

Table 2. Multiple Regression Results

Goodness-of-fit			
Multiple R= 0.995	R Square= 0.990	Adjusted R Square= 0.990	Standard Error= 0.38349
F Ratio= 2368.368	Significance F= 0.000		

Coefficients					
Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
1 (Constant)	.313	.136		2.303	.023
Perceived Price	**.736**	**.038**	**.580**	**19.120**	**.000**
Social Motivation	.565	.036	.454	15.805	.000
Status Consumption	-.266	.031	-.227	-8.610	.000
Brand Consciousness	.198	.027	.211	7.353	.000

$* p < 0.05, *** p < 0.001.$

5. Discussion

This study highlights the factors influencing customer purchase intentions and attitudes towards adulterant cosmetic products. All the independent variables, perceived price, social motivation, status consumption and brand consciousness, have a relatively strong positive correlation with the dependent variable, purchase intention, as reported in Table 2, with r values of 0.965, 0.948, 0.891 and 0.767, respectively. As most of the respondents have income below RM2000 monthly and some are students who rely on a limited monthly allowance, they prioritise the perceived price before making a purchase decision.

Previous researchers concurred that price could favour a customer's buying intention (Roth et al., 2017). When the cost of the original product is higher than the price of the adulterant, the adulterant's quality is sufficient, the customer does not feel any obligation to support the business that makes the original product, and consumers are more likely to buy adulterated items to save money (Levin, 2020). People of low-income groups in India are also brand conscious, but due to low purchasing power, they buy counterfeit cosmetic products (Bhatia, 2018). Moreover, referent groups and peers create a solid influence for buying counterfeit or adulterant cosmetic products, as individuals want to make a positive impression on others or the people around them (Ishak et al., 2019). Despite a high understanding and awareness of the dangers of adulterants, some research (Patel et al., 2023) has demonstrated that consumers use counterfeits to showcase their consumption status in terms of affluence, life status and accomplishments.

Next, regression analysis has shown that perceived price has the highest standardised beta coefficient with a value of 0.580. It indicates that perceived price is the dominant factor influencing consumer attitudes toward adulterant cosmetic products compared to the other three elements. Thus, it

shows that for every increase of 1 standard deviation in perceived price, purchase intention rises by 0.580 standard deviations. This assumes that the other variables (social motivation, status consumption and brand consciousness) are constant. Previous studies concurred that the most critical factor influencing consumers' decisions to purchase the adulterant was the price (Ng et al., 2021; Roth et al., 2017; Verma et al., 2018). Most respondents make less than RM2000 monthly, and some are students who depend on meagre monthly stipends, so they prioritise the perceived price when deciding whether to buy something. They compare product prices, choose the cheapest and typically purchase during discounts. They buy products from online retailers and social media platforms to take advantage of the more extensive online selection. Hence, they can get cheaper bargains, as many online retailers also provide rebates and discount vouchers.

6.   Conclusion

The market for cosmetics has grown by roughly 5% a year on average worldwide (Arshad et al., 2020). Cosmetics, natural or artificial, are used to maintain beauty. People, especially women, choose makeup as a form of self-expression to create positive images of aesthetic appearance. The development of mass media and rapidly evolving culture are driving this trend (Ahmad Bhat et al., 2020). For the first research objective, all independent factors- perceived price, social motivation, status consumption, and brand consciousness- were discovered to have a substantial positive correlation with the desire to buy adulterant cosmetic products. Despite widespread knowledge of the risks posed by adulterants, customers still purchase counterfeit goods to flaunt their wealth, success, and other statuses (Patel et al., 2023). The obsession with being beautiful has influenced many people affected by their referent groups and peers (Ishak et al., 2019). Low-income customers are also brand awareness, but since they have limited resources, they purchase knockoff cosmetics (Bhatia, 2018; Levin, 2020).

For the second research objective, regression analysis indicates that perceived price most influenced customer attitudes about adulterant cosmetic products. Most respondents prioritise perceived costs when deciding whether to buy anything since they average less than RM 2000 per month. Others are students who depend on meagre monthly stipends. They consider product pricing, choose the least expensive choice, and typically purchase during sales. They buy things from online shops and social media platforms to benefit from the more comprehensive selection online. Since many internet retailers also provide discounts and rebates, they can receive better bargains at cheaper costs.

6.1. Study Limitations and Future Research

This research used a convenience sampling study employing only 100 sample sizes. In addition, this study solely considers female customers in the Klang Valley rather than the entire consumer population. To obtain more accurate data and reduce sampling error, the sample size and location for future studies might be increased to cover a larger area. For instance, a future researcher may do a similar survey of adulterated cosmetic items among women and men in different regions. The survey of adulterants in decorative items is relatively small, and most studies concentrate more on clothing and food than skincare or cosmetics. This research involved four independent variables: perceived price, social

motivation, status consumption and brand consciousness. As a suggestion for future research, one could include new vital variables such as perceived risk and quality.

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