THE EFFECT OF PRODUCT QUALITY AND PERCEIVED PRICE ON CUSTOMER SATISFACTION AND LOYALTY: STUDY ON HALAL COSMETIC PRODUCTS IN INDONESIA

Ade Permata Surya¹, Anton Kurniawan²
1Universitas Mercu Buana, Faculty of Economics and Business, Jl. Meruya Selatan No.1, Kembangan, Jakarta, Indonesia
2Universitas Mercu Buana, Faculty of Economics and Business, Jl. Meruya Selatan No.1, Kembangan, Jakarta, Indonesia

Abstract
Indonesia is a country with the largest Muslim population in the world, so that Indonesia is the largest share of the world halal market, including in the cosmetics sector. The high and tight level of competition in the Indonesian halal cosmetic market, both with local halal cosmetic products and various imported halal cosmetics, requires companies to increase customer satisfaction and increase their customer loyalty. This study aims to determine the effect of product quality and perceived price in increasing customer satisfaction and customer loyalty to Wardah halal cosmetic products in Indonesia. Using a quantitative approach and non-probability sampling techniques, this study uses questionnaire data from 135 respondents who are Wardah consumers from 5 major cities in Indonesia, namely Jakarta, Bogor, Depok, Tangerang, and Bekasi (Jabodetabek). Furthermore, the data is processed using Partial Least Square (SEM-PLS). Results show that both product quality and perceived price have a significant effect on customer satisfaction. Furthermore, customer satisfaction also has a significant effect on customer loyalty. The Adjusted R-squared coefficient of customer satisfaction and customer loyalty is quite high, namely 0.60 and 0.73, which means that 60% of customer satisfaction can be improved with product quality and perceived price, and 73% of customer loyalty can be improved by customer satisfaction.

Keywords: product quality, perceived price, customer satisfaction, customer loyalty, halal cosmetics sector

1. Introduction
Based on Global Islamic Report 2018/2019 data, the Muslim population in the world reached 1.8 billion in 2017. For the world halal cosmetics market, it is estimated to reach USD 54 billion in 2022. Indonesia itself is a country with the largest Muslim population in the world, so that Indonesia becomes the largest halal market share in the world. This also applies to the Indonesian halal cosmetics sector. Indonesia is currently showing an increase in the beauty industry sector. No less than 760 cosmetic companies spread throughout Indonesia. Based on data from the Ministry of Industry (2016), this industrial market growth has averaged 9.67% per year in the last six years (2009-2015). With this amount, Indonesia is a potential market for cosmetic industry entrepreneurs, both foreign and domestic, especially for halal cosmetics.
Wardah is a local cosmetic brand that first received halal certification since 1995 and it is known as one of the largest halal cosmetic brands in Indonesia. Halal cosmetics are cosmetics with ingredients that are according to Islamic law. The product must be certain that it is cruelty free or does not use animal-containing ingredients and no alcohol content.

Based on data sources obtained from Top Brand, it is known that sales of several cosmetic products have increased and decreased. Wardah itself experienced a decline in sales from 2014 to 2015. Even though in 2017 Wardah became the number 1 top brand in Indonesia, in 2018, a halal cosmetic competitor from Malaysia, Safi entered the Indonesian market. Not only from abroad, wardah competitors from various local halal cosmetic brands are increasingly emerging, such as Mazaya, Nameera, and Zoya cosmetics. In October 2019, the government also officially issued a halal certification regulation for all medicinal and cosmetic products circulating in Indonesia in Law No. 33 of 2014, concerning the Guarantee of Halal Products. This is increasingly becoming a challenge for Wardah to make consumers loyal to their brand.

The high and tight level of competition in the Indonesian halal cosmetics market, both with its competitors from local and imported halal cosmetic products, requires the Wardah company to strive to maintain their survival. Customer loyalty plays a very important role in maintaining the continuity of a business. Loyal customers will continue to make repeat transactions and provide cash input and input on company ideas. Loyal customers will also voluntarily promote by providing positive testimonials and recommendations to other consumers, and even inviting them to become loyal Wardah customers.

Customer loyalty is not a new topic in marketing, a lot of literature has researched on customer loyalty (Akroush & Mahadin, 2019; Moura e Sá & Cunha, 2019; Omoregie, Addae, Coffie, Ampong, & Ofori, 2019; Othman et al., 2019; Surya & Surtiningsih, 2019; Wu & Li, 2018), including research on customer loyalty in services such as in the hotel industry (Wu & Li, 2018), in the automotive industry (Schepen, Draghici, & Niemann, 2018), in the mobile commerce industry (Lee & Wong, 2016), in the travel agency sector (Silva & Gonçalves, 2016), and in the transportation service sector such as the aircraft industry (Chen & Wang, 2016; Prentice & Loureiro, 2017), intercity buses (Y.-H. Chang & Yeh, 2017), public transportation (Fu, Zhang, & Chan, 2018; Li, Bai, Song, Chen, & Wu, 2018).

On the other hand, research on customer loyalty to goods was found to be very limited, including research on customer loyalty on smartphone products (M.-K. Kim, Wong, Chang, & Park, 2016); traditional food products (Chrysochou, Krystallis, & Giraud, 2012); organic products (Hasnelly & Yusuf, 2012); electronic products (Marakanon & Panjakajornsak, 2017); and in fast moving consumer goods (Sundström & Hjelm-Lidholm, 2020). Likewise, there is still very little research on customer loyalty to beauty products, especially cosmetic products (Suhartanto et al., 2020). Therefore, this study was conducted to answer the research gap by examining customer loyalty to cosmetic products in Indonesia.

From previous research, it is known that customer satisfaction is one of the most influential factors on customer loyalty (Bowen & Chen, 2001; Cheng, Gan, Imrie, & Mansori, 2018; Donio, Leventhal, Massari, & Passiante, 2006; Hallowell, 1996; Jeong & Lee, 2010), while product quality and perceived price are known as factors that influence customer satisfaction (Setiadi, Daryanto, & Fahmi, 2018; Sohrabi, 2017). Based on this, the purpose of this study was
formulated to determine the effect of product quality and perceived price on customer satisfaction and loyalty of Wardah cosmetic products in Indonesia.

2. Literature Review

Many previous studies on cosmetics have been carried out (Faria-Silva et al., 2020; Lacatusu et al., 2020; Murwaningtyas, Harisudin, & Irianto, 2020; Nathan & Wanner, 2019; Nguyen, Nguyen, & Vo, 2019; Song, Guo, & Zhang, 2019). Among them are research on organic cosmetics (Ghazali, Soon, Mutum, & Nguyen, 2017; Nguyen et al., 2019; Yeon Kim & Chung, 2011); green cosmetics (Liobikienė & Bernatonienė, 2017; Singhal & Malik, 2018), natural cosmetics (Ahmad & Omar, 2018; Jansri, 2016); Korean cosmetics & skin-care (D. Chang, 2007; S. Lee, Sung, Phau, & Lim, 2019; Massoud Moslehpour, Sugata, & Aulia, 2015; Massoud Moslehpour, Wong, Pham, & Aulia, 2017; Wangwiboolkij); and halal cosmetics (Abd Rahman, Asrarhaghighi, & Ab Rahman, 2015; Aoun & Tournois, 2017; Khan, Sarwar, & Tan, 2020; Shahid, Ahmed, & Hasan, 2018; Suhartanto et al., 2020; Yeo, Mohamed, & Young, 2016).

Generally, the previous literature examines the factors that affect purchase intention or repurchase intention of cosmetics products (Gómez & Pérez, 2018; Hanzaee & Andervazh, 2012; Massoud Moslehpour et al., 2015; Nguyen et al., 2019; Taghipour & Loh, 2017); innovation and business strategy in the cosmetic industry (Kumar, Massie, & Dumonceaux, 2006); cosmetics and their relationship with gender issues (J. Kim, Malhotra, Han, Kim, & Paramita, 2013; Pudaruth, Juwaheer, & Seewoo, 2015); consumer behavior in buying cosmetic products (Pudaruth et al., 2015; Weber & Villebone, 2002); cosmetic product packaging (S. Lee et al., 2019); customer's value on cosmetic products (Ahmad & Omar, 2018; Ghazali et al., 2017; Jansri, 2016; Song et al., 2019; Yeo et al., 2016); consumer attitudes or attitudes towards cosmetic products (Briliana & Mursito, 2017; Garg & Joshi, 2018; Singhal & Malik, 2018; Souiden & Diagne, 2009); and customer satisfaction with cosmetic products (Curtis, Abratt, Rhoades, & Dion, 2011; P.-J. Kim & Lee, 2016; Yeo et al., 2016).

However, there is still limited research on customer loyalty in the cosmetics sector (Curtis et al., 2011; Hanzaee & Andervazh, 2012), especially research on customer loyalty in halal cosmetics (Suhartanto et al., 2020). Research by Suhartanto et al. (2020) examined the factors that affect customer loyalty to halal cosmetic customers, where product quality, emotional attachment, religiousity and customer satisfaction were tested into the model and the results showed that only product quality, emotional attachment and customer satisfaction had a significant effect. Little or limited research on customer loyalty for halal cosmetic products is the background for this research. Where as a differentiator, this study adds the perceived price factor as an antecedent variable compared to previous studies.

2.1 Customer Loyalty

Kotler and Keller (2012) define customer loyalty as a consumer commitment to buy a product or reuse preferred products and services in the future, even though there are situations and promotions that have opportunities to cause customers to switch. According to Astini (2016), the advantage of having loyal customers is that it can guarantee the continuity of the company's life in the long run. According to Taylor, et al. (2006) loyalty is a multidimensional construct,
defined and viewed differently by researchers. Where, consumer loyalty includes three different constructs, namely (1) behavioral loyalty, (2) attitude loyalty, and (3) combined loyalty. Meanwhile, according to Moura e Sá and Cunha (2019) the concept of customer loyalty consists of two main dimensions usually identified, namely the attitude dimension and the behavior dimension.

2.2 Customer Satisfaction

To thrive in a highly competitive market, customer satisfaction plays a key role in retaining existing customers and acquiring new customers which ultimately encourages them to become brand loyal (Hussain, 2016). According to Novianti, Endri, and Darlius (2018), customer satisfaction is an emotional response in the form of feelings of pleasure and relief because their heart's desire has been fulfilled or fulfilled after purchasing a product or service. Meanwhile, according to Kotler & Keller (2012), customer satisfaction is the feeling of pleasure or disappointment of a customer that arises from comparing the perceived performance of the product (or results) against their expectations. Thus, satisfaction itself is a central concept in marketing theory and practice, and is one of the important goals of business activities (Permana, 2018). According to Chow & Zhang (2008) it is important for managers to identify satisfactory product attributes from unsatisfactory, because brand switching to customers may occur as a result of their dissatisfaction with the product.

2.3 Product Quality

According to Kotler and Keller (2012) a product is anything that can be offered to the market to satisfy a desire or need, whether it be physical goods, services, events, people, places, property, organizations, information, to ideas. Meanwhile, the product quality according to Trentin et al. (2012) is the ability of a product to carry out its function; such as durability, reliability, precision, ease of operational repairs and other valuable attributes. In other words, product quality means the ability of a product to perform its function. This includes overall durability, reliability, precision, ease of use and repair and the value of other attributes in a product.

2.4 Perceived Price

According to Hawkins and Mothersbough (2013), price is the amount of money that must be paid to get the right to use a product. In Zimmerman and Beneke (2014) it is explained that generally consumers do not remember exactly a price, but consumers perceive or encode prices in ways that are meaningful to them, so that price perceptions vary among consumers, products, situations and conditions.

3. Hypothesis Development

3.1 Relationship between Product Quality and Customer Satisfaction

Quality is the key to organizational success and survival in today's competitive environment. The intense global competition has highlighted the growing importance of quality (Hoe & Mansori, 2018). The consistency of the quality of a product or service can contribute to the success of a company in terms of customer satisfaction, employee satisfaction, and company profitability. Quality products play an important role in shaping customer satisfaction (Kotler and Armstrong, 1996). Several previous studies have found that product quality is one of the factors that affect
3.2 Relationship between Perceived Price and Customer Satisfaction

Various previous studies have found that perceived price is an antecedent or influential factor in increasing customer satisfaction (Albari & Kartikasari, 2019; Asadi, Khazaei Pool, & Reza Jalilvand, 2014; Djumarno, Anjani, & Djamiluddin, 2018; Ekasari et al., 2019). In their research, Bei and Chiao (2006) explain that price is an important factor that determines consumer satisfaction, because after consumers evaluate the value of the product or service received, they always think about the price of the product or service. In general, a fair price is based on customers' perceptions of their knowledge of the prices set by producers for the market as a whole.

3.3 Relationship between Customer Satisfaction and Customer Loyalty

In recent years, many studies have confirmed the relationship between customer satisfaction and customer loyalty. (Setiawan, Firdiansjah, & Darsono, 2019; Sitanggang, Sinulingga, & Fachrudin, 2019; Subaebasni, Risnawaty, & Wicaksono, 2019; Suhendar & Ruswanti, 2019; Wantara & Tambrin, 2019). Research by Jannah, Mappatompo, and Haanurat (2019) found that customer satisfaction has a significant effect on customer loyalty in companies engaged in the health care & beauty sector. Likewise, El-Adly (2019) who found that customer satisfaction is an important factor in determining customer loyalty in the hospitality sector. In addition, Surya (2019) also found that customer satisfaction has a significant positive effect on online transportation customer loyalty.

Figure 1. Research Model

4. Method

This study uses a quantitative approach and its type is causal research, which is research that aims to test hypotheses about the cause-and-effect relationship between several variables. In addition, this research method uses a survey method, in which primary data collection is done by giving the questions contained in the questionnaire to individual respondents. The population of
this study is all consumers who use Wardah halal cosmetic products who live in 5 major cities in Indonesia, namely Jakarta, Bogor, Depok, Tangerang, and Bekasi. The sampling method used is non-probability with incidental sampling type by giving online questionnaires to respondents. The research sample obtained was 135 respondents. The data was collected using a questionnaire technique, where the respondents answered questions that had been arranged in the form of choices and scale questions using a Likert scale (1–5). The data analysis method in this research is SEM-PLS which is processed with the help of WarpPLS 6.0 software.

5. Results

5.1 Model Fit Test

The model fit test was conducted to see the suitability of the model built in the study. A good research model will be able to describe the suitability of the relationship between the variables in the study. The use of WarpPLS 6.0 has provided calculation results that indicate the criteria used to judge whether the model is appropriate. From Table 1 below, it is known that each value has met the ideal criteria, so it can be concluded that the overall model of this research is good and appropriate.

<table>
<thead>
<tr>
<th>Description</th>
<th>Result</th>
<th>Ideal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average path coefficient (APC)</td>
<td>P&lt;0.001</td>
<td>&lt;= 0.05</td>
</tr>
<tr>
<td>Average R-squared (ARS)</td>
<td>P&lt;0.001</td>
<td>&lt;= 0.05</td>
</tr>
<tr>
<td>Average adjusted R-squared (AARS)</td>
<td>P&lt;0.001</td>
<td>&lt;= 0.05</td>
</tr>
<tr>
<td>Average block VIF (AVIF)</td>
<td>1.536</td>
<td>&lt;= 3.3</td>
</tr>
<tr>
<td>Average full collinearity VIF (AFVIF)</td>
<td>3.052</td>
<td>Acceptable if &lt;5</td>
</tr>
<tr>
<td>Simpsons’s paradox ratio (SPR)</td>
<td>1</td>
<td>Acceptable if &gt;0.7</td>
</tr>
<tr>
<td>R-squared contribution ratio (RSCR)</td>
<td>1</td>
<td>Acceptable if &gt;0.9</td>
</tr>
<tr>
<td>Statistical suppression ratio (SSR)</td>
<td>1</td>
<td>&gt;= 0.7</td>
</tr>
<tr>
<td>Nonlinear bivariate causality direction ratio</td>
<td>1</td>
<td>&gt;= 0.7</td>
</tr>
</tbody>
</table>

5.2 Convergent Validity and Reliability

The Average Variance Extracted (AVE) value indicates that all reflective constructs have an AVE value greater than 0.50, where AVE product quality is 0.746; perceived price 0.611; customer satisfaction 0.870 and customer loyalty 0.702. The AVE results indicate that all indicators have met the specified standard values, so that the convergence of the indicators is valid or acceptable and it can be stated that all indicators measuring the construct have met the convergent validity requirements. In addition, the results of the Composite Reliability (CR) data show that all values are above 0.8, where the CR product quality is 0.953; perceived price 0.887; customer satisfaction 0.964 and customer loyalty 0.934, so that means the data has high reliability. Besides CR, the reliability test is strengthened by Cronbach's Alpha, where the results show that all CA numbers are > 0.8 which can be concluded that the reliability is very high. The data can be seen in Table 2 below.
Table 2. Convergent Validity and Reliability

<table>
<thead>
<tr>
<th></th>
<th>AVE</th>
<th>CR</th>
<th>CA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product quality</td>
<td>0.746</td>
<td>0.953</td>
<td>0.943</td>
</tr>
<tr>
<td>Perceived price</td>
<td>0.611</td>
<td>0.887</td>
<td>0.840</td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>0.870</td>
<td>0.964</td>
<td>0.950</td>
</tr>
<tr>
<td>Customer loyalty</td>
<td>0.702</td>
<td>0.934</td>
<td>0.915</td>
</tr>
</tbody>
</table>

AVE Average Variance Extracted; CR Composite Reliability; CA Cronbach’s Alpha

5.3 Discriminant Validity

The discriminant validity test was carried out by looking at the cross-loading value and the Square Root of Average Variance Extracted / AVE value. Based on Table 3, it shows that each indicator measuring a construct has a greater cross loading value for its respective construct, so it can be said to be valid. The Square Root of AVE value obtained by each construct is greater than the correlation value between constructs and other constructs in the same column. These results indicate that the conditions for discriminant validity are met.

Table 3. Discriminant Validity (Fornell Lacker Criterion)

<table>
<thead>
<tr>
<th></th>
<th>PQ</th>
<th>PP</th>
<th>CS</th>
<th>CL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product quality (PQ)</td>
<td>0.864</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived price (PP)</td>
<td>0.603</td>
<td>0.782</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer satisfaction (CS)</td>
<td>0.638</td>
<td>0.705</td>
<td>0.933</td>
<td></td>
</tr>
<tr>
<td>Customer loyalty (CL)</td>
<td>0.622</td>
<td>0.656</td>
<td>0.851</td>
<td>0.868</td>
</tr>
</tbody>
</table>

5.4 Result of Hypothesis Test

Hypothesis test results show that there is a significant influence between product quality and customer satisfaction where the p-value is <0.001 so that H1 is supported. Furthermore, the relationship between perceived price and customer satisfaction has a p-value <0.001 so it can be stated that H2 is supported. A significant effect is also found on customer satisfaction with customer loyalty, so it is concluded that H3 is supported. Other results can be seen from the Adjusted R-squared coefficient of customer satisfaction and customer loyalty which is quite high, namely 0.60 and 0.73, which means that 60% of customer satisfaction can be improved with product quality and perceived price, and 73% of customers loyalty can be improved by customer satisfaction. The results of this hypothesis test are summarized in Table 4. In addition, Figure 2 shows the results of the hypothesis test based on the output of WarpPLS 6.0.
Table 4. Result of Hypothesis Test Summary

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Description</th>
<th>Path coefficients</th>
<th>P-values</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>PQ \rightarrow CS</td>
<td>0.390</td>
<td>&lt;0.001</td>
<td>Supported</td>
</tr>
<tr>
<td>H2</td>
<td>PP \rightarrow CS</td>
<td>0.480</td>
<td>&lt;0.001</td>
<td>Supported</td>
</tr>
<tr>
<td>H3</td>
<td>CS \rightarrow CL</td>
<td>0.850</td>
<td>&lt;0.001</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Figure 2. The results of the hypothesis test based on the output of WarpPLS 6.0

4. Discussion

Based on this research, empirical findings were found that product quality has a significant positive effect on customer satisfaction of Wardah halal cosmetic products in Indonesia. These results confirm various previous studies (Mahsyar & Surapati, 2020; Setiawan et al., 2019; Suhendar & Ruswanti, 2019; Wantara & Tambrin, 2019). The results of this study are in line with Sitanggang et al. (2019) who found that the quality of Indihome’s internet service provider (ISP) products have a significant effect on their customer satisfaction. Likewise, with Ekasari et al. (2019) who found that product quality was a significant factor in increasing customer satisfaction who purchased products online. This shows that the higher the product quality, the higher the level of customer satisfaction, and vice versa, the lower the product quality, the lower the satisfaction of Wardah halal cosmetic product customers. Based on Djumarno et al. (2018) when product quality meets or exceeds customer expectations, customers will feel that the product is acceptable and of high quality, so that customers will be happy and satisfied.

Another finding is the significant effect of perceived price on customer satisfaction. These empirical findings also confirm previous studies (Albari & Kartikasari, 2019; Kencana, 2018; Oxtafiani & Widowati, 2017; Shen & Yahya, 2021). Research by Razak, Nirwanto, and Triatmanto (2016) shows that perceived price has a significant effect on customer satisfaction.
from toothpaste products. The results of this study are also in line with the findings of Budiastari (2016) who found that perceived price has a significant impact in increasing customer satisfaction in the construction sector, especially cement and concrete products, and the findings of Kaura, Durga Prasad, and Sharma (2015) who found that price is significant effect on customer satisfaction in the Indian retail banking sector.

Other results show that customer satisfaction has a significant positive effect on customer loyalty. This finding is in line with Cakici, Akgunduz, and Yildirim (2019); Asadi et al. (2014) and Kaura et al. (2015). Cakici et al. (2019) found that perceived satisfaction has a significant positive effect on customer loyalty in the restaurant sector. Likewise, Asadi et al. (2014) found that customer satisfaction who bought Islamic-Iranian art products had a significant effect on their level of loyalty to these products. Still in line, Kaura et al. (2015) also have findings that customer satisfaction has a significant impact on customer loyalty in the Indian retail banking sector. This shows that the higher the level of perceived customer satisfaction, the higher the level of loyalty, and conversely, the lower the level of perceived customer satisfaction, the lower the level of customer loyalty.

6. Conclusion

From the results of research and discussion, the conclusion that can be drawn is that both product quality and perceived price have a significant effect on customer satisfaction. Furthermore, customer satisfaction also has a significant effect on customer loyalty. From the two variables, it was found that the path coefficient value of perceived price was greater (0.48) than product quality (0.39), which indicated that the effect of perceived price on customer satisfaction was more dominant. In addition, the Adjusted R-squared coefficient of customer satisfaction and customer loyalty is quite high, namely 0.60 and 0.73, which means that 60% of customer satisfaction can be improved with product quality and perceived price, and 73% of customer loyalty can be improved by customer satisfaction.

7. Implication

The research implications for Wardah's company are: (1) Wardah must increase buyer satisfaction, so that buyers become loyal customers who are loyal to Wardah products. Customer satisfaction can be increased by improving product quality and price perceptions of consumers. (2) the company must continue to improve the quality of cosmetic products in accordance with the expectations and needs of customers, including continuing to produce products that are halal and in accordance with the provisions of Islamic law; using safe and quality ingredients in making products; provide various product variants, use safe, comfortable and attractive packaging; provide complete information on product packaging; and the product must comply with the promised claims. In addition, (3) Wardah must adjust product prices to be affordable in the eyes of consumers and compete with other competitors' halal cosmetic products, and product prices must be relatively stable wherever consumers buy these products.

8. Acknowledgement

This research was funded and fully supported by the Research Center at the Universitas Mercu Buana Jakarta, Indonesia
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