The Way of Product Quality and Price in Affecting Customer Satisfaction of iPhone Users in Banda Aceh City: Is the Perceived Value as A Mediator?

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Abstract
This research aimed to analyze the effect of product quality and price on customer satisfaction both directly and indirectly through perceived value. The sampling technique used was quota sampling with the size of respondents as many as 90 iPhone Users in the City of Banda Aceh. Data analysis technique used was SEM-PLS (Structural Equation Model - Partial Least Square) with SmartPLS software as a tool. The results showed that perceived value had a significant effect on customer satisfaction; product quality and price had a significant effect on perceived value; and product quality and price did not significantly effect customer satisfaction directly, but indirectly affected customer satisfaction significantly through perceived value. Thus, the clauses of the findings explained that perceived value acted as a perfect mediators on the effects of product quality on customer satisfaction and price on customer satisfaction. These all found facts describe the useful of the full research model to contribute both to the academics and practical issues. For the academics, this research strengthens the previous causality theories, and figures the side of rejected hypothesis that supported by the same previous findings. For the practitioners, this model can be used as a reference to contribute to the formulation of their strategy in achieving the customer satisfaction especially for the leaders of the research object. The limitation of this research resides the scope of the object and the number of variables. The further researchers can develop this research model tested by adding other mediation variables such as online marketing or customer relationship management.

Keywords: Customer Satisfaction, Perceived Value, Product Quality, Price.

1. Introduction

Customer satisfaction is mentioned as a gap between the performance of a product with customer expectations. If the performance of a product is smaller than expected, then the customer is not satisfied with the product, whereas if the performance of a product is greater than expected, then the customer will be satisfied with the product mentioned (Kotler and Keller, 2018). One of the things that companies can do to improve customer satisfaction is by creating positive value that is felt by customers for a product. The perceived value is one of the factors that can determine the level of customer satisfaction, when a customer gets a high value for a product, then the customer will also feel high satisfaction (Hapsari, David and Dean, 2016).

Customer satisfaction can also be influenced by the price of a product consumed by the customer. The price of a product will affect consumers' perceptions about the product, when a customer considers that the performance of the product is in accordance with the price charged,
then the customer will feel satisfied with the product (Ehsani and Ehsani, 2015). Customer satisfaction with a product will also arise if a customer is satisfied with the quality of the product. Product quality can be said to be a strong foundation to build customer satisfaction, when a customer feels that a product has the quality as expected, then a customer will be satisfied with the product (Khan and Ahmed, 2012).

Based on the description previously explained, it is known that customer satisfaction can be affected by product quality, price, and perceived value. Nevertheless, there are differences in the results of research conducted by previous researchers (research gap). The results of previous researches found that product quality (Anggraeini et al., 2017), price (Kristanto, 2018), and perceived value (Kassim, Igau, Harun dan Tahajuddin, 2014) significantly affected customer satisfaction, meanwhile, there were also found that product quality (Mohammed et al., 2017), price (Setyo, 2017), and perceived value (Gultom, Yuliati and Djohar, 2016) did not significantly affect customer satisfaction.

Thus, the purpose of this research is to find out whether product quality, price, and perceived value contribute to increasing customer satisfaction and whether perceived value acts as a mediation between the effect of product quality and price on customer satisfaction.

2. Literature Review

Customer satisfaction based on Expectancy Disconfirmation Theory is a summary of the psychological state that comes from the comparison between the customer experience after using a product with the customer's expectations before using the product (Lubis et al., 2015). Then, (Zeithaml, Bitner and Gremler, 2018) defined perceived value as a comprehensive customer evaluation of the usefulness of a product based on perceptions about what is received and what is given by the customer. Next, (Kotler and Armstrong, 2017) defined price as the amount of money charged for a product or the amount of value that consumers exchange for the benefits of using that product. Furthermore, (Kotler and Armstrong, 2017) defined product quality as the ability of a product to carry out its functions which include reliability, durability, permanence, ease of operation, and product improvement, as well as other valuable attributes.

The result of study conducted by (Kassim et al., 2014) proved that the perceived value had a positive and significant effect on customer satisfaction. Then, the result of study conducted by (Anggraeini et al., 2017) revealed that product quality had a positive and significant effect on customer satisfaction. Next, the result of study conducted by (Kristanto, 2018) stated that price had a positive and significant effect on customer satisfaction. Furthermore, the result of study conducted by (Razak, Nirwanto and Triatmanto, 2016) described that product quality and price have a positive and significant effect on perceived value, and also the result also found that product quality and price have a positive and significant effect on customer satisfaction indirectly through perceived value.

Then, the framework formulated of this research can be seen in the following figure:
Based on the above review of literature, the research hypothesis is determined as follows:

Hypothesis 1: Perceived value affected customer satisfaction significantly
Hypothesis 2: Product quality affected customer satisfaction significantly
Hypothesis 3: Price affected customer satisfaction significantly
Hypothesis 4: Product quality affected perceived value significantly
Hypothesis 5: Price affected perceived value significantly
Hypothesis 6: Perceived value mediated the effect of product quality on customer satisfaction
Hypothesis 7: Perceived value mediated the effect of price on customer satisfaction

3. Method

The population in this research was all iPhone users in the city of Banda Aceh, while the number of sample in this study was 90 iPhone users selected by quota sampling. The research data were obtained through the dissemination of questionnaires and analyzed by structural equation model (SEM) technique using SmartPLS software. SEM is a multivariate data analysis technique that combines the outer model which aims to determine the specification of the relationship between latent variables and the indicators and inner model which aims to determine the effect specifications between latent variables (F. Hair Jr et al., 2014).

4. Results and Discussion

Outer Model

The outer model results in this research is shown in the following table:
Table 1. Outer Model

<table>
<thead>
<tr>
<th>Indicator Loading</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ξ_1.1</td>
<td>Product Quality 0.696</td>
</tr>
<tr>
<td>ξ_1.2</td>
<td>Product Quality 0.720</td>
</tr>
<tr>
<td>ξ_1.3</td>
<td>Product Quality 0.743</td>
</tr>
<tr>
<td>ξ_1.4</td>
<td>Product Quality 0.768</td>
</tr>
<tr>
<td>ξ_1.5</td>
<td>Product Quality 0.761</td>
</tr>
<tr>
<td>ξ_1.6</td>
<td>Product Quality 0.734</td>
</tr>
<tr>
<td>ξ_1.7</td>
<td>Product Quality 0.732</td>
</tr>
<tr>
<td>ξ_1.8</td>
<td>Product Quality 0.636</td>
</tr>
<tr>
<td>ξ_2.1</td>
<td>Price 0.822</td>
</tr>
<tr>
<td>ξ_2.2</td>
<td>Price 0.852</td>
</tr>
<tr>
<td>ξ_2.3</td>
<td>Price 0.890</td>
</tr>
<tr>
<td>ξ_2.4</td>
<td>Price 0.813</td>
</tr>
<tr>
<td>η_1.1</td>
<td>Perceived Value 0.890</td>
</tr>
<tr>
<td>η_1.2</td>
<td>Perceived Value 0.907</td>
</tr>
<tr>
<td>η_1.3</td>
<td>Perceived Value 0.845</td>
</tr>
<tr>
<td>η_1.4</td>
<td>Perceived Value 0.696</td>
</tr>
<tr>
<td>η_2.1</td>
<td>Customer Satisfaction 0.889</td>
</tr>
<tr>
<td>η_2.2</td>
<td>Customer Satisfaction 0.863</td>
</tr>
<tr>
<td>η_2.3</td>
<td>Customer Satisfaction 0.841</td>
</tr>
<tr>
<td>η_2.4</td>
<td>Customer Satisfaction 0.897</td>
</tr>
</tbody>
</table>

Based on Table 1, it is known that all indicators of each variable of product quality, price, perceived value, and customer satisfaction have a loading indicator value > 0.50 so it proves that all indicators of each of the variables can represent the measurement of its latent variables. Then, it is known that each variable of product quality, price, perceived value, and customer satisfaction have a value of AVE > 0.50 so it shows that the indicators in the research model developed are proven can measure the latent variable that is targeted and cannot measure other latent variables. Furthermore, it is known that each variable of product quality, price, perceived value, and customer satisfaction have a composite reliability value > 0.70 so it reveals that all indicators of each latent variable in this research model is reliable for measuring the variables.

Inner Model

The inner model results in this research is shown in the following table:
Based on Table 2, the R Square value of the effect of product quality and price on perceived value is 0.508 so it shows that the product quality and price variables can explain their effect on the perceived value variable by 50.8% while the remaining 49.2% is influenced by other variables not used in the research model. Furthermore, the R Square value of the effect of product quality, price, and perceived value on customer satisfaction is 0.445 so it describes the product quality, price, and perceived value variables can explain their effect on customer satisfaction by 44.5% while the remaining 55.5% is influenced by other variables not used in the research model.

Based on Table 2, the Q Square value of the effect of product quality and price on perceived value is 0.349 which is > 0.15 so that it shows that the product quality and price variables are relevant enough to predict the perceived value variable. Furthermore, the Q Square value of the effect of product quality, price, and perceived value on customer satisfaction is 0.324 which is > 0.15 so it reveals that the product quality, price, and perceived value variables are relevant enough to predict the customer satisfaction variable.

Based on Table 2, it is known that the values of the model fit criteria are SRMR (0.086), d_ULS (1.550), d_G (0.782), NFI (0.735), and rms Theta (0.112). Thus, the research model has met the minimum value requirements required so that the model in this research can be said to be fit.

**Results**

The results of this research can be seen in the following figure:
Figure 2. Results

Based on Figure 2, the discussion of the effects of product quality, price, perceived value, and customer satisfaction are further discussed as follows:

**H1 : Perceived Value Affected Customer Satisfaction Significantly (accepted)**

Based on the result, the path from perceived value significantly to customer satisfaction results the coefficient 0.521 and significant value 0.000. The numbers prove that the perceived value had a significant contribution in increasing customer satisfaction by 52.1%. In other words, it reveals that the perceived value was something that can determine customer satisfaction, so the higher the value felt by iPhone users, the iPhone user satisfaction level will also increase. This result is also in accordance with the research by (Iskandar, Nurmalina and Riani, 2015) which also resulted that perceived value had a significant effect on customer satisfaction.

**H2 Product Quality Affected Customer Satisfaction Significantly (rejected)**

Based on the result, the path form product quality to customer satisfaction results the coefficient 0.092 and significant value 0.515. The numbers prove that the product quality did not have a significant contribution in increasing customer satisfaction because it was only 9.2%. This result is not in accordance with the research by (Anggraeini et al., 2017) which found that product quality had a significant effect on customer satisfaction. However, the result of this hypothesis 3 does not prove the premise is incorrect or less relevant, because there were also other results that are the same as this research result, such as the research by (Mohammed et al., 2017) which also found that product quality did not have a significant effect on customer satisfaction.

**H3 : Price Affected Customer Satisfaction Significantly (rejected)**

Based on the result, the path from price to customer satisfaction has a coefficient 0.107 and significant value 0.423. The numbers prove that price did not have a significant contribution in increasing customer satisfaction because it is only 10.7%. This result is not in accordance with the research by (Kristanto, 2018) which found that price had a significant effect on customer satisfaction. However, the result of this hypothesis 3 does not prove the premise is incorrect or less relevant, because there were also other results that are the same as this results, such as the research by (Setyo, 2017) which also found that price did not have a significant effect on customer satisfaction.

**H4 : Product Quality Affected Perceived Value Significantly (accepted)**

Based on the results, the path form product quality to perceived value has a coefficient 0.382 and significant value 0.007 so it can be said that product quality had a significant contribution in increasing perceived value by 38.2%. In other words, the result indicates that product quality was a matter of determining the perceived value, where the better the quality of the iPhone product, the perceived value of iPhone users for the product will also increase. This result is in accordance with the research by (Razak, Nirwanto and Triatmanto, 2016) which also found that product quality had a significant effect on perceived value.

**H5 : Price Affected Perceived Value Significantly (accepted)**
Based on the results, the path from price to perceived value has a coefficient 0.376 and significant value 0.003 so it proves that price had a significant contribution in increasing perceived value by 37.6%. In other words, the result indicates that price was something that can determine the perceived value where the more appropriate the price of the iPhone, the perceived value of iPhone users for the product will also increase. This result is in accordance with the research by (Razak, Nirwanto and Triatmanto, 2016) which also found that price had a significant effect on perceived value.

**H6 : Perceived Value Mediated the Effect of Product Quality on Customer Satisfaction (accepted)**

Based on the results, the path from product quality to customer satisfaction through perceived value has a coefficient of 0.199 and significant value 0.015. These numbers conclude that the better the quality of the iPhone will increase the perceived value of the iPhone users to the product which indirectly also can contribute significantly in increasing the iPhone user satisfaction to product by 19.9%. Thus, the perceived value variable in this research acted as a full mediation variable between the effect of product quality on customer satisfaction, because it is proved from the result of hypothesis 2 that found that product quality did not have a significant effect on customer satisfaction directly but in this hypothesis 6 the product quality had a significant effect on customer satisfaction indirectly through perceived value.

This result is in accordance with the research by (Razak, Nirwanto and Triatmanto, 2016) which also found that product quality had a significant effect on customer satisfaction indirectly through perceived value. However, this results have difference with the research by (Razak, Nirwanto and Triatmanto, 2016) where the difference lies in the role of mediating the perceived value variable. In the research of (Razak, Nirwanto and Triatmanto, 2016) resulted the perceived value variable acted as a partial mediator, while in this research the perceived value variable acted as a full mediator.

**H7 : Perceived Value Mediated the Effect of Price on Customer Satisfaction (accepted)**

Based on the result, the path from price to customer satisfaction through perceived value has a coefficient of 0.196 and significant value 0.017. These numbers conclude that the more appropriate the price of the iPhone will also increase the perceived value of the iPhone users to the product which indirectly also can contribute significantly in increasing the iPhone user satisfaction to the product by 19.6%. Thus, the perceived value variable in this research acted as a full mediation variable between the effect of price on customer satisfaction, because it is proved from the result of hypothesis 3 that found that price did not have a significant effect on customer satisfaction directly but in this hypothesis 7 the price had a significant effect on customer satisfaction indirectly through perceived value.

This result is in accordance with the research by (Razak, Nirwanto and Triatmanto, 2016) which also found that price had a significant effect on customer satisfaction indirectly through perceived value. However, this result have differences with the research by (Razak, Nirwanto and Triatmanto, 2016) where the difference lies in the role of mediating the perceived value variable. In the research of (Razak, Nirwanto and Triatmanto, 2016) the perceived value variable acted as partial mediator, while in this research the perceived value variable acted as a perfect mediator.
5. Conclusion

This research proved that perceived value had a significant effect on customer satisfaction; product quality and price had a significant effect on perceived value; and product quality and price did not significantly effect customer satisfaction directly, but indirectly affected customer satisfaction significantly through perceived value. Thus, the clauses of the findings explained that perceived value acted as a perfect mediators on the effects of product quality on customer satisfaction and price on customer satisfaction. These all found facts describe the useful of the full research model to contribute both to the academics and practical issues. For the academics, this research strengthens the previous causality theories, and figures the side of rejected hypothesis that supported by the same previous findings. For the practitioners, this model can be used as a reference to contribute to the formulation of their strategy in achieving the customer satisfaction especially for the leaders of the research object. The limitation of this research resides the scope of the object and the number of variables. The further researchers can develop this research model tested by adding other mediation variables such as online marketing or customer relationship management.

References


