The Study of Customer Satisfaction on Natural Skincare Products for MSME’s E-Business Sustainability

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Abstract. The Covid-19 pandemic causes all activities carried out online and increases the demand for natural skincare products. E-business is a promising business model during the pandemic and post-pandemic for MSMEs that sell skincare products made from natural ingredients. This research aimed to define the influence of quality and price of natural skincare products on customer satisfaction, which can support the sustainability of MSMEs’ E-business. The object of this research is Zavennie, an MSME that sells green skincare products using the B2C E-business model. This study uses a quantitative approach by employing a survey distributed through an online questionnaire. The respondents of this research are customers who have bought Zavennie products. The data analysis method applied in this research is multiple linear regression. The results revealed that product quality and price partially and simultaneously had a significant influence on customer satisfaction. The findings in this study also indicate that improving product quality and determining the proper selling price could support the sustainability of MSMEs’ E-Business which produces skincare products made from natural ingredients. The findings of this study will provide a reference for MSMEs that operates E-Business to enhance product quality and determine appropriate selling price to maintain customer satisfaction. For further study, it is suggested to apply a wider research object and involve more respondents to gain a deeper insight regarding factors that influence customer satisfaction and its impact on the sustainability of MSMEs E-Business model.

1 Introduction

The majority of business ventures in Indonesia are in the form of MSMEs. In 2018 Indonesia had 64.2 million (99.99%) of MSMEs [1]. Technology disruption has driven MSMEs to implement E-business models in their business activities. The E-business model in Indonesia is widely used by MSMEs (Kementrian Komunikasi dan Informatika Republik Indonesia 2015). In fact, [2] discovered that the E-business models such as business-to-business (B2B), business-to-consumer (B2C), and consumer-to-consumer (C2C) are suitable to be applied in Indonesia. However, many MSMEs are reluctant to operate the E-business model due to limited access and difficulties in establishing partnerships in the marketplace [3].

Further analysis is needed so that E-business is massively applied by MSMEs in Indonesia. In addition, it is also necessary to examine the action to maintain the sustainability of MSME’s E-business in Indonesia. The COVID-19 pandemic has forced most activities conducted online. The pandemic also influences MSME’s business activities in terms of increasing implementation of the E-business model. Furthermore, it is essential to maintain the E-business of MSMEs in the post-pandemic era to expand the business exposure and increase financial performance.

Skincare products have become a necessity that is classified as a primary need. Hence, it drives a tight competition in the skincare business because of the great demand by consumers [4]. New competitors in the skincare market cause the customers to feel confused and anxious about selecting the appropriate type of skincare. Deciding which skincare products to purchase is critical for customers to prevent undesirable things such as skin damage. The issues often faced by customers regarding skincare products are lack of knowledge about the ingredients, differences between the actual product quality and product advertised, and illegal products circulating in the market. These problems cause customers to feel uneasy and fearful when they want to purchase skincare products. Hence, these concerns induce the customers to use skincare products made from natural ingredients (green skincare). In addition, these issues also provoke the customers to demand the presence of natural skincare products at affordable prices. Therefore, it is necessary to conduct a study on consumer satisfaction to support the sustainability of the E-business model implemented by MSMEs producing skincare products made from natural ingredients.

One of the MSMEs that implements the B2C E-business model and produces skincare products made from natural ingredients is Zavennie. In general, Zavennie is a new business venture engaged in skincare products made from natural ingredients (green skincare). Following the recent phenomenon, Zavennie also operates online B2C marketing. In addition,
Zavennie also sells skincare products made from natural ingredients at affordable prices. Zavennie's income statement growth rate is relatively good because there has been a significant increase in sales of its skincare products. Business prospects and growing sales performance are indicators of Zavennie's success in implementing the E-business model. Hence, it is considered an attractive point to conduct a further study concerning Zavennie's customer satisfaction which can support the sustainability of the E-business model implemented.

1.1 Objectives

This study aimed to examine the influence of the quality and price of natural skincare products toward consumer satisfaction to maintain the sustainability of MSMEs' E-business. This study has originality in terms of research object that involves a new business venture in the form of MSMEs. The findings in this study will provide a reference for MSMEs' E-business to improve product quality and determine appropriate selling prices in order to maintain customer satisfaction and business continuity.

2 Literature review

The intensive business competition requires the business enterprise to offer quality and value-added to distinguish their products from their competitors. Product quality becomes one of the consumer's concerns before making a purchase. The reliabilities of product quality are embedded in the minds of consumers. In addition, customers are also increasingly critical of what they receive and expect from a product. [5] argues that the ability to fulfill consumer demands will determine consumer satisfaction which also reflects the quality of the product; hence every business venture should make optimal endeavours to improve the quality of its products in order to meet consumer expectations. If it is not following customer expectations, then a business venture will lose its potential customers. [6] even stresses that the ability to fulfill the consumer expectations will create consumer satisfaction which will encourage repeat buying; on the contrary if consumers are dissatisfied with the product's quality, it will drive the consumers to switch to other brands. [7] also emphasize that product quality can affected customer satisfaction; furthermore, it is determined by product performance, additional product features, conformity with specifications, reliability, durability, aesthetics (product appearance), and serviceability. Based on this, the issue of product quality should be examined regarding customer satisfaction [8].

Price is one of the aspects that consumers consider before buying a product. Furthermore, the selling price affects consumer perceptions. Selling price is an indicator of value when it is linked with the perceived benefits of an item. [9] even assert that price is an indicator of product quality. When determining the value of an item, consumers will compare the ability of an item or service to meet their needs with the substitute goods or services. According to [10], there are four indicators regarding the price factor i.e., affordability, competitiveness, appropriateness with benefits, and suitableness with product quality. Therefore, price also could affect consumer satisfaction. Hence, the selling price also needs to be considered because it is associated to customer satisfaction [11].

Consumer satisfaction is crucial because it will impact company' financial performance and public perception of a product [12]. In addition, customer satisfaction can also be a differentiating factor in the market or business competition [13]. However, [14] argues that one of the biggest challenges for E-business is providing and maintaining customer satisfaction. It implies the importance of the management team's ability to provide high quality products, exceptional service, and competitive selling prices to succeed the competition in E-business. Furthermore, research by [15] reveals that consumer satisfaction can support the development of business ventures, boost brand recognition, and lessen negative word of mouth from consumers. These findings display the importance of achieving and even maintaining customer satisfaction for business venture.

The product quality and price are components of the marketing mix which aims to fulfill sales targets. There are several indicators of customer satisfaction such as the suitableness of expectations, the increasing intention of repeat orders or revisiting, and willingness to recommend to others [16]. Research conducted by [4], [17-19] reveals that the product quality and price have a significant and positive influence toward customer satisfaction. Therefore, there is an influence between the price and product quality towards customer satisfaction. Below is the hypothesis in this study:

H1: The product quality has a significant influence toward customer satisfaction
H2: The price has a significant influence toward customer satisfaction
H3: The product quality and price have a significant influence toward customer satisfaction.

3 Methods

This study is a quantitative research. The population in this research were customers who had bought Zavennie products in or outside Malang City. The amounts of samples in this study are 50 customers determined by the census technique, i.e., the total number of people who have purchased Zavennie products during February - December 2021. The measurement scale in this study will use a questionnaire where the respondents' answers will be measured using Likert's scales [20]. The objective of employing the Likert's scales is to discover the respondent's answer in numerical scores from 1-5 such as strongly disagree, disagree, neutral, agree, and strongly agree.

The instrument test in this research consists of validity and a reliability test [21]. The classical assumption test consists of normality, multicollinearity, heteroscedasticity [21], autocorrelation and linearity test [22]. The data analysis method is descriptive analysis to
determine the average and total value [23] by using the scale range formula used in the descriptive analysis [24] and using verification analysis methods consisting of multiple linear regression analysis [25] and coefficient of determination [26]. In addition to employ descriptive and verification analysis, this study also uses a hypothesis test consisting of two tests, i.e., the t-test and the F-test [27].

4 Data collection

The research data collected in this study is in the form of primary data. The primary data in this study acquired through online questionnaire, which will provide detailed and accurate information to find solutions of the pre-existing problems.

5 Results and discussion

5.1 Numerical results

The multicollinearity test in this study indicates that the tolerance value is 0.611 and the VIF is 1.636. Therefore, there is no tolerance value below 0.10. Furthermore, the VIF value is less than 10. Hence, there is no multicollinearity. In addition, the heteroscedasticity test shows that the significance level of the product quality is 0.729 > 0.05, and the significance level of the price is 0.675 > 0.05. Hence, there is no heteroscedasticity issue. Table 2 display the result of heteroscedasticity test in this study:

Table 2. Linearity test (anova table).

<table>
<thead>
<tr>
<th></th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Satisfaction</td>
<td></td>
</tr>
<tr>
<td>Product</td>
<td>(Combined)</td>
</tr>
<tr>
<td>* Between Groups</td>
<td>.000</td>
</tr>
<tr>
<td>Linear</td>
<td>.000</td>
</tr>
<tr>
<td>Deviation from Linear</td>
<td>.884</td>
</tr>
<tr>
<td>Within Groups</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td></td>
</tr>
<tr>
<td>Price</td>
<td>(Combined)</td>
</tr>
<tr>
<td>* Between Groups</td>
<td>.000</td>
</tr>
<tr>
<td>Linear</td>
<td>.000</td>
</tr>
<tr>
<td>Deviation from Linear</td>
<td>.268</td>
</tr>
<tr>
<td>Within Groups</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
</tr>
</tbody>
</table>

This study also calculate the coefficient of determination. The Adjusted R Square coefficient determination value is 0.590. It means that the product quality (X1) and the price (X2) affect Zavennie’s consumer satisfaction by 59.0%, while the remaining 41.0% is affected by other factors. Adjusted R Square value will be associated with the interpretation of the coefficient. The correlation is very strong if the coefficient interval is 0.80-1000; the correlation is strong if the coefficient interval is 0.60-0.799; the correlation is quite strong if the coefficient interval is 0.40-0.599; the correlation is weak if the coefficient interval is 0.20-0.399, and the correlation is very weak if the coefficient interval is 0.00-0.199. Hence, the value of Adjusted R Square is 59.0% which indicates that the relationship level between variables in this research model is quite strong. Table 3 summarize the Adjusted R Square calculation in this study:

Table 3. Coefficient determination (adj r square) model summary.

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.779a</td>
<td>.607</td>
<td>.590</td>
<td>.38889</td>
</tr>
</tbody>
</table>

5.2 Graphical results

The normality test in this study used the one-sample Kolmogorov-Smirnov test. The test results indicated a significant value of 0.183. Hence, the significant value is 0.183 > 0.05 which indicates that the data is distributed normally. Figure 1 depicted the result summary of normality test in this study:

Fig. 1. Normality test (one sample Kolmogorov-Smirnov test).
In addition for the normality test, the histogram graph is in a bell-shaped line and does not deviate to the right or left. Hence, the data in this study is normally distributed and fulfills the assumption of normality. Figure 2 below display histogram graph of the normality test in this study:

![Fig. 2. Histogram graph of the normality test.](image)

Furthermore, the data or points in this study gathered around the diagonal line and followed the diagonal line. Therefore, the residuals of the regression model are normally distributed in this study. Figure 3 display the result of normality test from P-P Plot Curve:

![Fig. 3. The result of normality test from P-P plot curve.](image)

### 5.3 Proposed improvements

Overall, statistical results indicate the relationship between variables that can affect customer satisfaction. The variables used in this research are product quality and price. In particular, the findings in this study regarding the significant influence of the product quality toward customer satisfaction support the opinion of [8], which describes that reliable product quality will be embedded in the minds of consumers so that it can influence customer decisions in making purchases. Based on the research findings, the sustainability of Zavennie's E-business as an MSME that produces natural skincare products can be accomplished by underlining consistency or enhancing product quality. Zavennie can ensure the sustainability of the B2C E-business model by paying attention to the function of product quality as described by [7], such as durability, aesthetics, and perceived quality. These functions could improve product quality and increase Zavennie's customer purchase intentions. If the product quality is consistently maintained, it will also contribute to customer retention due to customer satisfaction with the quality of Zavennie's products.

The findings in this study also discover that the price factor has a strong influence on Zavennie's customer satisfaction. These findings confirm the research of [11], which state that the price factor could influence customer perceptions on the product and eventually customer satisfaction. The findings in this study also reveal the need to apply the right pricing strategy. Zavennie can maintain the sustainability of their E-business by paying attention to price aspects such as price suitability with benefits, competitiveness, compliance with product quality, and affordability [10]. The consistency of the pricing strategy with the product's benefits could improve Zavennie's customer satisfaction because customers feel that they get skincare products made from natural ingredients at a proportional price. The proper pricing strategy not only influences customer satisfaction, but also create value for Zavennie's products. This will reflect the added value in the eyes of customers so that they will feel satisfied with the value received from the money paid.

The research findings confirm the previous research by [4], [17-19] which state that the product quality and price have a significant and positive influence toward customer satisfaction either partially or simultaneously. In particular, the results of this study imply that the sustainability of Zavennie's E-business as an MSME that produces skincare products made from natural ingredients is achieved by maintaining product quality. Exemplary product quality is an opportunity and creates a competitive advantage in building customer satisfaction. By improving the product's quality, customers will trust Zavennie's products. Concerning the price factor, Zavennie should be able to determine the proper pricing strategy because, in the skincare business, price is a crucial consideration for customers. The right pricing strategy also supports Zavennie to compete with the prices of similar products from competitors. Besides product quality and correct selling price, building close relationships with customers could create a pleasing experience. Eventually, it will drive customers to make repeat purchases on Zavennies's products.

### 5.4 Validation

The validity test for all question item scores is valid. All scores for each question are more than the R-table value, which is 0.2787. The value of the R-table is obtained from the formula df (N-2). The N value is the number of respondents which is 50 customers and employs a two-way test significance level of 0.05. Table 4 display the summary of the validity test:

<table>
<thead>
<tr>
<th>No</th>
<th>Variable (X)</th>
<th>No Item</th>
<th>R Statistic</th>
<th>Symbol</th>
<th>R Table</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Product Quality (X)</td>
<td>Product1</td>
<td>0.955</td>
<td>&gt;</td>
<td>0.2787</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Product2</td>
<td>0.644</td>
<td>&gt;</td>
<td>0.2787</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Product3</td>
<td>0.510</td>
<td>&gt;</td>
<td>0.2787</td>
<td>Valid</td>
</tr>
<tr>
<td>2</td>
<td>Price (X)</td>
<td>Price1</td>
<td>0.756</td>
<td>&gt;</td>
<td>0.2787</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Price2</td>
<td>0.611</td>
<td>&gt;</td>
<td>0.2787</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Price3</td>
<td>0.606</td>
<td>&gt;</td>
<td>0.2787</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Price4</td>
<td>0.626</td>
<td>&gt;</td>
<td>0.2787</td>
<td>Valid</td>
</tr>
<tr>
<td>3</td>
<td>Customer Satisfaction (Y)</td>
<td>CS1</td>
<td>0.696</td>
<td>&gt;</td>
<td>0.2787</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CS2</td>
<td>0.739</td>
<td>&gt;</td>
<td>0.2787</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CS3</td>
<td>0.767</td>
<td>&gt;</td>
<td>0.2787</td>
<td>Valid</td>
</tr>
</tbody>
</table>
The reliability test in this study also indicated that all variables were reliable. The product quality Cronbach's Alpha is 0.792 > 0.6, so H0 is accepted. The price Cronbach's Alpha is 0.741 > 0.6, so H0 is accepted. The customer satisfaction Cronbach's Alpha is 0.760 > 0.6, so H0 is accepted. Table 5 summarize the reliability test in this study.

Table 5. Reliability test.

<table>
<thead>
<tr>
<th>Variable</th>
<th>R table</th>
<th>R statistic</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Quality (X1)</td>
<td>0.792</td>
<td>0.6</td>
<td>Valid</td>
</tr>
<tr>
<td>Price (X2)</td>
<td>0.741</td>
<td>0.6</td>
<td>Valid</td>
</tr>
<tr>
<td>Customer Satisfaction (Y)</td>
<td>0.760</td>
<td>0.6</td>
<td>Valid</td>
</tr>
</tbody>
</table>

Moreover, multiple linear regression analysis revealed a constant of 0.712. Therefore, if the product quality and price are 0, then the customer satisfaction at Zavennie is 0.712. Furthermore, if there is an increase in product quality by one unit, there will be an increase in customer satisfaction of 0.364. In addition, if there is an increase in the price by one unit, then the customer satisfaction will increase by 0.469. The hypothesis testing in this study employed the t-test and F-test. The t-statistic value was obtained through the SPSS program. The t-table value was obtained with the provisions of t-table = t (0.05 / 2; n-k-1) with a significance of 5% (0.05). So t-table = t (0.025 ; 47) = 2.012. The value of n is the number of samples, while the value of k is the total independent variable. Figure 4 display the multiple linear regression coefficient test and the result of t-test in this study:

![Fig. 4](image)

The result of multiple linear regression coefficient test and t-test.

The value of t-statistic for the product quality (X1) is 3.893 > 2.012 (t-table) and the significant value is 0.000 < 0.05. Therefore, H0 is rejected and H1 is accepted for product quality. Hence, the product quality partially has a positive influence on Zavennie's customer satisfaction. In addition, the table above also displays the value of t-statistic for the price (X2) is 3.491 > 2.012 (t-table) and a significant value of 0.001 < 0.05. Hence, H0 is rejected, and H2 is accepted for the price. Therefore, the price partially has a positive effect on Zavennie's customer satisfaction.

Besides running the t-test, this study also employs the F-test to test the hypothesis. The value of F-statistic was obtained through the SPSS program. The F-table value was obtained with the provision that F table = F (k; n-k) with a significance of 5% (0.05). So F-table = F (2; 48) = 3.19. The value of n is the number of samples. The value of k is the total of the independent variable. The value of F-statistic is 36.238 > 3.19 (F-table) and a significant value of 0.000 < 0.05. Therefore, H0 is rejected and H1 is accepted. Hence, the product quality and the price simultaneously has a positive influence toward Zavennie's customer satisfaction.

The hypothesis testing indicates that price has a higher regression coefficient value than the product quality. Therefore, the price has a greater influence than the product quality. Based on the sig value on the t-test of 0.000, product quality has a partial and significant influence toward customer satisfaction. In addition, the sig t-test value on the quality product is less than the sig value of 0.05. It reveals that the product quality influences customer satisfaction. Furthermore, the sig value on the t-test is 0.001. Hence, the price has a partial and significant influence toward customer satisfaction. This findings also reveal the value of the t-test sig on the price is smaller than the sig value of 0.05. Therefore, the price also influences customer satisfaction.

The hypothesis test for the F-test displays a sig value of 0.000. Therefore, the product quality and the price have a simultaneous and significant effect toward customer satisfaction. Moreover, the value of the F-test sig on the product quality and the price is smaller than the sig value of 0.05. Hence, the product quality and the price affect customer satisfaction. The coefficient of determination in this study reveals the Adjusted R Square is 0.590 or 59.0% that confirms this research model is quite strong. The Adjusted R Square displays the influence's magnitude of the product quality and price toward customer satisfaction. The remaining 41.0% is affected by factors not involved in this study.

Hypothesis testing reveals that product quality and price simultaneously influence consumer satisfaction. It implies that product quality and selling price require particular attention due to their significant influence on consumer satisfaction. This finding also supports the thought [9] that price is an indicator of product quality. On the other hand, product quality can also be a factor that determines the selling price of the product. Selling prices in accordance with product quality that meet consumer expectations will foster the achievement of consumer satisfaction.

If examined separately, the hypothesis test in this study indicates that partially both product quality and the selling price also have a significant influence on consumer satisfaction. Product quality in accordance with consumer expectations will cause consumers feel satisfied. The findings in this study also support the opinion of [5] which emphasizes the ability of business venture to not only fulfill consumer demand, but also provide good quality products in accordance with consumer expectations. It signifies the importance of improving or maintaining product quality to satisfy consumers. As stated by [6] consumer satisfaction will encourage repeat buying. Hence, satisfied consumers will drive the creation of brand loyalty.

However, the hypothesis test in this study also display interesting findings. The hypothesis test reveals that price variable has greater influence than product quality toward consumer satisfaction. This finding also strengthens the view of [9] which states that the selling price is an indicator of product quality. The selling price in accordance with the product quality will lead to
consumer satisfaction because consumers feel they have spent costs proportionate with the quality obtained. Therefore, it is crucial for a business venture to set the right selling price that fulfill consumer expectations toward product quality.

The results of hypothesis testing in this study typically show the critical role of product quality and selling price on consumer satisfaction. [12] argue that consumer satisfaction will impact financial performance and product perceptions in the market. If examined based on the results of hypothesis testing in this study, the selling price that proportionate with the product quality will improve purchases. Hence it will boost the business's income. Furthermore, high quality product could create a positive perception. It is because the product considered by consumers able to provide the satisfaction. In addition, [13] also stated that customer satisfaction can be a differentiating factor for the business ventures. The results of hypothesis testing in this study support this opinion. The appropriate selling price and good product quality will distinguish a business venture from its competitors. Hence, the selling price and product quality that can satisfy consumers can be a competitive advantage for a business.

6 Conclusion

The findings in this research reveals that product quality partially has a significant and positive influence toward customer satisfaction. In addition, the selling price partially also has a significant and positive influence toward customer satisfaction. Furthermore, this study find that simultaneously product quality and price have a significant and positive influence toward customer satisfaction where the relationship between the research model is quite strong. Based on those findings it could be concluded that MSMEs which produce skincare products made from natural ingredients can maintain the sustainability of their E-business by paying attention to the product quality and selling price aspects. These two aspects need to assess carefully. Fail to do so will bring a significant impact in the future. Both product quality and price factors influence consumer satisfaction and the company's financial performance. Hence, these two factors need to be considered to guarantee the sustainability of the MSMEs business. The findings of this study will provide a reference for MSMEs that operates E-Business model to enhance product quality and determine appropriate selling price to maintain customer satisfaction. For further study it is suggested to apply a wider research object and involve more respondents to gain a deeper insight regarding factors that influence customer satisfaction and its impact on the sustainability of MSMEs E-Business model.

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