The Effect of Perceived Quality, Price, and Product Safety on Loyalty Consumer XYZ Products

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Abstract

Herbal skincare products are becoming more popular nowadays as consumers' concern regarding the negative side effects of synthetic ingredients are rising as well. XYZ is a newcomer herbal skincare brand from Indonesia and currently has not become one of the 10 famous cosmetic brands in Indonesia. This research was conducted to determine the description of consumer perceptions regarding the quality, price and safety of XYZ products and its influence on consumer loyalty. Questionnaires are distributed online by using google forms to make it easier to cover a wide area. Data collection is done by nonprobability sampling method using purposive and snowball sampling. There were 400 respondents obtained with the criteria of women who have bought and used XYZ products in Indonesia. This research used quantitative, qualitative and descriptive analysis methods. The obtained data was then analyzed by using multiple linear regression method with the help of SPSS software. Based on the conducted research, the results showed the average consumer agrees that XYZ has good product quality, affordable prices and safe to use. Perceived quality, price and safety have a significant effect on the XYZ consumer loyalty products, both partially and simultaneously. Quality perception has the strongest influence whereas, safety perception has the weakest influence on the consumer loyalty.
Keywords: *consumer loyalty, price perception, quality perception, safety perception, XYZ*

1. INTRODUCTION

Based on market research and cosmetic outlook data for 2009-2017, skincare is the most popular cosmetic product category for Indonesian women. Skincare is beneficial for treating skin hygiene and health (Tranggono, 2007).

Nowadays, natural ingredients are becoming more popular as the main ingredients of skincare. According to the Natural Products Association (NPA) in Emerald et al. (2016), products are claimed to be natural if they contain a minimum of 95% ingredients from natural sources. Compared to synthetic skin care, herbal products are lightweight, biodegradable, and environmentally friendly.

One of Indonesia's skincare brands that consistently promotes natural concepts is XYZ. This brand was founded in 2008, which is a newcomer compared to competitors such as Sari

Ayu (1973) and Mustika Ratu (1975) (Heru, 2018). As a newcomer brand, the XYZ brand awareness is high when compared to the Sari Ayu and Mustika Ratu brands. However, based on previous research conducted by Suardi (2018), it was found that 44% of XYZ consumers who were classified as not loyal.

Consumer loyalty has an important role in a company, maintaining consumers means improving financial performance and performance of the company's survival (Nurullaili, 2013). Various factors influence consumer loyalty.

Based on previous research, there are several dominant factors that influence product purchase intention and customer loyalty, namely perceived quality (Lee et al., 2019; Rahma, 2018; Minawati, 2017; Fitriani, 2018), price perception (Moslehpour et al., 2016; Minawati, 2017; Fitriani, 2018), and safety perceptions (Ghazali et al., 2017). These three

variables are also strengthened from the results of preliminary interviews conducted by researchers to XYZ consumers regarding the reasons for purchasing XYZ products.

This is what underlies researchers to analyze the effect of perceived quality, price, and safety on XYZ consumer loyalty. The results of this study can be used as a reference in making marketing strategies, in order to increase the number of purchases on old consumers (repurchase).

2. MATERIAL AND METHODS

The questionnaire consists of 3 parts, that are the questions demographic characteristics of respondents, questions about perceptions of quality, price and product safety of XYZ products and the last section were 22 items that asked about perceptions of quality, price and product safety towards consumer loyalty of XYZ products. This question was created by modifying relevant research and which was submitted by the researcher.

We measured the questionnaire on the variable part using a Likert scale (1-5) to show consumer agreement on each item stated, ranging from strongly disagreeing to strongly agreeing. We distributed the questionnaire online and found 400 female respondents who had bought and used XYZ products. Profile of respondents shown in Table 1.

Table 1 Profile of Respondents

	Category	Total
Age	>20	40
	20-25	313
	26-31	33
	<31	14
Education	Junior High School	4
	Senior High School	131
	Diploma	32
	Bachelor (S1)	223
	Postgraduate (S2/S3)	10
Profession	Student	194
	General employees	113
	House wife	18
	Freelancer	45
	ect	30
Income	< Rp1.000.000	131
	Rp1.000.000 – Rp2.000.000	123
	Rp2.000.001 - Rp3.000.000	51
	Rp3.000.001 – Rp4.000.000	29
	> Rp4.000.001	66

The overall value of the Corrected Item-Total Correlation (r count) is above 0.132 (r table), so that all statement items can be said to be valid and fit for use as measurement items. Then, the Cronbach alpha coefficient of 0.889 which means that it has a good reliability value.

The 400 respondents collected were then grouped into three categories: 110 respondents ex-consumers, 35 new respondents and 255 loyal customers. Ex-consumers are consumers who have bought and used XYZ products but now no longer use them. Newcomer consumers are consumers who have just used XYZ products for less than 1 month. Loyal consumer categories in this study are consumers who have been using XYZ products for over 1 month so we assume it to have made a repeat purchase. This grouping is done to analyze perceptions in each consumer category.

The effect of perceived quality, price, and safety on XYZ consumer loyalty was analyzed using multiple linear regression with the help of SPSS.

3. RESULT AND DISCUSSION

3.1 Result

3.1.1 Residual Normality Test

Table 2 Results of residual normality tests

Kolmogorov-Smirnov[a]		
Statistic	**df**	**Sig.**
0,076	255	0,001

Based on the residual normality test above, a significance value of 0.001 was obtained. Because p value (0.001) $< \alpha = 0.05$, it can be concluded that the data are not normally distributed, therefore the assumption of residual normality is not fulfilled.

Failure to fulfill classical assumptions makes the validity of the regression results obtained. Therefore, there will be a handling of residual normality assumptions by transforming dependent data (customer loyalty).

3.1.2 Box-Cox Transformation

The data transformation used is the Box Cox transformation, namely the transformation

of single parameter λ (lambda). Estimating the parameters can be searched using the maximum likelihood method with the help of Minitab, the results are as follows:
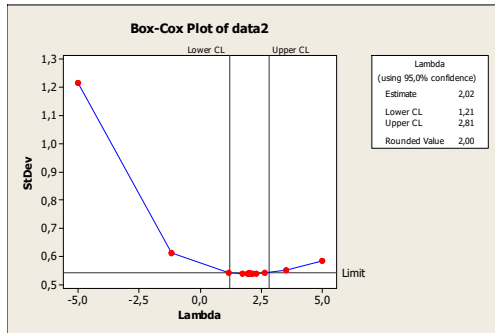

Figure 1 Box-Cox Transformation

At the bottom of Figure 1 there is a Rounded Value = 2 which shows the best lambda value. So the Likert score on the dependent variable, the value is raised to two.

3.1.3 Residual Normality Test After Transformation

Table 3 Results of residual normality tests after transformation

Kolmogorov-Smirnov[a]		
Statistic	**df**	**Sig.**
0,050	255	0,200

Based on the residual normality test above, a significance value of 0.200 is obtained, so it can be concluded that the data are distributed and it meets the assumption of residual normality.
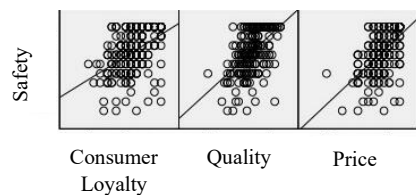
3.1.4 Linearity Test

Figure 2 Linearity test results

Scatter matrix in Figure 2 which shows the relationship between variables. The line formed between the points is a straight line so that there is a linear relationship between the variables of quality, price, and safety to the variable of

customer loyalty. Therefore, the linearity assumption is fulfilled.

3.1.5 Multicollinearity Test

Table 4 Multicollinearity test results

Model	Collinearity Statistics	
	Tolerance	**VIF**
(Constant)		
Quality Perception	0,477	2,095
Price Perception	0,430	2,327
Safety Perception	0,622	1,607

A good regression model is a model in which multicollinearity does not occur, as indicated by the Tolerance value of all independent variables> 0.10 and VIF <10. From the outputs above, the Tolerance and VIF values for each independent variable are 0.477 and 2.095; 0.430 and 2,327; and 0,622 and 1,607 so that it can be concluded that the assumption of the absence of multicollinearity is fulfilled.

3.1.6 Heteroscedasticity Test

Table 5 Heteroscedasticity test results

Model	Sig.
(Constant)	0,009
Quality Perception	0,052
Price Perception	0,092
Safety Perception	0,558

Based on Table 5 shows the significance value on perceived quality, price, and safety variables in sequence, 0.052; 0.092 and 0.558. The significance value of the three variables is over 0.05 so it can be concluded that all dependent variables (quality, price and safety) are homoscedastic. Because all independent variables are homoscedastic (heteroscedastic indication does not occur) so it can be concluded that this assumption is fulfilled.

3.1.7 Coefficient of Determination

Table 6 Coefficient of determination

Model	R Square	Adjusted R Square	Durbin-Watson
1	0,451[a]	0,445	2,116

Table 6 shows the coefficient of determination (R^2) obtained is equal to 0.451, which means as much as 45.1% of the dependent variable (customer loyalty) can be

explained by the independent variables (quality, price and safety) the rest is explained by variables outside this research model.

3.1.8. Simultaneous Test and Model Feasibility

Table 7 Simultaneous test and feasibility of the model

Model	df	F	Sig
Regression	3	68,766	0,000
Residual	251		
Total	254		

From the results of processing the F table values for df 1 = 3 and df 2 = 251 at the significance of 0.05 is 2.64 F calculated (68.766)> F table (2.64) so it can be concluded that the independent variable (perceived quality, price and safety) simultaneously influence the dependent variable (consumer loyalty).

A model is said to be feasible if F is significant $<\alpha = 0.05$ and vice versa. In Table 7 it is known that the significance value is 0,000 which means less than 0.05 then H_0 is rejected so it can be concluded that the regression model is feasible to use.

3.1.9 Partial Test

Table 8 Partial test results

Model	Unstandardized Coefficients		Sig.
	B	Std. Error	
(Constant)	-10,601	2,127	0,000
Quality Perception	3,093	0,763	0,000
Price Perception	2,774	0,554	0,000
Safety Perception	0,847	0,390	0,031

The partial test shows how far the influence of an independent variable individually explains the dependent variable. If sig <0.05, it can be concluded that the independent variable has a significant effect on the dependent variable. Based on Table 8, it can be seen that partial perceptions of quality, price and safety have a significant effect on consumer loyalty of XYZ products.

3.1.10 Multiple Linear Regression Model

Based on the results of the study, a regression model was formulated as follows (the dependent variable here is the variable Y which has been raised to two):

$$Y^2 = -10,601 + 3,093X_1 + 2,774X_2 + 0.847X_3 + \text{error}$$

From the regression equation it can be explained that:

1. A constant of -10,601 indicates the magnitude of the variable in the loyalty of consumers, if all the independent variables (X) value is 0 (zero).

2. The coefficient of perceived quality variable (X_1) is 3.093, meaning that each increase of 1 unit of perceived quality variable (X_1) will increase the square of the consumer loyalty variable by 3,093 units.

3. The coefficient of price perception variable (X_2) of 2.774, meaning that each increase of 1 unit of price perception variable (X_2) will increase the square of the consumer loyalty variable of 2.774 units.

4. The coefficient of safety perception variable (X_3) is 0.847, meaning that each increase of 1 unit of safety perception variable (X_3) will increase the square of the consumer loyalty variable by 0.847 unit.

3.2 Discussion

3.2.1. Quality Perception of XYZ products

From the results of the study it can be concluded that the respondent believed that the quality of the XYZ product is good because the average respondent's answer items on this variable is 3.9 which is close to the agreed answer (score 4).

Based on Table 2, it is known that most consumers in all categories feel positive benefits after using XYZ products. The benefits most felt by consumers are the effects of moisturizing and smoothing the skin. This happens because the types of products used by the majority of respondents are scrubs and olive oil.

Consumer perception of the speed of the perceived effect becomes the lowest value item on the quality variable. As many as 132 respondents or 33% of respondents stated that they felt the effects of using XYZ products after using at least the first week. However, the majority of new consumer groups felt the

benefits of using skincare since the first time they were used, as many as 19 respondents. This difference is influenced by several factors including human factors, cosmetics factors, environmental factors and the combined factors of the three (Tranggono, 2007).

Perception of quality is the most widely agreed upon by respondents and considered good, namely regarding the distinctive aroma possessed by XYZ products. A total of 257 respondents liked the aroma of fruit because it provides a fresh and long-lasting scent. Most consumers like the skincare texture of soft and

non-sticky gels and creams. The most preferred form of packaging by most consumers is the tube. The shape of the packaging is influenced by the texture shape of the product used. Facts quoted from the official website fimela.com that according to dermatologist Victor Georgescu explained that the tube packaging is the safest packaging used for cosmetic products, apart from single-dose products or those that are only used once. With this tube packaging, contamination with air or pollution around can be completed so as not to disturb the contents of the product.

Table 9 Quality Perception

Category		Ex-Consumer (people)	New Consumer (people)	Loyal Consumer (people)
Positive Effects Perceived	Moisturize the skin	82	30	231
	Smooth skin	47	14	117
	Brighten the skin	14	4	47
	Protect from the negative effects of UV rays	12	11	18
	the other	36	12	57
Results Start to Feel	One week of use	35	9	88
	First time use	25	14	60
	One month of use	29	4	61
	More than one month	11	7	38
	I do not feel the benefits	10	1	8
Favorite Scents	Fruit	71	25	161
	Flower	54	10	102
	the other	2	4	5
Preferred Texture	Soft	92	30	195
	Not sticky	59	21	164
	the other	2	0	15
Preferred Form of Skincare	Gel	57	17	144
	Cream	67	21	118
	the other	54	16	102
Preferred Form of Packaging	Tube	83	27	197
	Jar	36	14	76
	the other	37	9	59

3.2.2 Price Perception of XYZ products

Table 10 Price Perceptions

Purchasing Power of Respondents	Ex-Consumer (people)	New consumers (people)	Loyal consumers (people)
Rp15.000 – Rp50.000	65	20	156
Rp50.000 - Rp100.000	31	6	72
Rp100.001–Rp500.000	8	4	17
< Rp15.000	6	5	7
> Rp500.000	0	0	3

From the results of the study it can be concluded that respondents consider the price of XYZ products affordable because the average respondent's answer items on this variable is 4.1 which exceeds the agreed answer score (score 4). The item of price perception statement with the highest average value perceived by consumers as an indicator with the best value is a statement that the price of XYZ products is affordable, under the purchasing power of consumers. Whereas, the statement item with the lowest average value is the statement that the

price spent on XYZ products is proportional to the benefits that consumers get.

Based on the results of the study, most respondents in all categories of consumers, felt that the price of skin care was under the purchasing power of respondents, between Rp15,000 to Rp50,000 This shows that XYZ products have a relatively affordable price because people with income less than Rp1,000,000 can already buy XYZ products.

3.2.3 Safety Perception of XYZ products

Table 11 Safety perceptions

Negative Effects Perceived	Ex-Consumer (people)	New consumers (people)	Loyal consumers (people)
No negative effects were felt	94	30	203
Irritating	10	5	4
Itchy	6	1	7
Dry	0	0	7
Hot	1	0	1
Beruntusan	0	0	1

From the results of the study it can be concluded that the respondents believed that the XYZ product is safe to use because the average respondent's answer items on this variable is 4 which is the same as the score on the agreed answers. Safety perception statement items with the highest average value perceived by consumers as indicators with the best value are statements that XYZ products are suitable for consumers' skins and do not cause skin irritation.

In Table 4, it shows that the majority of consumers, 327 respondents, are suitable because they do not feel the negative effects of using XYZ products. Therefore, it can be concluded that the XYZ product is safe to use by most Indonesian consumers. There is also a negative effect that occurs, that are, sore and itchy, with the largest percentage of 14.5% in the ex-consumer category. This might be the reason for consumers to stop or replace XYZ skincare products with other products.

3.2.4 Effect of Quality Perception on XYZ Consumer Loyalty

Based on the results of multiple linear regression tests, it is evident that the first hypothesis "perceived quality affects the

consumer loyalty of XYZ products" is accepted. The β value obtained was 3.093 with a significance of 0,000. In this study, the variable perceived quality has the greatest influence on consumer loyalty of XYZ products. It also showed the same results were also in a study conducted by Fitriani (2018). Quality perception variable in this study was measured using six indicators i.e. performance quality, suitability quality, durability, reliability, style (unique aroma and texture) and design (color, shape and information on the packaging).

The existence of positive consumer perceptions formed about the quality of XYZ products will increase the desire of consumers to own the product which is then realized by making repeated purchasing decisions. This is consistent with the theory issued by Kotler and Armstrong (2008) that the better the quality of the product produced will provide an opportunity for consumers to make purchasing decisions.

The results of this study are supported by previous research conducted by Ardiansyah (2014), Nurhayati (2011), and Pratama (2015) in Minawarti (2017) and Cahyaningrum (2007) proving that product quality has an impact or influence on consumer loyalty.

3.2.5 Effect of Price Perception on XYZ Consumer Loyalty

Based on the results of multiple linear regression tests, it is proven that the second hypothesis "price perception has a significant effect on consumer loyalty of XYZ products" is accepted. The β value obtained was 2,774 with a significance of 0,000. In this study, the price perception variable has a second degree of influence after perceived quality. We measured the variable price perception in this study using four indicators, Price affordability (according to purchasing power), price suitability with product quality, price competitiveness and price suitability with benefits.

The results of this study are in line with previous studies conducted by Minawati (2017) and Cahyaningrum (2007) which state that price perceptions affect consumer loyalty. Price will be an important enough consideration for consumers in deciding their purchase, consumers will compare the price of the product of their choice and then test whether the price is appropriate with the value of the product, and the amount of money they have to spend (Kotler and Keller, 2009). Respondents in this study, the majority compared prices before making a purchase decision. Most product brands compared before purchasing XYZ products, namely, 106 respondents compared with Nature Republic products and 96 respondents compared with The Body Shop products. Both brands are popular overseas herbal skincare brands in Indonesia. The price comparison of the two brands is far more expensive than XYZ products because the target market is middle to upper, whereas, XYZ products have a lower middle market target.

As stated in the theory of price perception by Peter and Olson (2000) from Cahyani (2017) states that price perception is related to how price information is understood by consumers and gives a deep meaning to them. The assessment of the price of a product is said to be expensive, cheap or ordinary from each individual is not the same, because it depends on the individual's perception that is based on the environment and individual conditions. Most respondents in this study were students with an

average monthly income of less than Rp1,000,000 and the average every month expenditure for skincare needs between Rp50,000 and Rp150,000. With this background, respondents felt that the price of XYZ products was affordable because it was under the respondents' purchasing power of Rp15,000 to Rp50,000 for one skincare product.

3.2.6 Effects of Safety Perceptions on XYZ Consumer Loyalty

Based on the results of multiple linear regression tests, it is evident that the third hypothesis "safety perceptions influence consumer loyalty XYZ products" is accepted. The β value obtained was 0.847 with a significance of 0.031. In this study, the variable of safety perception has the weakest influence on consumer loyalty of XYZ products. We measured safety perception variables in this study using three indicators namely, no irritation, photosensitization, acne or other physical blockages occurred.

The natural ingredients contained in the product have given consumers peace of mind to enjoy the use of the product. The results of this study are in line with research conducted by Ghazali et al. (2017) which states that the safety value has a significant effect on consumer attitudes towards purchasing organic products. Furthermore, Yin et al. (2010) in Ghazali et al. (2017) revealed that 67.5% of the reasons respondents bought for natural products was their perception of a lack of the chemical content. Ghazali (2017) research results in Malaysia also revealed a positive relationship between product safety and the intention to repurchase personal care products.

3.2.7 Effects of Quality, Price, and Safety Perceptions on XYZ Consumer Loyalty

In the part of the simultaneous test results (Test F) it is known that hypothesis 4 is accepted so the perception of quality, price and safety simultaneously (together) affects the consumer loyalty of XYZ products. Judging from the value of the coefficient of determination (R^2) or the total contribution of perceived quality, price and overall safety to the consumer loyalty of

XYZ products is 45.1%. From these results we can see that the contribution of perceived quality, price and safety to consumer loyalty to XYZ products is not too large. That is because there are other factors that also contribute to consumer loyalty of XYZ products by 54.9% which is outside the regression model of this study. These factors can come from the producer side related to marketing and production systems or external factors such as economic, social and political conditions and government policies.

Based on observations and interviews, another factor that influences sales is leads to promotion. At present, the world is entering industry 4.0. which resulted in the concept's emergence of Beauty 4.0 in beauty standards. Quoted from the official website of marketeers.com states that beauty standards 4.0 involve various dimensions, ranging from public opinion, social awareness, psychosocial, and various other things. Therefore, the promotion variable might be one variable outside this study that can affect consumer loyalty.

CONCLUSION

Most consumers, both according to the category of ex-consumers, new consumers and loyal consumers agreed that XYZ products have good quality, affordable prices and are safe to use.

Perception of quality, price and safety have a significant effect on consumer loyalty of XYZ products both partially and simultaneously.

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