

(RESEARCH ARTICLE)



## The influence of product quality and brand image on customer loyalty with price as an intervening variable in lawe sikap brand amdk products

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### Abstract

This study aims to determine the effect of product quality and brand image on customer loyalty with price as an intervening variable on Lawe Attitude brand bottled water products. The sampling method uses probability sampling with simple random sampling technique with the number of samples obtained as many as 91 respondents. The data testing method used is the Structural Equation Model (SEM) using the SmartPLS application. Based on the test results, it is concluded that product quality has an effect on price. Brand image affects price. Product quality affects customer loyalty. Brand image affects customer loyalty. Price affects customer loyalty. Product quality and brand image affect customer loyalty through price as an intervening variable in Lawe Attitude brand bottled water products.

**Keywords:** Product Quality; Brand Image; Customer Loyalty; Price

### 1. Introduction

The current level of commercial performance, both globally and domestically, is influenced by globalization. Consumers are becoming more selective when making purchases for both primary and secondary needs as a result of globalization. In some situations, the effects of globalization result in additional goods in the market, but it also affects consumer purchasing decisions.

It must be recognized that intense competition exists in many industry sectors. Currently, many sectors are competing to fulfill the desires of the Indonesian people. The bottled drinking water business is one of the fastest growing businesses in Indonesian society.

Drinking water is one of the needs that must be met every day. People need something useful in this modern age, like drinking water for example. When it comes to drinking water, many people prefer bottled drinking water (AMDK). One of the reasons is the geographical location of the home environment which makes the water unfit for drinking because the water smells.

Utama (2017: 182) explains that loyalty, or the ability to be loyal, refers to a person's commitment to a particular brand of goods. Customer behavior in which they make repeated purchases and are satisfied with the product is called loyalty. Griffin (2003) claims that a company's ability to retain consumers is one of its most significant assets because loyal customers are more likely to make repeat purchases, avoid competing businesses, and are not affected by similar goods.

From some of the opinions of the experts above, it can be concluded that support for certain brands, goods, services, or places of business is referred to as customer loyalty. Brands are often used by customers as an incentive for their loyalty. The desire to keep using a product or service despite the possibility that you can find something better elsewhere is known as loyalty.

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Lawe Sikap is a form of company engaged in industry, especially in the field of selling bottled drinking water (AMDK). The Lawe Sikap factory was founded by Mr. Sulaiman in 2012 in Batu Mbulan Asli village, Babussalam sub-district, Southeast Aceh district.

To find out the existence and loyalty of users of Lawe Sikap bottled water products in Southeast Aceh, researchers conducted an initial survey of 30 respondents who had used Lawe Sikap products, which can be seen in Table 1 below:

**Table 1** Initial Survey

Statements	Score	Answers
I always buy Lawe Sikap AMDK products every month.	97	Some customers always buy Lawe Sikap AMDK products every month.
I like Lawe Sikap AMDK products and do not switch to other AMDK products.	83	Some customers dislike Lawe Sikap AMDK products and switch to other AMDK products.
I choose Lawe Sikap AMDK products because Lawe Sikap AMDK products are the best for me.	79	Some customers do not choose Lawe Sikap AMDK products because Lawe Sikap AMDK products are not very good.
I always recommend Lawe Sikap AMDK products to my friends.	75	Some customers do not recommend Lawe Sikap AMDK products to their friends.
Total Score	334	
Average Score	83,5	

Source: Data processed 2023

From Table 1. above, it can be seen from the initial survey of 30 respondents that the customer loyalty of Lawe Sikap products is not so good, it can be seen from the results of the respondents' answers where the scores on the second, third and fourth statements are below the average score, it can be concluded that some customers do not like Lawe Sikap AMDK products and switch to other AMDK products, some customers do not choose Lawe Attitude AMDK products because Lawe Attitude AMDK products are not so good and some customers do not recommend Lawe Attitude AMDK products to their friends. If this continues to happen, it can certainly cause Lawe Sikap AMDK to sell less and sell well in the market.

The results of research conducted by Saridewi and Nugroho in 2022 state that customer loyalty is influenced by several factors including product quality, brand image, price and customer satisfaction.

The first factor affecting customer loyalty is product quality. Product quality is very important for businesses because it can affect company reputation, customer loyalty, and profits generated. Good product quality can improve the company's reputation in the eyes of customers and win the competition. According to Kotler and Armstrong (2012), product quality is the ability of a product to demonstrate its function, this includes overall durability, reliability, accuracy, ease of operation, and product repair, as well as other product attributes.

The physical state, functionality, and properties of a product, whether goods or services, are all considered aspects of product quality. This includes features such as ease of use, durability, accuracy, and reparability, as well as other components intended to meet and satisfy the needs of customers or consumers.

Product quality is one of the keys to competition among businesses offered to consumers. Although some individuals believe that expensive goods are of higher quality, consumers generally want to get high-quality products for the money they spend. If businesses can practice this, then they will be able to win more customers and maintain current levels of customer satisfaction.

From the results of pre-research conducted by researchers by interviewing several customers who have used Lawe Sikap products where customers say that Lawe Sikap products have disadvantages where the boxes used tend to be more easily damaged and the packaging bottles are too thin so they break easily. The straw given in the 220ml package is also faded in color, not clear and clean, giving the impression that the customer is dirty.

The next factor that influences customer loyalty is brand image. Brand image is a collection of brand associations that are usually connected to brand memory in a significant way. Consumer perception of the brand and attitude towards the brand are part of the brand image. Consumer loyalty to a brand and their intention to make a purchase can be influenced by brand image. Brand image can also be influenced by elements such as word of mouth marketing, price, promotions, product quality, and advertising. Building a positive brand image is essential for businesses to influence consumer decisions and keep them loyal.

A strong brand is an important aspect for every company because it can obtain various advantages, such as good quality perception, higher brand loyalty, greater profit margins and additional opportunities for brand expansion. The following is the brand image rating data for bottled drinking water (AMDK) in 2022 which is presented in Table 2 below:

**Table 2** Brand Image Rating of Bottled Drinking Water (AMDK) in 2022

Product name	Rating Percentage (2022)
Aqua	57,20%
Le Minerale	12,50%
Ades	6,40%
Cleo	4,20%
Club	3,80%

Source : [www.topbrand-award.com](http://www.topbrand-award.com)

From Table 2 above, you can see the AMDK brand image rating for 2022, where the top 5 rankings are filled with Aqua, Le Minerale, Ades, Cleo and Club products, while Lawe's Attitude products are not ranked in the top brand award because they are only local products. This of course proves that the brand image of AMDK Lawe Attitude products is less well known and sought after by the public.

A factor that is no less important in influencing customer loyalty is price. Price is the amount of money charged for a product or service, or the amount of value that consumers exchange. The cost of a good or service is expressed as a price. The monetary value set by a business in exchange for the products or services exchanged can also be understood as price. Product costs have a significant role in the decision-making process around purchasing and can influence consumers' interest in making a purchase. The actual value of a product or the quantity required to produce a good or service is known as the cost price. Other types of price include selling price, which is the cost price plus the amount of the seller's expected profit, and subjective price, which is set based on subjective considerations. In the context of price wars or market price fluctuations, price adjustments may also be discussed.

**Table 3** List of Comparison of Bottled Drinking Water Prices in Southeast Aceh

External Product Name	Size	Price
Aqua	220 ml	Rp 33.000
Cleo	220 ml	Rp 23.000
Clean q	220 ml	Rp 15.000
Indodes	220 ml	Rp 17.000
Club	220 ml	Rp 21.000
Local Product Name	Size	Price
Lawe Sikap	220 ml	Rp 14.000
Khutung Khampak	220 ml	Rp 12.000
Lawe q	220 ml	Rp 12.000
Lawe Murni	220 ml	Rp 12.000

Source: Data processed in 2023

One way to measure the price of a product is by looking at price competitiveness. To find out the competitiveness of the price of Lawe Siswa AMDK products with other AMDK products, researchers conducted a survey at several shopping places in the Southeast Aceh area by comparing the prices of Lawe Siswa AMDK with other AMDK products and can be seen in Table 3 above:

From Table 3 above, you can see a comparison of the prices of bottled drinking water in Southeast Aceh, where the highest price for foreign products is Aqua products with a price of IDR 33,000 per 220ml box. Meanwhile, the highest local product price is the Lawe Ilmu product with a price of IDR 14,000 per 220ml box. This certainly proves that the price of local AMDK Lawe products is not able to compete with other local competitor products. Where the price of the local AMDK Lawe Ilmu product is more expensive than the local AMDK product Khutung Khampak, Lawe q and Lawe Murni.

Based on the research background above, the author is interested in researching the title "The Influence of Product Quality and Brand Image on Lawe Brand AMDK Products. Attitudes towards Customer Loyalty with Price as an Intervening Variable".

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## 2. Material and methods

### 2.1. Structural Equation Model (PLS)

#### 2.1.1. Outer Model Analysis

This analysis involves several calculations:

- Convergent validity is the factor loading value on a latent variable that contains indicators. The expected value exceeds 0.7.
- Discriminant validity is the cross-loading value of factors which is useful in showing how much discriminant the construct has. This is done by comparing the value of the targeted construct, which must be greater than the value of the other construct.
- Composite reliability is a construct value that has a high reliability value if the reliability value is greater than 0.7.
- Average Variance Extracted (AVE) is an average variance of at least 0.5.
- Cronbach alpha is a calculation to prove composite reliability results where the minimum size is 0.6.

#### 2.1.2. Inner Model Analysis

Testing the relationships between latent constructs is the goal of this model analysis. This analysis involves the following calculations:

- R square is the coefficient of determination for endogenous constructs. "The limiting criteria for the R square value are in three classifications, namely 0.67 as substantial; 0.33 as moderate; and 0.19 as weak," as explained by Chin (1998) in Sarwono (2015).
- Hypothesis testing (t – statistics) in hypothesis testing can be seen from testing t-statistics and probability values. To test hypotheses using statistical values, for alpha 5% the t-statistic value used is 1.96. So the criterion value for acceptance/rejection of the hypothesis is  $H_a$  accepted and  $H_0$  rejected when the t-statistic is  $>1.96$ . To reject/accept the hypothesis using probability,  $H_a$  is accepted if the p value  $<0.05$  (Husein:2015:21).
- Hypothesis testing (t-statistics) in smartPLS is obtained using the Bootstrapping method. The bootstrap approach is a nonparametric representation for the precision of PLS estimates. The bootstrap procedure uses the entire original sample to carry out resampling again (Ghozali and Hengky: 2015: 80).

### 3. Results

#### 3.1. Outer Model Evaluation Results

##### 3.1.1. Discriminant Validity

**Table 4** Fornell Larcker Criterion Results

	<b>Brand Image</b>	<b>Price</b>	<b>Product quality</b>	<b>Customer loyalty</b>
Brand Image	0.878	-	-	-
Price	0.382	0.846	-	-
Product quality	0.341	0.512	0.820	-
Customer loyalty	0.317	0.728	0.751	0.797

Source: Data processed from SmartPLS, 2023

From the table above, it can be seen that the Fornell Larcker test results are as follows:

- The brand image correlation value of 0.878 is greater than the correlation value of other variables which include the price variable of 0.382, the product quality variable of 0.341, and the customer loyalty variable of 0.317.
- The price correlation value of 0.846 is greater than the correlation value of other variables which include the product quality variable of 0.512, and the customer loyalty variable of 0.728.
- The product quality correlation value of 0.820 is greater than the customer loyalty variable correlation value of 0.751.
- The correlation value for customer loyalty is 0.797.

The conclusion from the Fornell Larcker Criterion test is that all variables have passed the Fornell Larcker Cross Criterion criteria with a higher AVE square root value compared to the correlation value between the variables.

**Table 5** Composite Reliability

	<b>Composite Reliability</b>
Brand Image	0.910
Price	0.883
Product quality	0.925
Customer loyalty	0.874

Source: Data processed with SmartPLS, 2023

Based on the table above, it is known that the Composite Reliability value for each variable is greater than 0.6. This shows that each variable has met Composite Reliability, so it can be concluded that each variable has a high level of reliability.

**Table 6** Cronbach's Alpha

	<b>Cronbach's Alpha</b>
Brand Image	0.853
Price	0.800
Product quality	0.903
Customer loyalty	0.809

Source: Data processed with SmartPLS, 2023

Based on the table above, the Cronbach's Alpha value for each variable is > 0.7. Thus, these results can show that each research variable has met the Cronbach's Alpha value requirements so that it can be concluded that each variable is declared reliable and has a high level of reliability.

### 3.2. Inner Model Evaluation Results

#### 3.2.1. Coefficient of Determination Results/R-Square Value

**Table 7** R-square

	R Square	R Square Adjusted
Price	0.335	0.340
Customer loyalty	0.743	0.734

Source: Data processed with SmartPLS, 2023

The analysis results from the adjusted R-square value show that:

- The variables Product Quality (X1) and Brand Image (X2) together (simultaneously) are able to explain the Price variable by 0.340 or 34%, while the remaining 66% is explained by other factors.
- The variables Product Quality (X1) and Brand Image (X2) together (simultaneously) are able to explain the Customer Loyalty variable of 0.734 or 73.4%, while the remaining 26.6% is explained by other factors.

### 3.3. Hypothesis Test Results

#### 3.3.1. First Hypothesis

First Hypothesis: Product quality has a significant influence on price. Based on the results, it can be seen that product quality has a significant influence on price. This can be seen from the T statistic of 3.799 > 1.96 with a P value of 0.000 < 0.05.

#### 3.3.2. Second Hypothesis

Second Hypothesis Brand Image has a significant influence on price. Based on the results, it can be seen that Brand Image has a significant and influential effect on price. This can be seen from the T statistic of 3.937 > 1.96 with a P Value of 0.000 < 0.05.

#### 3.3.3. Third Hypothesis

Third Hypothesis Product Quality has a significant and influential effect on Customer Loyalty. Based on the results, it can be seen that product quality has a significant influence on customer loyalty. This can be seen from the T statistic of 10.465 > 1.96 with a P value of 0.000 < 0.05.

#### 3.3.4. Fourth Hypothesis

Fourth Hypothesis Brand Image has a significant and influential effect on Customer Loyalty. Based on the results, it can be seen that Brand Image has a significant and influential effect on customer loyalty. This can be seen as a T statistic of 3.092 > 1.96 with a P Value of 0.002 < 0.05.

#### 3.3.5. Fifth Hypothesis

Fifth Hypothesis Price has a significant and influential effect on Customer Loyalty. Based on the results, it appears that price has a significant and influential effect on customer loyalty. This can be seen from the T statistic of 6.899 > 1.96 with a P value of 0.000 < 0.05.

#### 3.3.6. Sixth Hypothesis

Sixth Hypothesis: Product quality has a significant influence on customer loyalty through price as an intervening variable. Based on the results, it can be seen that product quality has a significant influence on customer loyalty through price as an intervening variable. This can be seen as a T statistic of 3.937 > 1.96 with a P value of 0.000 < 0.05.

### 3.3.7. Seventh Hypothesis

The seventh hypothesis is that brand image has a significant and influential effect on customer loyalty through price as an intervening variable. Based on the results, it can be seen that brand image has a significant and influential effect on customer loyalty through price as an intervening variable. This can be seen as a T statistic of  $3.124 > 1.96$  with a P value of  $0.002 < 0.05$ .

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## 4. Discussion

### 4.1. The Influence of Product Quality on Prices for Lawe Sikap Brand Amdk Products

Based on hypothesis testing, it was found that product quality has a significant effect on price. Price and product quality may be related. Numerous studies have shown that product quality impacts consumer satisfaction and purchasing decisions, which can then impact product prices. It is important to remember that these influences may change depending on the specific context and sector. Higher product quality can sometimes justify a higher price. Consumers may be willing to spend more money on a product if they believe the product is of higher quality. On the other hand, consumers may not accept a high price if they believe the quality of the product is below standard.

### 4.2. The Influence of Brand Image on Prices for Lawe Sikap brand AMDK products

Based on hypothesis testing, it was found that Brand Image has a significant influence on price. The value of a brand can influence the price of a product. According to some studies, a strong brand reputation can support higher prices. Customers may be more willing to pay more for goods that have a positive brand reputation and are perceived to be of higher quality. Customers are more likely to buy a product even if the price is higher when there is a positive perception of the brand. A strong brand reputation can also influence how consumers judge the quality of a product, which in turn can influence how much they are willing to pay.

### 4.3. The Influence of Product Quality on Customer Loyalty in Lawe Sikap brand AMDK products

Based on hypothesis testing, it was found that product quality has a significant effect on customer loyalty. Customer loyalty is influenced by product quality, improving the quality of a product can of course attract consumer attention, so that consumers become more loyal in using the product..

### 4.4. The Influence of Brand Image on Customer Loyalty in Lawe Sikap brand AMDK products

Based on hypothesis testing, it was found that Brand Image has a significant and influential effect on Customer Loyalty. Brand image influences customer loyalty. By creating a brand that is remembered among the public, it can of course create a sense of interest in customers, so that customers become more familiar with the product and become loyal to the product.

### 4.5. The Effect of Price on Customer Loyalty in Lawe Sikap brand AMDK products

Based on hypothesis testing, it was found that price has a significant effect on customer loyalty. The relationship between price and customer loyalty is formed through several interacting factors. First, the price of a product or service has a direct impact on customers' perceived value. Customers will evaluate whether the price offered is commensurate with the benefits they get from the product or service. If prices are deemed too high or not commensurate with the perceived value, customers may look for more affordable alternatives.

### 4.6. The Influence of Product Quality on Customer Loyalty Through Price as an Intervening Variable in Lawe Sikap brand AMDK products

Based on hypothesis testing, it was found that product quality has a significant and influential effect on customer loyalty through price as an intervening variable. Good product quality can increase customer loyalty, while affordable prices can maintain customer loyalty. Good product quality supported by an affordable price can of course attract consumers to determine their stance so that consumers become more loyal to the product.

### 4.7. The Influence of Brand Image on Customer Loyalty Through Price as an Intervening Variable in Lawe Sikap brand AMDK products

Based on hypothesis testing, it was found that brand image has a significant and influential effect on customer loyalty through price as an intervening variable. Brand image influences customer loyalty. By creating a brand that is remembered among the public, of course it can create a sense of interest in customers, so that customers become more

familiar with the product. Coupled with affordable prices, customers will make regular purchases, creating an impression of loyalty to a product.

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## 5. Conclusion

The conclusions in this research are:

- Product quality influences the price of Lawe's AMDK brand AMDK products
- Brand Image Influences the Price of Lawe Sikap brand AMDK products
- Product Quality Affects Customer Loyalty to Lawe's AMDK Brand AMDK products
- Brand Image Influences Customer Loyalty to Lawe Attitude brand AMDK products
- Price Affects Customer Loyalty to Lawe's AMDK Brand AMDK products
- Product Quality Affects Customer Loyalty Through Price as an Intervening Variable in Lawe Sikap AMDK brand products
- Brand Image Influences Customer Loyalty Through Price as an Intervening Variable in Lawe Sikap brand AMDK products

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## Compliance with ethical standards

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### *Disclosure of conflict of interest*

The authors declare that they have no conflicts of interest.

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