The Effect of Product Quality, Brand Image, Price, and Advertising on Purchase Decision and its Impact on Customer Loyalty of Morinaga Milk in Aceh

Adnan*, Mukhlis Yunusb, Muhammad Adamc, Hafasuddind, *Ph.D Student at Management Science of Syiah Kuala University, Aceh Indonesia. Lecturer of Malikussaleh University, b,c,dLecturer at Doctoral Program in Management Science Syiah Kuala University, Email: adnanberdan@yahoo.co.id

The lack of studies regarding purchase decisions about customer loyalty is the reason for the emergence of new concepts about the influence of product quality, brand image, price and advertising on purchase decisions that have implications for the loyalty of Morinaga milk customers in Aceh. This study uses quantitative analysis where the data analysis technique is the structural equation model, SEM Amos, and uses forty references related to product quality, brand image, price, advertising, decision making, and customer loyalty. It includes 250 respondents as the study samples. The results of the study reveal that product quality, brand image, price, and perceived advertisement have a significant effect on the purchase decision of customers and have an effect on customer loyalty. These results provide support for the concept of the relationship between decision making and customer loyalty and empirical evidence on the mediating effects of decision making on the relationship between marketing mix elements and customer loyalty.

Key words: Product Quality, Brand Image, Price, Advertisement, Decision Making, Customer Loyalty.
Introduction

The dairy industry in Indonesia is one of the strategic food industries and has great potential to be developed. In addition to the opportunity to improve community nutrition, the development of the dairy industry can also improve welfare because it fundamentally develops the dairy industry to build the community economy, create employment opportunities and increase income and family welfare.

The Milk Processing Industry has an important role in the effort to provide and fulfill community nutrition needs. This industry has a great opportunity to supply dairy products, which currently have an average consumption of 10.47 kg/capita/year and still far below ASEAN countries that consist of the Philippines 20 kg/capita/year, Malaysia 20 kg/capita/year, Thailand 20-25 kg/capita/year, and Singapore 32 kg/capita/year. The estimated increase in milk production in developing countries during 1997-2020 is estimated at 2.73% (Delgado, et al, 2001) or about 10-15 million tons per year.

Giving formula milk to babies should be done after two years of breastfeeding. However, mothers or families must have understand the content of formula milk contained in milk so that the total needs of children can be addressed. Formula milk products are intended for the infant and child sector, but the purchase decision is dominated by parents. In this case, the families of fertile couples between the age of 20 and 45.

The number of children under five based on the results of the 2015 BKKBN data collection is 19,270,715 and the Province of Aceh with a population of 5,001,953 (Centre for Data and Information, Ministry of Health of the Republic of Indonesia, 2015) has an average number of children of 100,088/year. The high number of toddlers makes Indonesia one of the biggest markets in the world for the marketing of milk. Indonesia and China are the countries with the biggest milk consumption in the world. Competition in milk development in Indonesia is expected to continue to increase along with public purchase power and lifestyle changes for transferring from breastfeeding to milk formula for toddlers.

There are two factors that influence the decision of parents in giving formula milk to children, including internal factors such as socio-economic background which includes psychological, physical health, education and knowledge, lifestyle, demography, and family income (Triana, 2012). Another internal factor is the psychological condition of the mother such as unsuccessful breastfeeding. At the same time, many women do not want to breastfeed because of a lifestyle that views breastfeeding as causing the loss of figure, Krisnatuti et al (2000), while the external factors include milk prices and advertising influences. Toddlers are recommended to consume milk three times a day to meet the
important need for calcium and phosphorus for bones, (Mc William, 1993), with calcium requirements being between 500-800 mg per day (Allen & Myers, 2006).

Competition in the dairy industry has resulted in many companies promoting various kinds of improvement in milk powder. According to Almendra & Christian (2009), purchasing decisions on products highlight three substantive elements, such as access to knowledge and management, thinking and communication skills and strategies and solutions. According to Krishnan & Ulrich (2001), marketing decision reflects the level of product attributes and prices.

Research conducted by Hallowel (1996) revealed that customer satisfaction is a prerequisite for customer loyalty. However, the market indicates the opposite fact and customer satisfaction does not guarantee that the consumer or dissatisfied customer does not change brands (Rowley and Dawes, 2000). Mittal and Lassar's study (1998) also found the same facts with Jones and Sasser (1995) including the that the vulnerability of brand switching is always caused by dissatisfaction, and satisfaction does not always guarantee customer loyalty. Furthermore, it shows that the relationship between customer satisfaction and customer loyalty is non-linear. Similarly, the statement of Dowling and Uncles was quoted by O'Malley (1998) which reminded marketers that the relationship between satisfaction and loyalty is also non-linear. However, other studies have found that satisfaction does not influence loyalty. For example, Jones and Sasser (1995) and Stewart (1997) concluded that satisfaction and loyalty do not move together (linear), Reicheld (1996) while Jones and Sasser (1995) and Stewart (1997) concluded that satisfaction and loyalty are separate Reicheld (1996).

Bloomer and Kasper (1995) state that the relationship between satisfaction and loyalty is not simple and straightforward due to the level of elaboration of customers who must act as a moderator between satisfaction and loyalty. Likewise, as stated by Oliver et.al (1992) satisfaction and loyalty are non-linear. When associated with a purchase decision variable that acts as a moderator, the variable that starts with the stage of need recognition to post-decision making an evaluation means that the results of evaluations conducted by consumers produce satisfaction from a particular product brand so that consumers will repurchase the brand and create brand loyalty. This study outlines a different perspective from the views of many researchers so far which maintain that satisfaction is a variable that mediates customer loyalty, (Bloomer and Kasper 1995; Oliver et.al 1992; Straus and Neuhaus, 1997, Cassel, 2001). However, this study attempts to further examine the role of a purchase decision in mediating customer loyalty as a novelty (Novelty) because there are still very similar studies which provide a gap for researchers to conduct further research.
This study aims to analyse and examine the effect of several elements of the Marketing Mix on Consumer Purchase Decisions and their impact on the loyalty of Morinaga milk customers in Aceh. The study’s originality is that researchers integrate several variables at once and also try to change the mediation pattern that has been made between satisfaction variables with purchasing decision variables namely product quality, brand image, price, as exogenous variables on purchasing decisions as mediating or intervening variables impacting on customer loyalty to Morinaga brand milk in Aceh.

**Literature Review**

*The Relationship between Product Quality and Purchasing Decision*

The results of research conducted by Ackaradejruangsri (2012) reveals that product quality influences the purchase decisions of consumers in Thailand. The decision to be loyal to the brand or switch to another brand is influenced by a number of factors: brand names (Aaker, 1996); product quality (Garvin, 1988); Price (Cadogan and BFoster, 2000); service quality (Mittal and Lasser, 1996), and promotion (Evan, et. al. 1996). Although consumers, Macdonald and Sharp (2000), are accustomed to and willing to buy products, therefore brand awareness is still an important factor in influencing purchase decisions.

Purchase decisions of consumers can be influenced if the product has higher brand awareness (Dodds, Monroe, & Grewal, 1991; Grewal, Monroe & Krishnan, 1998). It explains that the product with high brand awareness has a better market share and quality of evaluation.

*The Relationship between Brand Image and Purchase Decision*

Aaker (1996) asserts that brand image can be a set of significant relationships to consumers. According to Yoo (2000), brand loyalty has the power to influence consumer decisions to buy the same product or brand. Yoo (2000) argues that there is a positive relationship between brand loyalty and image. According to Richardson et al. (1994), consumers use brand image products in reducing the overall perception of certain products. Consumers can infer products with a higher brand image as being of superior quality and values (Richardson et al., 1994). Kotler and Armstrong (1996) state that brand images are used by consumers to evaluate perceptions of product quality. Similarly, Macdonald and Sharp (2000), are accustomed to and willing to buy products highlighting the fact that brand awareness is still an important factor in influencing purchasing decisions.
The Relationship between Price and Purchase Decision

The decision to be loyal to a brand or switch to another brand depends on a number of factors: product quality (Garvin, 1988), price (Cadogan and Foster, 2000), and promotion (Evan, et. Al, 1996). According to Lau et al, (2006), seven factors influence consumer loyalty: brand name, product quality, price, design, store environment, promotion and service quality.

The Relationship between Ads and Purchase Decision

A part of the sales promotion function is not only to strengthen consumer commitment but also to encourage repeat purchases. The effect of sales promotion on consumer behaviour has been extensively investigated in the literature (Nagar, 2009). Sales promotion has an impact on various aspects of purchase decision of consumers such as brand choice, time of purchase, quantity and brand switching (Nijs, Dekimpe, Steenkamps and Hanssens, 2001). Apart from a broad interest in the relationship between sales promotion and purchase behaviour, most of these studies focus on the effect of sales promotions on choices as offered (DelVecchio, Henard, Freling, 2006).

The Relationship between Purchase Decision and Loyalty

According to Kapferer and Laurent (1985), purchasing pleasure is one of five dimensions that can be used to explain the involvement of consumer purchases in a product. They define this factor as value based on product purchases, emotional appeal, and product ability to provide pleasure to an individual (Heidarzadeh & Khoshpanjeh, Rahnama, 2011). Chadori and Hol Broke (2002) regard emotions and feelings of pleasure as important elements in purchasing decisions and present an explanation for this phenomenon. They propose that products on the spectrum of profit-making must be fun (pleasure-based products). They believe that hedonism produces commitment and brand loyalty (Heidarzadeh, Khoshpanjeh & Rahnama, 2011). Kapferer and Laurent (1985) maintain that sign values are highly symbolic values associated with products by consumers. In other words, this concept reveals the level of consumer use of products for describing self-concepts and personal values (Quester & Lim, 2003).

Hypothesis and Models

This study investigates nine hypotheses as follows:

H 1: Product quality positively influences decision making
H 2: Brand image positively influences decision making
H 3: Price has a positive effect on decision making
H 4: Advertising has a positive effect on decision making
H 5: Decision making has a positive effect on customer loyalty
H 6: Product quality has a positive effect on customer loyalty
H 7: Brand image has a positive effect on customer loyalty
H 8: Price has a positive effect on customer loyalty
H 9: Advertising has a positive effect on customer loyalty

Methodology

The research is carried out by taking locations in Aceh Province and the objects are the consumers who purchase formula milk from the Morinaga BMT brand. The samples are chosen using non-probability sampling with two methods, namely the quota sampling method and purposive sampling method. The quota sampling method with a cluster system divides the range of research into several regencies/city areas. In this study, the sample size is used to adjust the data analysis, namely Structural Equation Modelling (SEM).

There are 6 (six) variables used, consisting of 4 exogenous variables and 2 endogenous variables. Hair et al. (2009) claim that the appropriate sample size for SEM is recommended to be between 100-200 for the Maximum Likelihood estimation method (ML) or 5-10 times the number of indicators (manifest variable) in the research model. Based on the above, there are as many as 25 indicators plus 9 parameters, 34 times multiplied by 7, then the number of samples in this study are 238, and if there is damaged data, unreturned questionnaires, and factually unreliable data, then 250 respondents will be used as research samples.
To measure product quality variables, researchers use the opinions of Kotler (1995), Kotler Keller (2009) and Orville, Larrache and Boyl (2005), brand indicators according to Kotler (2009), price indicators, Armstrong, (2001), advertising, Kotler, (2006), purchase decision, Kotler Keller, (2009) and Customer Loyalty, Angel (2009). These indicators are measured using a Likert scale of 1 strongly disagree to 5 strongly agree. All hypotheses are tested using Structural Equation Model (SEM) with AMOS. However, before checking data using SEM AMOS, researchers test the reliability and construct validity/indicators. For constructs of product quality, brand image, price, advertising, decision-making and customer loyalty, all items have a value of more than 0.334 (value for df = 33, α <0.05). This means that all items used to measure marketing mix attributes are valid and all constructs are reliable.

Results and Discussions

Demographics

In this section, the characteristics of respondents will be explained based on the inherent traits such as gender, current education, length of employment and age of the respondents. The purpose of displaying the characteristics of respondents is to find out the number and percentage of samples chosen so that it will help researchers in analysing and connecting between the response of participants and their respective characteristics.

Table 1: Profile of Respondents’ Demographic Distribution

<table>
<thead>
<tr>
<th>Demography</th>
<th>Category(ies)</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>47</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>203</td>
<td>81</td>
</tr>
<tr>
<td></td>
<td>Primary School</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Junior High School</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Senior High School</td>
<td>53</td>
<td>21</td>
</tr>
<tr>
<td>Education Level</td>
<td>Diploma</td>
<td>67</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Bachelor</td>
<td>78</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>Master</td>
<td>27</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>PhD</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>&lt;20 year</td>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>21-25 year</td>
<td>76</td>
<td>30</td>
</tr>
<tr>
<td>Age</td>
<td>26-30 year</td>
<td>72</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>31-35 year</td>
<td>59</td>
<td>24</td>
</tr>
</tbody>
</table>
Normality and Outlier Tests

The normality of the data can be proven by examining the values of the critical ratio for slope and kurtosis which are in the range between -2.58 and +2.58 (Hair et al, 2006), and means that the data has been normally distributed. In this study, there is no outlier data, but the normality test and data outlier have met SEM AMOS requirements.

Measurement Model Test

The measurement model test is carried out to determine the accuracy of all joint constructions. This is based on the Goodness of Fit Test criteria, namely the value of the Goodness of Fit Index, the Adjusted Goodness of Fit Test, the Tucker-Lewis Index, the Comparative Fit Index, the Root Mean Square Error of Approximation, CMIN and P-Value (Hair et al. 2006). The measurement model index reveals that the proposed model is appropriate. These appear in Table 1.

Table 2: Test the goodness of the appropriate model

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Cut Off</th>
<th>Results</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square</td>
<td></td>
<td>285.124</td>
<td>Good</td>
</tr>
<tr>
<td>The Goodness of Fit Index (GFI)</td>
<td>&gt; 0.85</td>
<td>0.893</td>
<td>Marginal</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index</td>
<td>&gt; 0.90</td>
<td>0.881</td>
<td>Marginal</td>
</tr>
<tr>
<td>(AGFI)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tucker Lewis Index (TLI)</td>
<td>&gt; 0.95</td>
<td>0.923</td>
<td>Good</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>&gt; 0.95</td>
<td>0.955</td>
<td>Good</td>
</tr>
<tr>
<td>RMSEA</td>
<td>&lt; 0.08</td>
<td>0.033</td>
<td>Good</td>
</tr>
<tr>
<td>-------</td>
<td>--------</td>
<td>--------</td>
<td>-------</td>
</tr>
<tr>
<td>CMIN/DF</td>
<td>&lt; 2.00</td>
<td>1.128</td>
<td>Good</td>
</tr>
<tr>
<td>P-Value</td>
<td>&gt; 0.05</td>
<td>0.168</td>
<td>Good</td>
</tr>
</tbody>
</table>

**Table 3: Parameter Value Estimation**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate</th>
<th>S.E.</th>
<th>C.R.</th>
<th>P</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iklan</td>
<td>0.390</td>
<td>0.078</td>
<td>13.834</td>
<td>0.006</td>
<td></td>
</tr>
<tr>
<td>Harga</td>
<td>-0.250</td>
<td>0.071</td>
<td>11.222</td>
<td>0.023</td>
<td></td>
</tr>
<tr>
<td>Citra_Merek</td>
<td>0.450</td>
<td>0.084</td>
<td>10.360</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>Kualitas_Produk</td>
<td>0.360</td>
<td>0.074</td>
<td>9.139</td>
<td>0.004</td>
<td></td>
</tr>
<tr>
<td>Kualitas_Produk</td>
<td>0.480</td>
<td>0.076</td>
<td>12.842</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>Citra_Merek</td>
<td>0.560</td>
<td>0.075</td>
<td>11.215</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>Harga</td>
<td>-0.380</td>
<td>0.085</td>
<td>10.380</td>
<td>0.008</td>
<td></td>
</tr>
<tr>
<td>Iklan</td>
<td>0.520</td>
<td>0.076</td>
<td>9.179</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>Keputusan_Pembelian</td>
<td>0.550</td>
<td>0.079</td>
<td>10.139</td>
<td>***</td>
<td></td>
</tr>
</tbody>
</table>
The next step is to modify the model by performing co-variance between errors as recommended by the system in the modification Indices (MI) section as in Table 2. The modified results are shown in Figure 2 and can be explained by the fact that the research model is in accordance with the data, excepting GFI; 893 and AGFI value of 0.881. It means that the data is in accordance with the model and can explain the model well (marginal). The value of the Goodness of Fit after the modified model can be seen in Table 2.

The estimation result of the parameter values is a tool to see the influences, direction of influences and significance. To find out whether there is an influence of exogenous variables on endogenous variables, it is necessary to estimate the parameter value analysis. The coefficient value used refers to the standard regression weight estimation values as shown in Table 3.

The co-efficient value of product quality on purchase decision is 0.074 with a significant value of 0.004 or much lower than 0.05. This means that product quality affects the purchase decision. Thus, we can conclude that the first hypothesis states "Product quality has a significant effect on purchase decision of Morinaga milk customers in Aceh Province" is accepted.

The co-efficient value of brand image on purchase decision is 0.084 which is very significant. This means that the brand image has a significant effect on the purchase decision. Thus, it concludes that the second hypothesis statement which maintains that "brand image has a positive and significant effect on purchase decisions of Morinaga milk customers in Aceh Province" is accepted.

The co-efficient value of the price on purchase decision is 0.071 with a significant value of 0.023. It means that the price significantly influences the purchase decision. Thus, it concludes that the third hypothesis statement which states that "prices have a significant influence on the purchase decision of Morinaga milk customers in Aceh Province" is accepted.

The co-efficient value of advertisement on purchase decision is 0.078 with a significant value of 0.006. This means that advertising has a significant effect on purchase decision. Thus, the research concludes that the fourth hypothesis statement which highlights that "advertising has a positive and significant effect on purchase decision on Morinaga milk customers in Aceh Province" is accepted.

The co-efficient value of purchase decision on customer loyalty is 0.079 which is very significant. It means that the purchase decision significantly influences customer loyalty. Thus, it concludes that the fifth hypothesis statement which states the purchase decision has a
significant influence on the loyalty of Morinaga milk customers in the Aceh Province is accepted.

The co-efficient value of the product quality variable on customer loyalty is 0.076 which a very significant value which means that the product quality significantly affects customer loyalty. Thus, it can be concluded that the sixth hypothesis statement which states "product quality has a significant influence on customer loyalty to Morinaga milk customers in Aceh Province is accepted.

The co-efficient of brand image on customer loyalty is 0.075 which is a very significant value. This means that the brand image has a significant effect on customer loyalty. Thus, it can be concluded that the seventh hypothesis statement which states that the brand image has a positive and significant effect on the loyalty of Morinaga milk customers in Aceh Province is accepted.

The co-efficient value of the price on customer loyalty is 0.085 with a significance value of 0.008. It means that the price significantly affects customer loyalty. Thus, it concludes that the eighth hypothesis statement which states "the price has a significant influence on customer loyalty of Morinaga milk in Aceh Province" is accepted.

The co-efficient value of advertisement on customer loyalty is 0.079 with a very significant value which means that advertising has a significant effect on customer loyalty. Thus, it concludes that the ninth hypothesis statement which states "the price has a positive and significant effect on customer loyalty of Morinaga milk in Aceh Province" is accepted.

Conclusions and Implications

Theoretical Implications

Product quality, brand image, price, and advertisement are drivers of purchase decisions of customers that impact on customer loyalty. This study aims to integrate several elements of marketing with customer loyalty mediated by consumer purchase decisions. The background for selecting purchase decision as a mediating or intervening variable is based on the opinion of Bloomer and Kasper (1995 et.al.), who concluded that simply satisfying customers is not enough to keep them loyal because they are free to make choices.

Based on the above description, the author tries to develop a new concept that will provide more meaning in the treasury of science, namely by placing purchase decision as the intervening variable where intervening variables or mediation between endogenous and exogenous variables (loyalty) mostly use customer satisfaction as an intervening variable. Like Zamora et al. (2004), state theoretically and empirically consumer satisfaction increases the loyalty factor. This means that there are still other factors that can be carried out which
can mediate between exogenous and endogenous variables, namely purchasing decision variables.

Empirical findings also provide evidence that some elements of marketing mix such as product quality, brand image, price, and advertising variables have a significant influence on purchase decision and so all of these variables also have a significant effect on customer loyalty. The decision-making model used and designed by combining it as a mediating variable is strengthened by some literature from experts and this study highlights that decision making can be used as one of the mediating variables that support loyalty for customers.

Practical Implications

The results of this study can be used to make policies or decisions in order to improve product quality, brand image, price policy, and advertising so that consumers will continue to be loyal to Morinaga formula milk for their children. Consumers need to pay attention to market prices so that Morinaga dairy products can compete in the market so that they can continue to expand their market share.
REFERENCES


Center for Data and Information, 2015, Ministry of Health of the Republic of Indonesia


Krisnatuti et al., 2000, Preparing complementary foods for breast milk. Pembangunan Swadaya Nusantara Library, Jakarta


Cassel, 2001, Modelling customer satisfaction and loyalty on aggregate levels: Experience from the ECSI pilot study, Journal, Total Quality Management, Volume 12, Issue 7-8


Garvin, 1988, Managing quality the strategic competitive edge, New York free press

Cadogan, Foster, 2000, Relationship selling and customer loyalty, Marketing

Evan, et.al. 1996, Applied consumer behaviour, Wesely publication co


Lau et al. (2006), valuating the Effect of Consumer Sales Promotions on Brand Loyal and Brand Switching Segments

Nagar K, 2009, Sales promotion has significantly influenced and brand switching decision, Sage Journal


40. Engel James F, 2009, Volume 1, consumer behaviour, Bina Rupa Aksara, Jakarta