**Product Quality, Brand Image and Pricing To Improve Satisfaction Impact on Customer Loyalty**

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**ABSTRACT**

The purpose of this study is to know and analyze the influence of product quality, brand image, and price partially or simultaneously to customer satisfaction customer loyalty. The population of this research is the UMKM customer of Emping Melinjo Industrial Sector in Banten Province.The research method used in this research is descriptive survey method and explanatory survey with sample size of 255 respondents, and data analysis method used is SEM (Structural Equation Modeling).Based on result of research, that product quality, brand image, and price partially or simultaneously have positive and significant effect of customer satisfaction with contribution equal to 53% and equal to 47% influenced by other variable not examined. Partially product quality is the most dominant variable affecting customer satisfaction. Product quality, brand image, price, and customer satisfaction partially or jointly have a positive and significant effect on customer loyalty with contribution of 84% and 16% influenced by other variable not examined. Partial customer satisfaction is the most dominant variable affecting customer loyalty. The result of research also shows that customer satisfaction is partial intervening variable on the influence of product quality, brand image, and price to customer loyalty.

**Keywords: Product Quality, Brand Image, Price, Customer Satisfaction, Customer Loyalty**.

**JEL Classification : M10**

1. **INTRODUCTION**

Banten Province is one of the big enough industrial centers and significant role in the national economy. But since the economic crisis hit Indonesia until mid-2013 the performance of this sector tends to decline. The contribution to the industrial sector to the Banten economy which was originally 37.86 percent in 2014 decreased to 35.68 percent in 2015 and continued in 2016 to 34.70 percent (PDRB Banten 2013-2016: 32). If this continues, it will threaten the viability of Indonesia's industry and economy.

The food industry is now considered to be a potential Banten commodity and contributes substantially to total non-oil and gas exports. In 2016 the contribution to this commodity exports to total non-oil and gas exports in Banten amounted to 58.70%. The value of the Banten food industry until 2015 has increased although in 2016 a slight decline. This resulted in a decrease in the contribution to food industry commodities to total non-oil and gas exports of Banten at 7.89%. Food industry in Banten is more dominated by UMKM (Office of Industry and Trade of Banten, 2016: 37).

Sentra emping melinjo, Banten is a center in the relatively location not far from the capital of the State of Jakarta, which is about 90 km, which is a potential market for the center of small and medium industries in the vicinity, for it proper formulation of appropriate development policies through data collection about the existence and the potential of the center needs to be updated. On the other hand, SMEs in the food industry sector in Banten are relatively declining, especially emping Melinjo, in detail the value of Banten food from 2012 to 2016 is presented in Table 2

**Table 2. Sales Value of UKM Food in Banten (KLUI 3.1) Year 2012-2016 (in thousands of US dollars)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Industry Sector** | **Year** | | | | |
| **2012** | **2013** | **2014** | **2015** | **2016** |
| Snack  Meat  Product  Fresh Fruit  Fresh Vegetables  Fruit + Vegetables though  Juice  **Emping Melinjo**  Beer and wine  Fruit Pieces  Processed Coffee  Herbs and spices  Other processed products | 3.467  2.301  52  0  8  67.736  5.698  **10.399**  0  226  13.253  127.276  1.443 | 11.604  1.097  46  8  7  83.962  10.103  **6.373**  35  651  10.264  100.324  1.844 | 13.004  1.258  27  17  101  65.816  3.921  **6.450**  0  421  9.519  132.360  1,708 | 13.266  647  447  28  0  53.171  4.078  **4.248**  38  661  9.704  106.193  2.409 | 17.105  1.061  690  31  12  56.686  7.373  **2.006**  0  820  11.384  80.852  3.038 |
| Amount | 231.858 | 226.317 | 234.603 | 194.890 | 181.059 |

Source: IPB, Integrated Information System of Superior Food Products, 2016.

1. **LITERATURE REVIEW**
   1. **Product Quality**

The definition of product quality by Kotler and Armstrong in Cahyono (2008: 11) is the ability of a product to perform its function; it includes the products of overall durability, reliability, precision, ease of operational repair and other valued attributes. Product quality is the ability of a product to perform its function. It includes overall robustness, reliability, precision, easy to use and repair and the value of other attributes in a product.

Furthermore, Kotler and Armstrong (2012: 229) stated that product quality is the characteristic of a product or service that bear on its ability to satisfy stator implied customer needs. Product quality is a product or service characteristic that provides the ability to meet customer needs.

Garvin in the Dawn (2008: 89), product quality is defined as a product or service in its ability to satisfy the stated or implied customer requirements. Product quality is measured by eight dimensions, ie:

1. ***Performance***, measured with product display indicators (melinjo), product hygiene (melinjo), and freshness of the product (melinjo)
2. ***Feature,*** measured by raw material quality indicator (melinjo) and product maturity (melinjo).
3. ***Reliability***, measured by product safety indicators (melinjo) and product presentation appeal (melinjo).
4. ***Conformance***, measured by product variation indicator (melinjo), conformity to product quality standards (melinjo), and product durability (melinjo).
5. ***Durability***, measured by the indicator of conformity of the product taste (melinjo) and the suitability of the product (melinjo) with the specified standard.
6. ***Service Ability***, measured by indicators of employee friendliness and employee speed in delivering the product.
7. ***Aesthetics,*** measured by product scent indicator (melinjo) and beauty of product packaging (melinjo).
8. ***Perceived Quality***, measured by indicator of conformity of promised quality standard of melinjo through promotion and buyer assessment on product.

**2.2. *Brand Image***

*American Marketing Association* (Kotler, 2009 : 258), defines a brand as its name, term, sign, emblem, design or combination, intended to identify goods or services of one of the sellers or groups of sellers and differentiate them from competitors. While Kegan (1995) in Sadat (2009: 18) defines the brand as a set of complex images and experiences in the minds of customers, who communicate expectations about the benefits to be derived from a product produced by a particular firm.

The definition of brand image according to Long-Yi Lin and Ching-Yuh Lu (2010: 18) described above, indicates that the prestige name will rely heavily on the interpretation and understanding of individual on the brand of the meaning of the existence of the mark of the individual concerned plus good or bad attitudes or judgments accompanied by individual behavioral trends toward brands.

The brand images dimension by Aaker (1996: 16) reinforced by Kotler and Keller (2009: 261) is explained through the function of brand equity, where the brand's equity will be higher as the dimensions of the brand image to grow. The dimensions of the brand image are as follows:

1. Recognize, as measured by indicators of melinjo brand marking and brand advantage over other brands
2. Reputation, as measured by brand name indicator (melinjo) and commitment in maintaining quality (melinjo)
3. Afinity, as measured by brand indicators attract consumers (melinjo) and brand uniqueness (melinjo)
4. Domain, as measured by brand (melinjo) is easily found in the market and the brand (melinjo) is widely known by the public
   1. ***Price***

Kotler (2008: 519) argues that price is the only element of the marketing mix that generates revenue, the other elements incurring costs. The price is also one of the most flexible elements of the marketing mix (the price can be changed quickly), unlike product features and distribution agreements. At the same time, price fixing and competition is also the number one problem facing the company. Yet many companies do not handle good pricing. The most common mistakes are price-oriented pricing, often less revised prices to take advantage of market changes, prices set independently on other marketing mixes and not as intrinsic elements of market positioning strategies, as well as considerably varying prices for various products, market segments and when purchasing.

In business-to-consumer (B2C) relationships, price satisfaction play an important role in competitive strategy, affecting customer buying intentions that can ultimately lead to profitability and business sustainability (Boniface et al., 2011: 47). The need for a target to attract and retain loyal customers is a company activity. Price satisfaction is an important factor affecting buyer seller relationships. Because price is one of the most flexible and varied mixed marketing elements after changing the characteristics of products and services (Dovaliene and Virvilait, 2008).

Diller (2000) states that in achieving price satisfaction is determined by the five dimensions of price, namely price transparency, price quality ratio, price fairness, relative price, reliability (price reliability).

Consumers describe the value of a product or service that corresponds to their perception of two factors: perceived price and perceived quality, or, in other words, price quality ratio. If perceived quality exceeds perceived cost, customer value is high, if the price exceeds quality, customer value is low. The perceived value as a consumer's overall assessment of the usefulness of the product is based on perceptions of what are received and what is given (Zeithaml, 1988).

* 1. **Customer Satisfaction**

Kotler and Armstrong's (2012: 13) definition of customer satisfaction is the extent to which a product's perceived performance matches a buyer’s expectation. Customer satisfaction is the level at which a performance achievement of a product received by a consumer equals the consumer's expectation.

According to Schiffman and Kanuk (2007: 9) customer satisfaction is is the individual's perception of the performance of the product or service in relation to his or her expectation. Customer satisfaction is the individual perception of the performance of goods or services related to customer expectations.

According to Kotler (2012:183) “A companies would be wise to measure customer satisfaction regularly because one key to customer retention is customer satisfaction. A highly satisfied customer generally stays loyal longer, buys more as the company introduces new products and upgrades existing products, talks favorably about the company and its products, pays less attention to competing brands and is less sensitive to price, offers product or service ideas of the company, and costs less to serve than new customers because transactions are routine”

Customer satisfaction has been defined in various ways, but the conceptualization, which seems to have achieved the greatest acceptance, is satisfaction is the evaluative evaluation of specific post-transaction choices (Bastos and Gallego, 2008). Customer satisfaction is the result of the customer's perception of the value received in the transaction or relationship - where the value is equal to the perceived quality of the service relative to the price and cost of customer acquisition (Hallowell, 1996; Heskett et al., 1990; Blanchard and Galloway, 1994). The literature contains significant differences in the definition of satisfaction, all definitions have several common elements (Giese and Cote, 2002). When examined in its entirety, three common components can be identified:

1. Consumer satisfaction is the response (emotional or cognitive).
2. Responses related to a particular focus (hope, product, consumption experience)
3. Response occurs to a certain time (after consumption, after selection, based on accumulated experience).
   1. **Customer Loyalty**

As suggested by some researchers (Kumar and Shah, 2004; Blak and Parks, 2003; Bell et al., 2005 and Dean, 2007) in Asghar Afshar Jahanshahiet. al. (2011: 256), there are two types of loyalty that is behavioral loyalty and attitude. The behavioral aspects of customer loyalty are characterized in terms of repurchase intentions, word of mouth communication, and organizational recommendations. Liu Thompkins et. al. (2010) in Asghar Afshar Jahanshahi et. al. (2011: 256), defines attitude loyalty as a good evaluation that is held with sufficient strength and stability to encourage repeatedly favorable responses to products / brands or stores. According to Kumar and Shah (2004) Consumer loyalty seems to be based on three factors. First is trusting. Consumers must trust the vendor or product they are dealing with. Second, a transaction or relationship must have a positive perceived value greater than that supplied by a competitor. Third, if marketers build the first two factors, they may be able to create a positive level of emotional attachment. That emotional response may be a commitment to their brand that is resistant to change. Today, every industry offers a variety of loyalty schemes aimed at differentiating one competitor from another. Every time a customer buys, he progresses through the buying cycle (Griffin, 2002).

According to Sheth and Mittal in Tjiptono (2005: 387) customer loyalty is a customer commitment to a brand, store, or supplier, based on a very positive attitude and reflected in consistent repeat purchases. While Engelet.al. in Hasan (2008: 84) that customer loyalty is a habit of repetitive buying behavior, linkage and high involvement in choice and characterized by external information search and alternative evaluation.

Gosling, Shang and Marlow (2005) in Osayuwamen Omoruyi and Chengedzai Mafini (2016: 46), stated that customer satisfaction achieved an increasing level of customer loyalty, increased cash flow and reduced operating costs. As a result, customers will be willing to pay more (customers will be willing to pay more) for high quality products and services.

1. **RESEARCH METHOD**

Research method used is descriptive survey method and explanatory survey method. The unit of analysis in this study is the customers of Micro Small and Medium Enterprises Melinjo Industrial Sector in Banten Province. The time horizon in this study is cross-sectional, where the research is conducted simultaneously.

Sources of data onto this study are secondary data sources of documentation or reports available to relevant institutions. While the primary data in the form of product quality, brand image, price, customer satisfaction, and customer loyalty sourced from customers Micro Small and Medium Enterprises Melinjo Industrial Sector in Banten Province.

In this study the population (unit of analysis) are the customers of the Office of Cooperatives and UKM Banten Province and there are 5 variables that required a minimum sample size of 200 respondents. This research has 64 parameters (indicator) hence obtained minimum sample size equal to 255 respondents.

1. **RESULTS AND DISCUSSION**

**4.1. Confirmatory Factor Analysis (CFA) Hybrid Model (Full Model)**

After the measurement model analysis on each construct yield a Confirmatory Factor Analysis (CFA) models on conformity test (GOF), good validity and reliability on each construct. The next step is to combine the four CFA model constructs to produce a hybrid model (full model). Based on the results of data analysis using LISREL 8.80, it is found that the overall suitability of the hybrid model (full model) is as follows.

**Table 3. SEM Compatibility Model Size (Hybrid Model)**

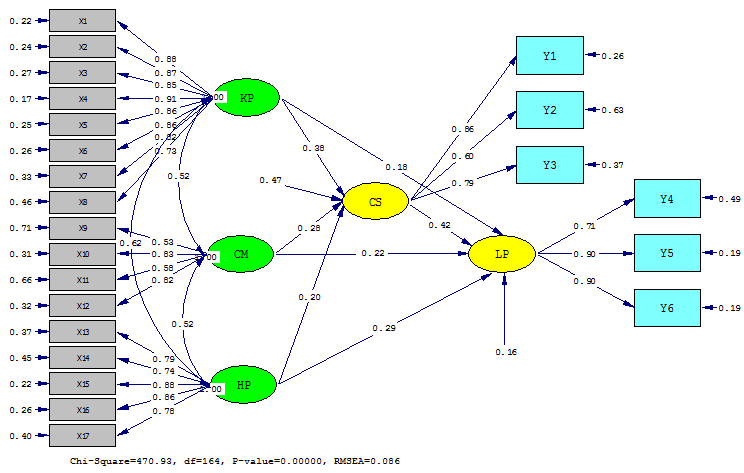
| **Indicator**  **GOF** | **Expected Size** | **Estimated Results** | **Conclusion** |
| --- | --- | --- | --- |
| ***Absolute Fit Size*** | | | |
| GFI | GFI > 0,90 | 0,90 | Marginal Fit |
| RMSEA | RMSEA < 0,08 | 0,086 | Marginal Fit |
| ***Incremental Fit Size*** | | | |
| NNFI | NNFI > 0,90 | 0,96 | Good Fit |
| NFI | NFI > 0,90 | 0,95 | Good Fit |
| AGFI | AGFI > 0,90 | 0,85 | Marginal Fit |
| RFI | RFI > 0,90 | 0,94 | Good Fit |
| IFI | IFI > 0,90 | 0,96 | Good Fit |
| CFI | CFI > 0,90 | 0,96 | Good Fit |

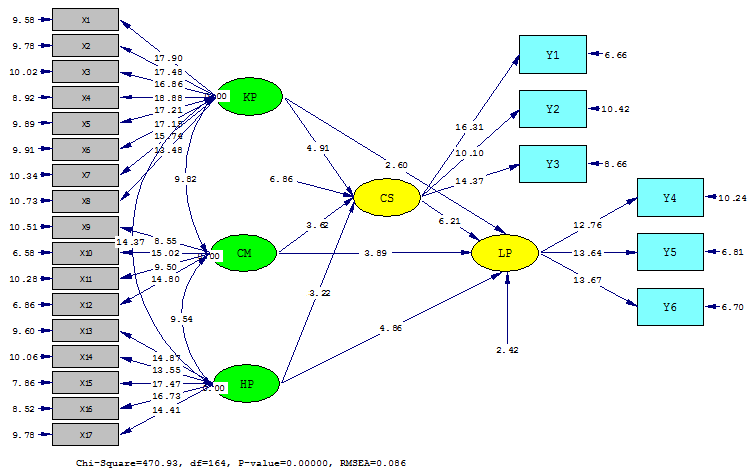
Note: Marginal Fit is the conformity condition of the measurement model under the absolute fit size criteria, or incremental fit, but can still be continued in further analysis, as it is close to the criterion of good fit measure (Hair et al 2006:662).

Source: Processing Results with LISREL 8.70

Based on Table 3. above, the five conformities obtained have a good fit fit measurement model index, namely NNFI, NFI, RFI, IFI and CFI. While the other three suitability measures have a suitability index of the marginal fit measurement model, ie GFI, RMSEA, and AGFI. Thus it can be continued on the next hybrid model measurement analysis.

The Hybrid Model (Full SEM) using Lisrel 8.80 is shown in Figures 3 and 4.



**Figure 3.** Model Hybrid (Full Model) Standardized 

**Figure 4.** Hybrid Model (Full Model) t-value

Based on Figures 3 and 4 above, the next are to analyze hybrid (full model) modeling on each variable, as shown in Table 4 below.

**Table 4.** Measurement Analysis of Hybrid Model (Full Model)

| ***Measurement Model*** | | ***STD. Loading factor*** | ***STD. Error*** | ***thitungnn*** | ***Construct Reliability (CR)*** | ***Variance Extract (VE)*** |
| --- | --- | --- | --- | --- | --- | --- |
| ***Latent Variable*** | **Sub Variabel/**  **Dimensi** |
| Product Quality (LP) | *Performance* (X1) | 0.88 | 0.049 | 17.90 | 0.991 | 0.934 |
| *Reliability* (X2) | 0.87 | 0.050 | 17.48 |
| *Feature* (X3) | 0.85 | 0.051 | 16.86 |
| *Durebility* (X4) | 0.91 | 0.048 | 18.88 |
| *Conformance* (X5) | 0.86 | 0.050 | 17.21 |
| *Serviceability* (X6) | 0.86 | 0.050 | 17.15 |
| *Aesthetic* (X7) | 0.82 | 0.052 | 15.74 |
| *Perceived quality* (X8) | 0.73 | 0.054 | 13.48 |
| Brand Image (CM) | *Recognize* (X9) | 0.53 | 0.062 | 8.55 | 0.970 | 0.894 |
| *Reputation* (X10) | 0.83 | 0.055 | 15.02 |
| *Affinity* (X11) | 0.58 | 0.061 | 9.50 |
| *Domain* (X12) | 0.82 | 0.055 | 14.80 |
| Price (HP) | *Price transparency* (X13) | 0.79 | 0.053 | 14.87 | 0.984 | 0.926 |
| *Price quality ratio* (X14) | 0.74 | 0.055 | 13.55 |
| *Price fairness* (X15) | 0.88 | 0.050 | 17.47 |
| *Relative price* (X16) | 0.86 | 0.051 | 16.73 |
| *PriceReliability* (X17) | 0.78 | 0.054 | 14.41 |
| Customer Satisfaction (CS) | *Quality satisfaction* (Y1) | 0.86 | 0.053 | 16.31 | 0.968 | 0.912 |
| *BrandSatisfaction* (Y2) | 0.60 | 0.059 | 10.10 |
| *PriceSatisfaction* (Y3) | 0.79 | 0.055 | 14.37 |
| Loyalitas Pelanggan (LP) | *Repurchase* (Y4) | 0.71 | 0.056 | 12.76 | 0.971 | 0.919 |
| *Recommendation* (Y5) | 0.90 | 0.066 | 13.64 |
| *Willingness to pay more* (Y6) | 0.90 | 0.066 | 13.67 |

Note: CR and VE criteria are (Hair et al., 2006: 636):

1. Composite Reliability Measure (CR), or often referred to as reliability, with a CR value requirement must be ≥ 0.7.
2. Variance Extract Measure (VE) or variant extract, with requirements must have a VE value of ≥ 0.5*.*

Source: Processing Results with LISREL 8.80

The table above shows that all sub-variables (dimensions) has Standardized Loading Factor (SLF) ≥ 0,50 and value │*tkritis*│≥1,96 (at α = 0,05) (Wijanto, 2008), then all sub variable (dimension) forming into latent variable (eksogen and endogen) is significant, in other words can be said that significant and significant dimension in forming latent variable. So that all sub variables (dimensions) in this study can be further analyzed, because it can form latent variables.

Validity of sub variable (dimension) durability (endurance) (X4) is indicator with the biggest standardized loading factor of parameter estimate 0,91 in forming variable of product quality. While the dimension perceived quality (X8) is the indicator with the smallest standardized loading factor of the parameter estimate of 0.73. Construct reliability and variance extractvariabel product quality is equal to 0,991 and 0,934, it shows that construct of product quality has good reliability constructs. So that the indicators are significant in forming latent variables of product quality of the most dominant dimension on the dimension of durability (X4)**.**

Validity of sub variable (dimension) reputation (X10) is sub variable which becomes indicator with the biggest standardized loading factor of parameter estimate 0,83 in forming brand image variable. While the recognize dimension (X9) is the sub variable that becomes the indicator with the smallest standardized loading factor of the parameter estimate of 0.53. Construct reliability and extract variance between brand image variables are 0.970 and 0.894, indicating that the construct of brand image has good reliability constructs. So that the significant indicators in forming latent variable of brand image of the most dominant dimension are reputation dimension (X10)**.**

Validity of sub variable (dimension) prices fairness (X15) is sub variable which becomes indicator with the biggest standardized loading factor of parameter parameter 0,88 in forming price variable. While the dimension of price quality ratio (X14) is a sub variable that becomes indicator with the smallest standardized loading factor of parameter estimate 0.74. Construct reliability and extract variance between price variables are 0.984 and 0.926, this indicates that the price construct has a good reliability constructs. So that the significant indicators in forming latent variable price of the most dominant dimension are the dimension of price fairness (X15)**.**

Validity of sub variable (dimension) quality satisfaction (Y1) is sub variable which becomes indicator with the biggest standardized loading factor with parameter estimate 0,86 in form variable of customer satisfaction. While brand satisfaction (Y2) is a sub variable that becomes indicator with the smallest standardized loading factor with parameter estimate 0,60. Construct reliability and variance extract customer satisfaction variables are 0.968 and 0.912, it shows that customer satisfaction constructs has good reliability constructs. So that the significant indicators in forming the latent variable of customer satisfaction with the most dominant dimension are the dimension of quality satisfaction (Y1)**.**

The validity of sub variable recommendation (Y5) and willingness to pay more (Y6) are sub variable which becomes indicator with the largest standardized loading factor of parameter estimate 0,90 in forming customer loyalty variable. While repurchase (Y4) is sub variable which become indicator with standardized loading factor the smallest of parameter estimate 0,71. Construct reliability and extract variance customer loyalty variables are 0.971 and 0.919, this indicates that the construct of customer loyalty has a good reliability construct. So that the significant indicators in forming latent variables customer loyalty to the most dominant dimension are the dimension of recommendation (Y5) and willingness to pay more (Y6)**.**

**4.2. Structural Model Analysis**

**Table 5.** Inter-Variable Significance

| **No** | **The structural trajectory** | ***Path Coeff.*** | ***tvalue*** | ***Tcriteria*** | **Test Result** |
| --- | --- | --- | --- | --- | --- |
| 1 | Product Quality🡪Customer Satisfaction | 0,38 | 4,91 | 1,96 | Significant |
| 2 | Brand Image🡪Customer Satisfaction | 0,28 | 3,62 | 1,96 | Significant |
| 3 | Price🡪Customer Satisfaction | 0,20 | 3,22 | 1,96 | Significant |
| 4 | Product Quality🡪Customer Loyalty | 0,18 | 2,60 | 1,96 | Significant |
| 5 | Brand Image 🡪Customer Loyalty | 0,22 | 3,89 | 1,96 | Significant |
| 6 | Price 🡪 Customer Loyalty | 0,29 | 4,86 | 1,96 | Significant |
| 7 | Customer Satisfaction🡪Customer Loyalty | 0,42 | 6,21 | 1,96 | Signifikan |

Source: Results of data processing, 2017 (LISREL 8.80)

* 1. **Hypotheses Test**
     1. ***The Effect of Product Quality, Brand Image, and Price to Customer Satisfaction***

The first hypothesis (H1) states that product quality affects customer satisfaction; The second hypothesis (H2) states that the brand image has an effect on customer satisfaction; The third hypothesis (H3) states that the price affects customer satisfaction; The fourth hypothesis (H4) states that product quality, brand image, and price together affect customer satisfaction.

***4.3.4. The Effect of Product Quality on Customer Satisfaction*.**

Based on the table of structural equations, it is seen that the coefficient of variable path of product quality of customer satisfaction is 0.38 with a t count of 4.91> 1.96, so it can be said significant. The magnitude of the coefficient of the path shows that the contribution to product quality influences directly to customer satisfaction with (0,38)2 = 14,44%, while indirect effect of product quality of customer satisfaction with contribution equals to 10,24% so total influence of product quality on customer satisfaction with contribution of 24.68%. Thus the quality of the product proved to have a positive and significant impact on customer satisfaction or in other words that Hypothesis 1 (H1) is accepted.

***4.3.5 The Effect of Brand Image on Customer Satisfaction***

Based on the table of structural equations, it is seen that the coefficient of the variable path of the image brand of the customer satisfaction is 0.28 with the tcount of 3.62> 1.96, so it can be said significant. The magnitude of the coefficient of the path shows that the contribution of the influence of brand image directly to the customer satisfaction of (0.28)2 = 7.84%, while the indirect effect of brand image on customer satisfaction with 8.44% contribution so the total influence of brand image on customer satisfaction with a contribution of 16.28%. Thus the brand image proved to have a positive and significant impact on customer satisfaction or in other words that Hypothesis2 (H2) received.

* + 1. ***The Effect of Price on Customer Satisfaction.***

Based on the table of structural equations, the amount of coefficient coefficient of price on customer satisfaction is 0.20 with t count of value 3.22> 1.96, so it can be said significant. The magnitude of the coefficient of the path shows that the magnitude of the influence of price influence directly to customer satisfaction of (0.20) 2 = 4%, while the indirect effect of price on customer satisfaction with the contribution of 7.62% so that the total influence of price on customer satisfaction with contribution amounted to 11.62%. Thus, the price proved to have a positive and significant impact on customer satisfaction or in other words that Hypothesis 3 (H3) is accepted.

* + 1. ***The Effect of Product Quality, Brand Image, and Price Together to Customer Satisfaction.***

Based on the table of structural equations, the determinant coefficient of determination (R2) variable of product quality, brand image, and price together to customer satisfaction is 0,53 with value of Fcount equal to 132,01> 3,84, so it can be said significant. The magnitude of the coefficient of determination (R2) shows that the amount of contribution influences the quality of product, brand image, and price together to customer satisfaction by 53%, while 47% is big influence over variable of product quality, brand image, and price. The most dominant variable affecting customer satisfaction is variable product quality. Thus the quality of product, brand image, and price together proved to have a positive and significant impact on customer satisfaction in other words that Hypothesis 4 (H4) is accepted.

* 1. **Testing the Effect of Product Quality, Brand Image, Price, and Customer Satisfaction on Customer Loyalty**

The fifth hypothesis (H5), which states that product quality affects the performance of managers; The sixth hypothesis (H6), which states that the brand image has an effect on customer loyalty; The seventh hypothesis (H7) states that the price affects customer loyalty; Hypothesis eighth (H8), which states that customer satisfaction affects customer loyalty; The ninth hypothesis (H9) which states that product quality, brand image, price, and customer satisfaction together affect the customer loyalty.

The causality relationship of product quality variables, brand image, price, and customer satisfaction to customer loyalty can be described as follows:

* + 1. ***The Effect of Product Quality on Customer Loyalty.***

Based on the structural equation of customer loyalty, it is seen that the coefficient of variable path of product quality of customer loyalty is 0.18 with tcount value of 2.60> 1.96, so it can be said significant. The magnitude of the coefficient of the path shows that the contribution of product quality influence directly to customer loyalty (0.18) 2 = 3.24%, while the indirect effect of product quality on customer loyalty with contribution of 9.68% so the total effect of product quality to customer loyalty with contribution of 12.92%. Thus the quality of the product proved to have a positive and significant impact on customer loyalty or in other words that Hypothesis 5 (H5) is accepted.

***4.4.2 The Effect of Brand Image on Customer Loyalty***

Based on the structural equation structure of customer loyalty, it can be seen that the coefficient of variable path of brand image of customer loyalty is 0,22 with tcount value 3,89> 1,96, so it can be said significant. The magnitude of the coefficient of the path shows that the contribution of the influence of the image directly to the customer loyalty (0.22) 2 = 4.84%, while the indirect influence of the brand image on customer loyalty with the contribution of 11.01% so the total influence of the brand image against customer loyalty with a contribution of 15.85%. Thus, the brand image proved to have a positive and significant impact on customer loyalty or in other words that Hypothesis 6 (H6) is accepted.

***4.4.3 The Effect of Price on Customer Loyalty***

Based on the structural equation structure of customer loyalty, it is seen that the coefficient of variable price path of customer loyalty is 0.29 with tcount value 4,86> 1,96, so it can be said significant. The magnitude of the coefficient of the line indicates that the magnitude of the influence of price influence directly to customer loyalty (0.29) 2 = 8.41%, while the indirect effect of price on customer loyalty with the contribution of 13.01% so the total price influence on customer loyalty with a contribution of 21.42%. Thus the price proved to have a positive and significant impact on customer loyalty or in other words that Hypothesis 7 (H7) is accepted.

***4.4.4 The Effect of Customer Satisfaction on Customer Loyalty***

Based on the structural equation structure of customer loyalty, it is seen that the coefficient of variable path of customer satisfaction with customer loyalty is 0.42 with the tcount value of 6.21> 1.96, so it can be said significant. The magnitude of the coefficient of the path shows that the contribution of the influence of customer satisfaction directly to customer loyalty (0.42) 2 = 17.64%, while the indirect effect of customer satisfaction on customer loyalty with a contribution of 16.48% so the total influence of customer satisfaction to customer loyalty with contribution of 34.12%. Thus, customer satisfaction proved to have a positive and significant impact on customer loyalty or in other words that Hypothesis 8 (H8) is accepted.

* + 1. ***Effect of Product Quality, Brand Image, Price, and Customer Satisfaction Together to Customer Loyalty*.**

Based on the structural equation table of upper customer loyalty, the determinant coefficient of determination (R2) variable of product quality, brand image, price, and customer satisfaction together with customer loyalty is 0.84 with Fcount of 335.83> 3.84, so it can be said to be significant. The magnitude of the coefficient of determination (R2) shows that the amount of contribution influence the quality of product, brand image, price, and customer satisfaction together to customer loyalty equal to 84%, while 16% is big influence over variable of product quality, brand image, , and customer satisfaction. The most dominant variable affecting customer loyalty is variable customer satisfaction. Thus the quality of product, brand image, price, and customer satisfaction together proved to have a positive and significant impact on customer loyalty or in other words that Hypothesis 9 (H9) is accepted.

* 1. **Direct and Indirect Effect**

**Table 6.** Direct and Indirect Effect on Customer Loyalty

| **Effect** | **Direct** | **Not Direct Through Customer Satisfaction** | **Conclusion** |
| --- | --- | --- | --- |
| Product Quality🡪Customer Loyalty | (0,18)2 = 0,0324 | (0,38 x 0,42) = 0,1596 | L < TL |
| Brand Image🡪Customer Loyalty | (0,22)2 = 0,0484 | (0,2 x 0,42) = 0,1176 | L < TL |
| Price🡪Customer Loyalty | (0,29)2 = 0,0841 | (0,20 x 0,42) = 0,0840 | L > TL |

Source: Data Processing Results, 2017

1. **CONCLUSIONS, RESEARCH IMPLICATIONS AND RECOMMENDATIONS**

Based on the results of data analysis and discussion that has been done, the conclusion :

1. Quality of product especially at dimension of durability (X4), Brand image especially on reputation dimension (X10), Price especially at dimension of price fairness (X15) partially have positive and significant effect to customer satisfaction at UMKM Industrial Sector Emping Melinjo in Banten Province, on the dimension of quality satisfaction (Y1).
2. Quality of product especially on durability dimension (X4), brand image especially on reputation dimension (X10), price especially on dimension of price fairness (X15) together has positive and significant effect of customer satisfaction with UMKM of Industrial sector of Emping Melinjo in Province Banten with the coefficient of determination (R2) of 53%, it shows that 53% variable customer satisfaction can be explained together by product quality, brand image and price 47% influenced by variables other than product quality, brand and price variables. Product quality variable especially in durability dimension (X4) is partially the most dominant variable in increasing customer satisfaction especially on dimension quality satisfaction (Y1).
3. Quality of product especially at dimension of durability (X4), Brand image especially on reputation dimension (X10), Price especially on dimension of price fairness (X15) partially have positive and significant effect to customer loyalty in UMKM Industrial Sector Emping Melinjo in Banten Province, on the dimensions of recommendation (Y5) and willingness to pay more (Y6).
4. Customer satisfaction, especially on the dimension of quality satisfaction (Y1) partially have a positive and significant effect on customer loyalty on SMEs in Emping Melinjo Industrial Sector in Banten Province especially on dimension (Y5) and willingness to pay more (Y6).
5. Quality of product especially at dimension of durability (X4), brand image especially on reputation dimension (X10), price especially on dimension of price fairness (X15), and customer satisfaction especially on dimension quality satisfaction (Y1) significant to customer loyalty to UMKM industrial sector of Emping Melinjo in Banten Province, especially on the dimension of recommendation (Y5) and willingness to pay more (Y6) with the value of determination coefficient (R2) of 84%, it shows that 84% customer loyalty variable can be explained collectively by product quality variables, brand image, price and customer satisfaction. The most dominant variable is customer satisfaction variable also acts as a full mediating variable in mediating variable of product quality, brand image and price in increasing customer loyalty to UMKM in Emping Melinjo Industry Sector in Banten Province.

**Research Implications**

**Theoretical Implications**

Customer loyalty to the UMKM Industry Sector of Melinjo Emping Industry in Banten Province, especially on the dimension of recommendation (Y5) and willingness to pay more (Y6) will be able to increase if UMKM of Melinjo Emping Industry Sector in Banten Province can increase customer satisfaction especially on dimension of quality satisfaction (Y1) , where customer satisfaction will increase if UMKM of Emping Melinjo Industrial Sector in Banten Province can improve product quality especially in durability dimension (X4), also supported by increasing brand image especially on reputation dimension (X10), and supported by increasing price especially at dimension price fairness (X15)**.**

**Managerial Implications**

1. Result of research indicates that if product quality of durability, brand image of reputation and price with price fairness possesses able to put together and synergized hence will able to give positive and significant influence over increasing from customer satisfaction especially in quality satisfaction at UMKM of Industrial sector of Emping Melinjo in Provinsi Banten. Based on these findings, managerial implications can be applied to optimize customer satisfaction by increasing the quality of the product by taking into account the most dominant dimension of durability dimension, so that UMKM of Industrial Sector Emping Melinjo in Banten Province must be able to maintain especially on the level of product variation (melinjo) levels of conformity of product quality standard (melinjo), and product endurance level (melinjo).
2. Result of research indicates that if product quality of durability, brand image of reputation, price with price fairness, and customer satisfaction with dimension of quality satisfaction able to put together and synergized hence will able to give positive and significant influence to increase customer loyalty especially in recommendation and willingness to pay more to UMKM in the Melinjo Emping Industry Sector in Banten Province, both at the level of the customer feel like to recommend melinjo to others and the level of customer feel must give input to umkm melinjo, in order to keep improving its quality, if found by customer something less on product , also at the level of the customer is ready to pay more if the product has a social element (helping the orphanage / poor people, other social donations), and at the level of customers ready to pay more, if the product melinjo increase the price due to rising raw materials. Based on these findings, the managerial implications applied by UMKM of the Melinjo Emping Industry Sector in Banten Province to optimize customer loyalty by increasing customer satisfaction by paying attention to the most dominant dimension is the dimension of quality satisfaction (satisfaction on product quality), so that UMKM of Industrial Sector Emping Melinjo in Banten Province must be able to maintain the quality of customer satisfaction in terms of satisfied customer level because the taste of the product (melinjo) in accordance with expectations, the level of fasting customers because the service on them good, and the level of customers are satisfied because the quality of good products.

In accordance with the conclusions that have been reached, the suggestions of this study are as follows :

Some indicator on the recommended product quality variables to be maintained that is on the perceived quality dimension is the indicator of the buyer's rating level on the product, the level of standard quality of melinjo promised through promotion, then the aesthetic dimension is the indicator of the beauty level of the product packaging (melinjo ) and the level of product aroma (melinjo), then on the service ability dimension is on the indicator of employee's speed level in product delivery, next on the reliability dimension is on the indicator of raw material quality level (melinjo) and maturity level of the product (melinjo), and on the dimension of durability namely on the indicator level of product variation (melinjo). Nevertheless there are still some indicators of product quality of UMKM of Industrial Sector Emping Melinjo in Banten Province which is suggested to keeping attention and enhanced that is in feature dimension is on indicator of product safety level (melinjo), level of attractiveness of product presentation (melinjo), then at dimension performance is on the product level display indicator (melinjo), product hygiene level (melinjo), and product freshness level (melinjo), then the durability dimension is on the indicator of conformity level of product quality standard (melinjo) and product endurance level (melinjo) next on the conformance dimension is the indicator of the level of conformity of the product taste (melinjo) and the level of product (melinjo) with the standard set, and the serviceability dimension is the employee level employee level indicator.

Some indicator on customer satisfaction that is recommended to being maintained is in the dimension of quality satisfaction which includes customer satisfaction level indicator because the product sense (melinjo) in accordance with expectations, customer satisfaction level because the service on them is good, and customer level is satisfied because good product quality , then on brand satisfaction dimension which includes satisfied customer level indicator because melinjo brand is widely known, as well as on price satisfaction dimension which includes satisfied customer level indicator at affordable price. Nevertheless, there are still some indicators on customer satisfaction with UMKM of Industrial Sector Emping Melinjo in Banten Province which is suggested to being noticed and enhanced by UMKM of Industrial Sector Emping Melinjo in Banten Province as in the dimension of brand satisfaction which includes the level of satisfied customers because it gives the impression of pulling from packaging or product form (melinjo), as well as on the dimension of price satisfaction which includes a satisfactory level customer indicator at a price that matches the quality.

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