

Analysis of Factors That Form a Welding Electrode Brand Image: Case Study of Gemini Brand Welding Wire

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ABSTRACT

For companies that have a good brand image will get a positive perception from consumers, so that the consumer's decision to use the product is higher. For this reason, it is necessary to know various things and factors that can shape the brand image itself. Brand image can basically form a high willingness for consumers to buy company products continuously. To build a brand image on company products there are seven dimensions of product image to measure brand image, namely Performance, Durability, Conformance to Specification, Features, Reliability, Aesthetics and Perceived Quality.

The purpose of this study is to analyze the factors that can form the Gemini Welding Electrode Brand Image based on consumer perceptions. Identifying the most significant factors forming the Gemini Welding electrode Brand Image based on consumer perceptions. Where the samples taken in this study were 120 people. Data was collected using a questionnaire. Data is tested using validity and reliability tests, and data must meet the elements of the classic assumption test conditions. Test data analysis using factor analysis.

This research concludes that Performance, Durability, Conformance, Features, Reliability, and Aesthetic are factors that can influence the Gemini Brand Welding Wire Brand Image. Furthermore, Variables Performance, Durability, Conformance are variables that significantly affect the brand image of gemini welding wire. This shows and provides information that the dimensions of product quality or in other words that the quality of gemini welding products according to consumer perceptions is still considered less than the quality of other brand products. And in the formulation of strategies to increase sales and loyal consumers must pay attention to the variables Performance, Durability, Conformance.

Keywords: Performance, Durability, Performance to Specification, Features, Reliability, Aesthetics and Brand Image

INTRODUCTION

In contemporary times, economic transactions can be carried out widely throughout the world which is termed as economic globalization. Every company can conduct transactions with other state companies around the world massively. This will increase and grow the economy of a

country. As a result of the economic globalization that creates current economic growth, creates competition between one company and another company to gain profits for the company. Economic growth is increasingly leading to very tight competition between one company and another company. Therefore, every

company is required to make maximum changes to win the competition.

The company must understand the conditions that occur at that time, and overcome the problems that arise at that time. Polarization that occurs in the market must be able to be faced by the company. In the economic field, polarization can occur in the welding wire industry sector. Welding wire is basically the main support for construction, which is for the construction of factories, warehouses, pipelines, oil & gas, shipyard, mines, and also for factory maintenance needs, and of course for production needs such as automotive, bicycles, window doors, etc. . Given the basic needs of the production process in various sectors, making the demand for welding wire becomes high, so that the competition becomes very tight.

The intense competition in the business sector is so sharp, given the growth of this business that continues to lead positively. This is because there is a very large investment in the global market that stimulates the steel industry throughout the world including Indonesia. This raises the number of new companies that have sprung up with their respective brands. One of the new brands that entered the steel industry is the "Gemini" brand welding wire.

As one of the new welding wire brands, it is not easy for Gemini to be accepted directly by consumers, because basically there have been previous brands that have mastered the welding wire market in Indonesia, especially in North Sumatra. Although the demand for welding wire in Indonesia has increased in general, but specifically for the Gemini brand itself tends to be stagnant. Data shows that the welding wire industry is dominated by two major brands, Kobe and Nikko. The following are data related to the market share of welding wire in Indonesia.

Table 1 Las Wire Market Share in Indonesia

| No | Year | Welding Wire Request (ton) | Market Share (%) | | |
|----|------|----------------------------|------------------|-------|--------|
| | | | Niko | Kobe | Gemini |
| 1 | 2015 | 823,6 | 41,39 | 29,97 | 2,79 |
| 2 | 2016 | 997,9 | 43,28 | 31,91 | 2,56 |
| 3 | 2017 | 1.040,6 | 45,00 | 32,00 | 2,55 |

Source: Processed Data, 2019

Table 1 shows that welding wire in Indonesia has an increasing trend when viewed from 2015 to 2017. The increase reflects the growth of industrial demand for the use of welding wire. The increase in demand for welding wire from 2015 to 2017 is very significant. However, when viewed from the growth of the Gemini brand welding wire, there is a downward trend. As it appears that in 2015 Gemini's market share was only 2.79% far behind the Nikko brand of 41.39 and Kobe of 29.97%. In 2016, Gemini's market share decreased to 2.56% but for the Nikko brand it increased to 43.28% and the Kobe brand also increased to 31.91%. Furthermore, in 2017 Gemini's market share rate has decreased which tends to be stagnant at 2.55%, but for the Nikko and Kobe brands, it has increased. It is very clear that there is a very far margin between established brands and new emerging brands.

When viewed from the side of the price compared to the quality of sales of gemini brand welding wire can be described as follows:

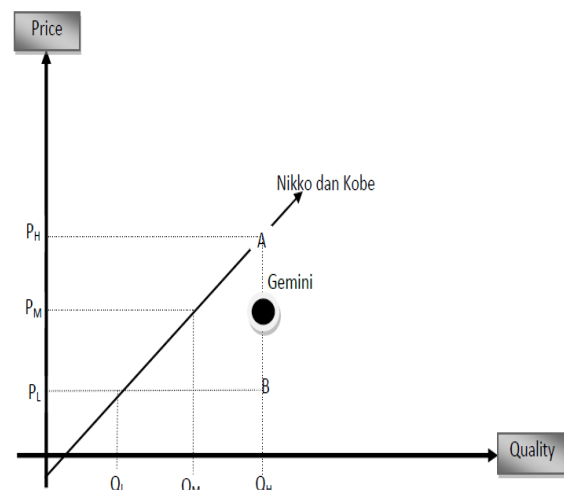


Figure 1 Price Comparison and Quality of Sales Gemini Brand Welding Wire

Figure 1 shows that at a competitive price level or in other words, with cheaper prices with the same good quality, the Gemini brand still experiences a low level of sales. Based on information from welding wire users, it is known that the Gemini brand is not known by users of welding wire,

although it has a cheaper price with a quality that is as good as premium brands. Based on this information and the symptoms that occur in the description of this study, it is very clearly illustrated that brand image is very important for consumers to give their perception of a particular product. For companies that have a good brand image will get a positive perception from consumers, so that the consumer's decision to use the product is higher. For this reason, it is necessary to know various things and factors that can shape the brand image itself.

Brand image can basically form a high willingness for consumers to buy company products continuously. To build a brand image on company products there are seven dimensions of product image to measure brand image, namely Performance, Durability, Conformance to Specification, Features, Reliability, Aesthetics and Perceived Quality (Fransisca, 2016). Other research shows that the dimensions of brand image consisting of Performance, Durability, Conformance to Specification, Features, Reliability, Aesthetics and Perceived Quality cause consumers to have

a high willingness to buy the company's products repeatedly (Demis and Mukhlis, 2017). Then there is a positive relationship between brand image and consumer perception about the product. Furthermore it was stated that, the perception of a high product by consumers is a necessity to establish a high brand image reputation (Kiyat, 2017).

The use of the brand is a reflection of the increase in brand awareness and brand image itself. This means that the strength, superiority and uniqueness of a brand will be awareness and brand image which is reflected in increased brand use (Alimen and Cerit, 2010). Then the variable of brand association excellence, brand association strength and the uniqueness of brand associations to measure brand image (Nurman, 2016).

From the various studies, this study will be modified in the previous research by Fransisca (2016) to determine the dominant factors that shape brand image, especially the brand image of the Gemini brand of welding wire.

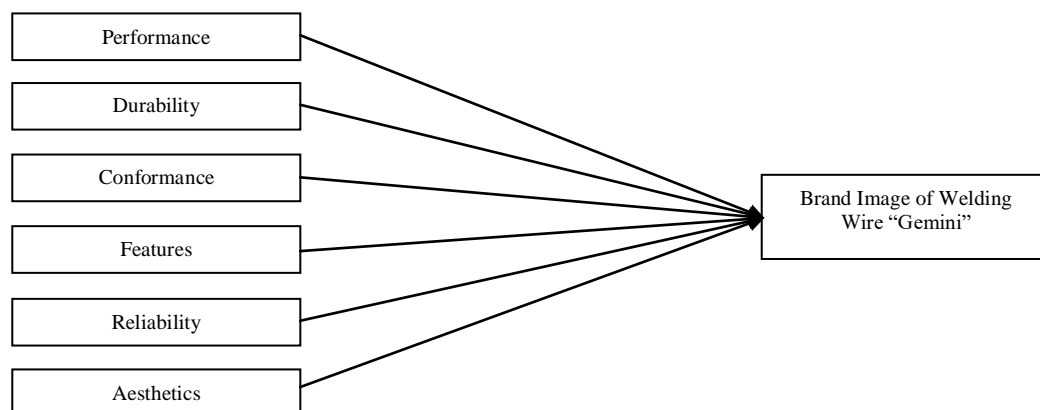


Figure 2 Conceptual Framework

Hypothesis

The research hypothesis is formulated as follows:

1. Based on Consumer Perception About Product Quality (Performance, Durability, Conformance, Feature, Reliability, Aesthetics) are the factors

that make up the Gemini Welding Wire Brand Image.

2. Product Quality Factors have a significant influence in forming Gemini Wire Brand Image.

MATERIAL AND METHODS

This research is correlational research using a quantitative approach. Correlational research aims to examine the extent of variation in a factor related to variations in other factors based on the correlation coefficient (Sekaran, 2000). Whereas according to Sugiyono (2015) the quantitative approach research method can be interpreted as a research method based on the philosophy of positivism, used to examine certain populations or samples, sampling techniques are generally carried out randomly and data analysis is quantitative or statistical in order to test the hypothesis which have been set.

Population is the whole of research subjects who have certain characteristics. Population is the overall object of research to be studied (Sugiyono, 2015). The population of this research is all consumers who use Gemini Welding Wire in Medan City. However, it is necessary to limit the number of population based on the time of the study, namely in December 2018 to April 2019.

The sample is part of the population that represents the population to be taken (Sugiyono, 2015), because the population allows for the overall research to be carried out. The sample in this study is a member of the population or all consumers who use las gemini wire in the city of Medan. To determine the sample size, according to Hair et al (1995) depending on the number of indicators multiplied by 5 to 10. It is known

that in this study there were 24 indicators. Thus the number of samples in this study were 120 respondents.

Data collection is done by distributing questionnaires to respondents. The type of questions used in the questionnaire are structured (closed) questions. The method of data collection in the study was carried out by means of, among others: the distribution of questionnaires, namely by spreading the questionnaire to respondents sampled. Where the respondent chooses one of the answers that has been provided and studies Documentation where secondary data is obtained through a document study, which is collecting the required data from the documents owned by the company that have been published.

RESULTS AND DISCUSSION

Factor Analysis

In this factor analysis it is important to pay attention to the terms or assumptions. Some assumptions for analyzing these factors can be explained as follows:

Testing of Factor Assumption Analysis

Determinant of Correlation Matrix

Testing the determinant of correlation matrix is to see the correlation that occurs between variables. In this matrix test there must be interrelated relationships between variables indicated by the value of Determinant of Correlation Matrix approaching the value 0. The results of this test are as follows:

Table 2

| Correlation Matrix ^a | | Performance | Durability | Conformance | Features | Reliability | Aesthetic |
|---------------------------------|-------------|-------------|------------|-------------|----------|-------------|-----------|
| Correlation | Performance | 1.000 | .170 | .042 | .078 | .050 | .068 |
| | Durability | .170 | 1.000 | .393 | .201 | .256 | .145 |
| | Conformance | .042 | .393 | 1.000 | .392 | .237 | .222 |
| | Features | .078 | .201 | .392 | 1.000 | .239 | .140 |
| | Reliability | .050 | .256 | .237 | .239 | 1.000 | .089 |
| | Aesthetic | .068 | .145 | .222 | .140 | .089 | 1.000 |
| Sig. (1-tailed) | Performance | | .032 | .324 | .198 | .295 | .230 |
| | Durability | .032 | | .000 | .014 | .002 | .057 |
| | Conformance | .324 | .000 | | .000 | .005 | .007 |
| | Features | .198 | .014 | .000 | | .004 | .064 |
| | Reliability | .295 | .002 | .005 | .004 | | .166 |
| | Aesthetic | .230 | .057 | .007 | .064 | .166 | |

a. Determinant = .578

Table 2 shows the value of Determinant of Correlation Matrix is 0.578. The magnitude of this value is smaller than 1 which tends to approach the number 0. Thus it can be concluded that there is a correlation in a matrix that is interconnected and related between one variable with another variable. Therefore, the requirements of the Determinant of Correlation Matrix have been fulfilled so that the data can be analyzed further.

1. Kaiser Meyer Olkin Measure of Sampling

KMO Measure of Sampling is an index of the comparison of the distance between the correlation coefficients and their partial correlation coefficients. The KMO Measure of Sampling value is considered sufficient if the value of Measure of Sampling KMO is greater than 0.5 (KMO > 0.5). The test results for this second condition can be seen as in the following table:

Table 3

| | | |
|--|--------------------|--------|
| KMO and Bartlett's Test | | |
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .673 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 63.696 |
| | Df | 15 |
| | Sig. | .000 |

Table 3 shows the value of KMO Measure of Sampling is 0.673, the value is greater

than 0.5 (0.673 > 0.500) so it can be concluded that this test has used sufficient samples. Therefore this data can be analyzed further.

2. Barlett Test of Sphericity

The Barlett Test of Sphericity assumption is done by measuring the value of Chi-Square with a significant level smaller than 0.05 (Sig.Barlett <0.05). The value of Chi Square is used to see the level of feasibility of the correlation that has been formed in the factor analysis test. Table 4.11 shows that the value of Chi Square Barlett Test of Sphericity is 63,696 with a significance level of 0,000 (0,000 <0,05). These results have shown that the correlation formed in this factor analysis test has the feasibility for further testing.

3. Measure of Sampling Adequacy (MSA)

This test is conducted to see the variables that can be used and can be further analyzed in factor analysis. Variables that can be analyzed further if they have the value of Measure of Sampling Adequacy indicated by the sign "a" in the Anti Image Correlation table greater than 0.5 (MSA > 0.5). The results of testing this condition can be seen as in the following table:

Table 4

| Anti-image Matrices | | Performance | Durability | Conformance | Features | Reliability | Aesthetic |
|------------------------|-------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Anti-image Covariance | Performance | .965 | -.138 | .044 | -.049 | -.001 | -.045 |
| | Durability | -.138 | .794 | -.240 | -.011 | -.144 | -.042 |
| | Conformance | .044 | -.240 | .718 | -.244 | -.071 | -.125 |
| | Features | -.049 | -.011 | -.244 | .818 | -.132 | -.043 |
| | Reliability | -.001 | -.144 | -.071 | -.132 | .890 | -.017 |
| | Aesthetic | -.045 | -.042 | -.125 | -.043 | -.017 | .941 |
| Anti-image Correlation | Performance | .570 ^a | -.158 | .053 | -.055 | -.001 | -.047 |
| | Durability | -.158 | .663 ^a | -.317 | -.014 | -.172 | -.049 |
| | Conformance | .053 | -.317 | .639 ^a | -.318 | -.088 | -.152 |
| | Features | -.055 | -.014 | -.318 | .679 ^a | -.155 | -.049 |
| | Reliability | -.001 | -.172 | -.088 | -.155 | .754 ^a | -.019 |
| | Aesthetic | -.047 | -.049 | -.152 | -.049 | -.019 | .771 ^a |

a. Measures of Sampling Adequacy(MSA)

Table 4 shows that the MSA value for Performance is 0.570 greater than 0.5 so it can be concluded that Performance can be analyzed further. The MSA value for Durability is 0.663 greater than 0.5 so it can be concluded that Durability can be further analyzed. The MSA value for Conformance

is 0.639 greater than 0.5 so it can be concluded that Conformance can be analyzed further. The MSA value for Features is 0.679 greater than 0.5 so it can be concluded that Features can be analyzed further. The MSA value for Reliability is 0.754 greater than 0.5 so it can be concluded

that Reliability can be further analyzed. The MSA value for Aeshetic is 0.771 greater than 0.5 so it can be concluded that Aeshetic can be analyzed further.

Contribution of Forming Factors

Contributing factors that will form variables can be explained as can be seen as in the following table:

Table 5

| Communalities | | |
|--|---------|------------|
| | Initial | Extraction |
| Performance | 1.000 | .913 |
| Durability | 1.000 | .490 |
| Conformance | 1.000 | .612 |
| Features | 1.000 | .464 |
| Reliability | 1.000 | .339 |
| Aeshetic | 1.000 | .183 |
| Extraction Method: Principal Component Analysis. | | |

Table 5 shows that the Performance value of 0.913 figures gives the meaning that the Performance factor is able to contribute to the variables formed at 91.30%. Durability value of 0.490 numbers gives the meaning that Durability factor is able to contribute to the variables formed by 49%. The Conformance value of 0.612 numbers gives the meaning that the Conformance factor is able to contribute to the formed variable at 61.20%. The value of Features is 0.464, which means that the Features factor is able to contribute to the variables formed at 46.40%. Reliability value is equal to 0.339, giving the meaning that the Reliability factor is able to contribute to the formed variable at 33.90%. The Aeshetic value is 0.183, giving the meaning that the Aeshetic factor is able to contribute to the formed variable of 18.30%.

DISCUSSION

Factor Analysis Results

In the discussion of factor analysis it is known that out of 3 (three) factors that can improve brand image. These three factors are important factors that can later become the basis for company management to improve brand image.

The most dominant factor in contributing to improving the brand image is Performance which is equal to 0.913 or equal to 91.30%. Next is the Conformance

which is equal to 0.612 or equal to 61.20%. Then is the Durability variable which is equal to 0.490 or equal to 49%. While the most smallest contribution variable in forming a new variable is Aeshetic which is equal to 0.183 or equal to 18.30%. This proves that basically Performance, Conformance and Durability are important factors in improving brand image.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

Performance, Durability, Conformance, Features, Reliability and Aeshetic are factors that can influence the Gemini Brand Welding Wire Brand Image. Performance is the most dominant factor in improving brand image. Whereas the smallest factor contributing to improving the brand image is Aeshetic.

Variables Performance, Durability, Conformance are variables that significantly affect the brand image of gemini welding wire. This shows and provides information that the dimensions of product quality or in other words that the quality of gemini welding products according to consumer perceptions is still considered less than the quality of other brand products, especially in older brands such as Kobe and so on.

Variables Performance, Durability, Conformance are variables that can affect the brand image of gemini welding wire according to consumer perceptions. In this case the strategy that can be applied must be able to increase or maintain these three variables so that consumers become loyal.

Recommendations

Given that Performance, Durability, Conformance are the most dominant factors in forming the brand image of welding wire, the company management can improve the performance of gemini brand welding wire products and form special features that are easy to recognize gemini welding wire. This is important because the special characteristics of gemini welding wire will be able to easily distinguish it from other

brands of welding wire that are competitors of gemini welding wire.

It is known that the Features, Reliability and Aesthetic variables do not significantly affect the brand image of gemini welding wire. It is better for company management to be able to maintain the standards that have been set in this variable and even to continuously improve its product quality standards (Continuous Improvement).

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