



RELATED IMPACT FROM PRODUCT QUALITY AND BRAND IMAGE TOWARDS BUYING DECISIONS AS WELL AS ITS IMPLICATIONS TO CUSTOMER SATISFACTION AT FUJI YUSOKI KOGYO

Ryan Irawan¹, Arifin Sitio²

- 1) Master of Management Student in Mercu Buana University, Bekasi, Indonesia, ryanirawan2691@gmail.com
- 2) Lecturer of Postgraduate Program in Mercu Buana University, Bekasi, Indonesia, arifin.sitio@mercubuana.ac.id

Corresponding Author: First Author

Abstract: This research aims to find out those influence from Product Quality, and Brand Image towards Buying Decisions and its Implications to Customer Satisfaction at Fuji Yusoki Kogyo. This type of research was categorized as descriptive analytics research. While population was customers from Fuji Yusoki Kogyo totalling of 56 customers according to December 2020 company's internal data. The analysis technique used path analysis through SmartPLS version 3.3. The results from this research was indicate that (1) Product Quality has huge impact to Buying Decision (2) Brand Image has significant influence over Buying Decision (3) Buying Decision has undefinable effect to Customer Satisfaction (4) Product Quality has marked affects towards Customer Satisfaction, and (5) Brand Image has huge impact on Customer Satisfaction.

Keywords: Product Quality, Brand Image, Buying Decisions, Customer Satisfaction.

INTRODUCTION

Asia is the largest industrial robot market in the world, although growth slowed substantially in 2018. A total of 283,080 units installed in 2018 were only 1% more than the previous year but still a new peak for the sixth consecutive year. From 2013 to 2018, the yearly robot establishment expanded by a normal of 23% each year. Robot establishments in the second biggest market is Europe, expanding 14% to 75,560 units, another top for the 6th consecutive year. The normal yearly development rate from 2013 to 2018 was 12%. The development rate is considerably higher in America: About 55,212 robots were introduced in 2018. This is 20% more than the earlier year and as in Asia and Europe it is another top for the 6th continuous year. Normal yearly development rate since 2013 was 13% (ifr, 2020).

The auto business is the main client of modern robots. Almost 30% of all mechanical robot establishments happen in this industry. Robot establishments in the gadgets business

(counting PCs and gear, radio, TV and specialized gadgets, clinical hardware, exactness and optical instruments) have expanded by a normal of 24% every year since 2013 (ifr, 2020).

The use of robots in Indonesia is quite good, ranking 5th in Asia after China, Japan, Korea, Thailand. In Southeast Asia, it means the second place with the use of robotic technology. The use of robots in industry in the coming years will be more and more. Because the more companies that make robots and the more companies that use them, the cheaper the price will be. Physically, the robot can be used for decades, but the speed may be inferior to the new one. This will encourage the robot market in the coming years to be even busier (Rudyhandjaja, 2019).

Industrial needs stimulated the growth of the Indonesian economy which led to this increase. The growth of various industrial sectors encourages the development of the industrial business itself. Fuji Robotics hopes to help customers, especially now that many companies are adapting to the coronavirus pandemic so that the workforce has been pressured by companies to find ways to run their businesses with fewer people (fujirobotics, 2020).

The prospects that exist in the robotic palletizer continue to grow and are quite promising, so to become a market leader the company must provide optimal quality, steps that can be taken by making many improvements in terms of quality. Customer satisfaction with the robotic palletizer can be seen in the quality provided, the item quality should be as per the desires and assumptions for the client so that companies must continue to improve product quality by increasing their performance to meet customer needs and desires, namely in terms of effectiveness, productivity in robots, speed of material handling. It's easy to use features and easy to maintain. This phenomenon attracts attention to be examined from the product quality and brand image of Fuji Yusoki Kogyo's customers.

Table 1. Pre-research results

Statement/Question	Percentage
Fuji Yusoki Kogyo provides a reward every time customer make a purchase	60%
The robotic palletizer on Fuji Yusoki Kogyo is as expected	40%
Fuji Yusoki Kogyo asked after-sales for robot maintenance	70%
The price of robotic palletizer at Fuji Yusoki Kogyo is affordable	90%
The robotic palletizer on Fuji Yusoki Kogyo has many references	50%
An attractive discount is offered at Fuji Yusoki Kogyo	80%
The effectiveness of the features provided on Fuji Yusoki Kogyo	70%

The pre-research survey was conducted on robotic palletizer customers at Fuji Yusoki Kogyo and was conducted on November 2, 2020 to November 6, 2020. Of the seven factors, the factors that received the least response from respondents were product quality and brand image. This proves that the majority of respondents think that they still do not meet their expectations so that this factor will then become the research material for researchers so that researchers in conducting their research will focus on analyzing these two factors.

From the data described above and according to the pre-survey results, the researcher in this study will take the title of the research entitled "**Related Impact from Product**

Quality and Brand Image towards Buying Decisions as well as Its Implication to Customer Satisfaction at Fuji Yusoki Kogyo".

LITERATURE REVIEW

Product Quality

Product quality is anything that can be offered by a manufacturer for consideration and use by consumers as a means of fulfilling one's needs or desires because product quality is a combination of overall product characteristics resulting from marketing, engineering, production and maintenance strategies that make this product usable to fulfill customer expectations. According to Kotler and Armstrong in Herviana and Anik (2018), explained that product quality is the totality of the features and characteristics of a product or service that depends on its ability to satisfy stated or implied needs.

Brand Image

Brand image is providing special offers to customers and influencing them to act on certain products or services. He, Sha and Yang in Suci and Yunia (2018) define brand image as the overall perception of a product, seen from understanding the information on a product. Brand image also helps consumers to identify their needs and desires for certain brands and to differentiate one product from another (Anwar and Gulzar in Suci and Yunia, 2018).

Buying Decision

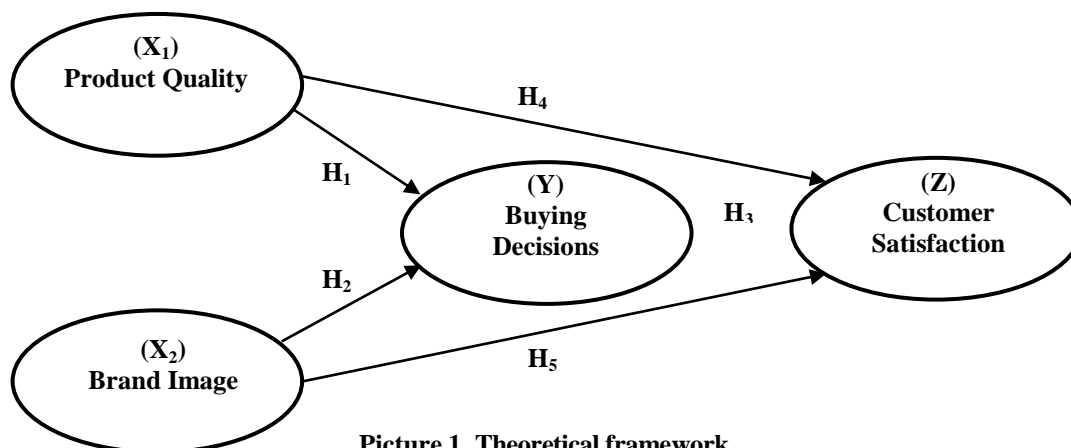
Buying decisions made describe the evaluation process that consumers undertake for the attributes of a set of products, brands or services, in which consumers then rationally choose one of the products, brands, or services that can meet their needs at the lowest cost. Schiffman and Kanuk in Nurul (2020) state that the decision to choose one of several alternative options is a buying decision. Meanwhile, Kotler and Armstrong in Pradita and Sitio (2020), consumer's buying decisions are purchasing the most favored brand from different other options, however two variables can be between buy expectation and purchasing choice. The main factor is the demeanor of others and the subsequent factor is the situational factor. Consequently, inclinations and buy aims don't generally bring about real buys.

Customer Satisfaction

Customer satisfaction is a post-purchase evaluation where alternatives are chosen that at least give the same results or exceed customer expectations, while customer dissatisfaction arises when the results (outcomes) are not in line with expectations. According to Khadka and Maharjan in Suci et al. (2019) show that customer satisfaction is consumer feelings about product performance that consumers expect about the product and feel satisfied if product performance exceeds consumer expectations.

Theoretical Framework

Accordance to Theory result and background Matters, these following framework could be made up as its follows:



Picture 1. Theoretical framework

Hypothesis

According to theoretical review, literature review, prior research outcome and theoretical framework there are several following hypothesis could be drawn by the authors for this research such as: 1) If buying decision increases, so that product quality should be improved. 2) If decision increases increased, so with brand image should be improved. 3) If customer satisfaction increased, product quality should be improved. 4) If customer satisfaction increased, so with brand image that should be improved. 5) If customer satisfaction increased, these buying decision should be increased either.

RESEARCH METHODS

This type of research used descriptive analytic research. Data was obtained by quantitative data, which structured using a Likert scale 1-5. Independent variable in these research were consisted of product quality and brand image, the dependent variable was buying decision which mediated by customer satisfaction variable. The population was customers of Fuji Yusoki Kogyo which total 56 customers based on company internal data in 2020. Those research sample was used nonprobability sampling technique in the form of saturated sampling. Saturated sampling is used because all members of the population are used as research samples. Data analysis method in these research used the path analysis method with help of SmartPLS 3.3 program to test hypothesis.

FINDINGS AND DISCUSSION

Characteristics of Respondents

Based on characteristics of these 56 respondents who are robot customers from Fuji Yusoki Kogyo, it could be described that majority of customers are male (72.0%) aged between >31 years (63.0%) who was graduated from Diploma (15.0%) with has been a customer of Fuji Yusoki Kogyo for more than 1 year (61.0%). So, it could be concluded that robot customers from Fuji Yusoki Kogyo are entrepreneurs who will enter retirement phase and who has trading experience and mature minds.

Analysis of Measurement Models

Evaluate the relationship between constructs and indicators. This evaluation goes through two stages, namely evaluation of convergent validity (seen based on the loading factor for each construct) and discriminan validity (looking at composite reliability or Cronbach's alpha output).

In evaluating the convergent validity of checking individual item reliability, it can be seen from the standardized loading factor. Standardize loading factor describes the magnitude of the correlation between each measurement item (indicator) and its construct. Coming up next is the external stacking estimation of every pointer in the examination variable:

Table 2. Convergent Validity

Assessment of Measurement Model: Convergent Validity					
Construct	Item	Loading (>0.7)	AVE (>0.5)	Composite Reliability (>0.7)	Cronbach's Alpha (>0.7)
Product Quality (X ₁)	X1.1	0.917	0.778	0.972	0.968
	X1.2	0.916			
	X1.3	0.893			
	X1.4	0.904			
	X1.5	0.832			
	X1.6	0.927			
	X1.7	0.877			
	X1.8	0.906			
	X1.9	0.857			
	X1.10	0.782			
Brand Image (X ₂)	X2.1	0.909	0.817	0.973	0.968
	X2.2	0.900			
	X2.3	0.890			
	X2.4	0.913			
	X2.5	0.879			
	X2.6	0.908			
	X2.7	0.935			
	X2.8	0.897			
Buying Decision (Y)	Y1	0.820	0.744	0.967	0.962
	Y2	0.838			
	Y3	0.853			
	Y4	0.841			
	Y5	0.823			
	Y6	0.867			
	Y7	0.904			
	Y8	0.888			
	Y9	0.906			
	Y10	0.881			
Customer Satisfaction (Z)	Z1	0.891	0.843	0.982	0.979
	Z2	0.906			
	Z3	0.914			
	Z4	0.904			
	Z5	0.907			
	Z6	0.924			
	Z7	0.949			
	Z8	0.923			
	Z9	0.912			
	Z10	0.950			

In light of the information introduced in table 2 above, it is realized that every marker of the examination factors all have an external stacking estimation of > 0.7. In this manner,

all pointers are pronounced qualified or legitimate for research utilize and can be utilized for additional investigation.

Discriminant validity is to see and compare between discriminant validity and square root of average extracted (AVE). If the AVE square root value of each construct is greater than the correlation value between constructs and other constructs in the model, then it is said to have good discriminant validity and for the expected AVE value is > 0.5 . Based on the data presented in table 2 above, it is known that the AVE value of all variables is > 0.5 . Accordingly, it very well may be expressed that every factor has great discriminant legitimacy.

Composite reliability is an index that shows the extent to which a measuring tool can be trusted to be relied on. Data that has composite reliability > 0.7 has high reliability. Composite dependability marker block that actions a develop can be assessed with two sorts of measures, specifically interior consistency and cronbach's alpha. In view of the information introduced in table 2 above, it very well may be seen that the composite dependability estimation of all examination factors is > 0.7 . These outcomes show that every factor has met composite unwavering quality so it tends to be presumed that all factors have an undeniable degree of dependability.

The reliability test with the composite reliability above can be strengthened by using the Cronbach's alpha value. A variable can be declared reliable or meets Cronbach's alpha if it has a Cronbach's alpha value > 0.7 . In light of the information introduced in table 2 above, it very well may be seen that the Cronbach's alpha estimation of each examination variable is > 0.7 . In this way, these outcomes can demonstrate that every one of the exploration factors has met the necessities for the Cronbach's alpha worth, so it very well may be presumed that all factors have an undeniable degree of unwavering quality.

Structural model analysis

This section deals with evaluating the effect of one latent variable on other latent variables. Evaluation of this structural model includes:

Table 3. Latent Variable t-value

No	Variable	t-value	T _{table}	Conclusion
1	X ₁ → Y	2.072	1.96	Significant
2	X ₂ → Y	2.193	1.96	Significant
3	Y → Z	2.546	1.96	Significant
4	X ₁ → Z	2.031	1.96	Significant
5	X ₂ → Z	2.008	1.96	Significant

The t-table value at $\alpha = 5\%$ and $df = 56$ is 1.96. Based on this, it can be concluded that for hypothesis 1, hypothesis 2, hypothesis 3, hypothesis 4 and hypothesis 5, the value of $t_{\text{count}} > t_{\text{table}}$. Where all the values of T count > 1.96 , so it can be concluded that they have a significant effect.

R^2 in the structural equation does not have a clear interpretation and to interpret R^2 in the regression equation it is taken from the reduced form equation, this is intended to determine the size of the influence between latent variables.

Table 4. Value of Determination Efficiency

No	Variable	R ²
1	X ₁ , X ₂ → Y	0.629

2 $X_1, X_2, Y \rightarrow Z$ 0.823

Based on the results of R^2 in table 4 above, it can be explained that the magnitude of the influence of $X_1, X_2 \rightarrow Y$ is 0.629, meaning that 63% of the Buying Decision variable can be explained by the Product Quality and Brand Image variables. The magnitude of the influence of $X_1, X_2, Y \rightarrow Z$ is 0.823, meaning that 82% of the purchase intention variable can be explained by the variables of Product Quality, Brand Image and Buying Decisions.

Hypothesis Test

Speculation testing depends on the qualities contained in the underlying model investigation, the importance level of the way coefficient is acquired from the t-esteem and the normalized way coefficient esteem. As far as possible or the edge for testing the theory, namely:

- The t-value of the factor loadings is greater than the critical value (≥ 1.96).
- Standardized path coefficient (p) ≥ 0.05 .

The summary of the results of hypothesis testing can be seen in table 4.5 of the results of the structural model test below.

Table 5. Structural Model Test Results

	Hypothesis	T Value	Standardized Path Coefficient (p)	Result
H ₁	Product Quality → Buying Decision	2.072	0.422	Significant
H ₂	Brand Image → Buying Decision	2.193	0.444	Significant
H ₃	Buying Decision → Customer Satisfaction	2.546	0.393	Significant
H ₄	Product Quality → Customer Satisfaction	2.031	0.286	Significant
H ₅	Brand Image → Customer Satisfaction	2.008	0.329	Significant

From Table 5 above, it can be seen that for H₁, H₂, H₃, H₄ and H₅, the t-estimation of the factor loadings is more noteworthy than the basic worth (≥ 1.96), so it can be concluded that there is a significant effect.

Discussion

The results of the research and the results of the analysis of Structural Equation Modeling (SEM), the researcher will describe the discussion in accordance with the 5 hypotheses designed, namely:

H₁: There is a positive influence between product quality on buying decisions of Fuji Yusoki Kogyo. Hypothesis 1 in this study is that product quality has an influence on the buying decision of Fuji Yusoki Kogyo. Based on the results of data processing, it is known that the the t-estimation of the factor loadings is more noteworthy than the basic worth (≥ 1.96). This shows that product quality has an influence on the buying decision of Fuji Yusoki Kogyo, so that the research hypothesis 1 is accepted.

H₂: There is a positive influence between brand image on buying decisions of Fuji Yusoki Kogyo. Hypothesis 2 in this study is that brand image has an influence on the buying decision of Fuji Yusoki Kogyo. Based on the results of data processing, it is known

that the t-estimation of the factor loadings is more noteworthy than the basic worth (≥ 1.96). This shows that the brand image has an influence on the buying decision of Fuji Yusoki Kogyo, so that the research hypothesis 2 is accepted.

H₃: There is a positive influence between buying decisions on customer satisfaction Fuji Yusoki Kogyo. Hypothesis 3 in this study is that buying decision has an influence on customer satisfaction Fuji Yusoki Kogyo. Based on the results of data processing, it is known that the t-estimation of the factor loadings is more noteworthy than the basic worth (≥ 1.96). This shows that the buying decision has an influence on customer satisfaction Fuji Yusoki Kogyo, so that the research hypothesis 3 is accepted.

H₄: There is a positive influence between product quality on satisfaction customer Fuji Yusoki Kogyo. Hypothesis 4 in this study is product quality has an influence on customer satisfaction Fuji Yusoki Kogyo. Based on the results of data processing, it is known that the t-estimation of the factor loadings is more noteworthy than the basic worth (≥ 1.96). This shows that product quality has an influence on customer satisfaction Fuji Yusoki Kogyo, so that the research hypothesis 4 is accepted.

H₅: There is a positive influence between brand image on satisfaction customer Fuji Yusoki Kogyo. Hypothesis 5 in this study is that brand image has an influence on customer satisfaction Fuji Yusoki Kogyo. Based on the results of data processing, it is known that the t-estimation of the factor loadings is more noteworthy than the basic worth (≥ 1.96). This shows that brand image has an influence on customer satisfaction Fuji Yusoki Kogyo, so that the research hypothesis 5 is accepted.

CONCLUSION AND RECOMMENDATION

Conclusion

According to result from research that has been conducted, there are several conclusions that could be drawn from here such as:

- 1) Product Quality has a positive and critical impact on Buying Decisions, meaning that changes in the value of Product Quality have a unidirectional effect on changes in Buying Decisions or in other words, if Product Quality increases, there will be an increase in Buying Decisions and statistically significant effects.
- 2) Brand Image has a positive and critical impact on Buying Decisions, meaning that changes in the value of Brand Image have a unidirectional influence on changes in Buying Decisions or in other words, if the Brand Image activities are carried out properly, there will be an increase in Buying Decisions and statistically have a significant effect.
- 3) Buying Decisions have a positive and critical impact on Customer Satisfaction, meaning that changes in the value of Buying Decisions have a unidirectional effect on changes in Customer Satisfaction or in other words, if the Buying Decision increases, there will be an increase in Customer Satisfaction and statistically has a significant effect.
- 4) Product Quality has a positive and critical impact on Customer Satisfaction, which means that changes in the value of Product Quality have a unidirectional effect on changes in Customer Satisfaction or in other words, if the Product Quality increases, there will be an increase in Customer Satisfaction and statistically significant impact.
- 5) Brand Image has a positive and critical impact on Customer Satisfaction, meaning that changes in the value of Brand Image have a unidirectional effect on changes in Customer Satisfaction or in other words, on the off chance that the Brand Image expands, there will be an increment in Customer Satisfaction and genuinely has a huge impact.

Suggestion

According to these results of conclusions, these following suggestions could be made from this research such as in below:

- 1) To improve product quality in order to improve purchasing decisions. The good quality of the products was met with positive reactions from customers. Fuji Yusoki Kogyo better try to maintain the quality of its products for the sake of purchasing decisions that will ultimately have a positive effect on customer satisfaction. As for what Fuji Yusoki Kogyo needs to do regarding Product Quality is to further improve the level of quality that currently exists, one of the steps is by conducting interviews with customers about what they want / expect and advice on product quality that already exists. this, which can then be used as a reference for the future repair / development of Fuji Yusoki Kogyo's robotic palletizer products.
- 2) To create purchasing decisions by forming a good corporate brand image according to clients. A decent corporate brand picture in the eyes of customers is needed by Fuji Yusoki Kogyo to generate customer satisfaction with the company. Customers who already have satisfaction with the company tend to make repeated transactions and look for what they need from the company. The first step to getting a purchase decision is to understand the consumer individually. This is intended so that companies can communicate with customers effectively and offer the right products for them, companies must be able to build an accurate profile of each individual.
- 3) Further research should expand the scope of research, namely by using a sample of several new customers, Fuji Yusoki Kogyo, to determine the level of customer satisfaction. Develop other dimensions of customer satisfaction indicators, so that a more in-depth analysis can be carried out to determine the level of customer satisfaction. This is expected to increase Fuji Yusoki Kogyo's customer satisfaction.

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