
DESIGNING IMPROVEMENTS TO THE PRODUCT ATTRIBUTES OF SAMASE KOKO CLOTHES BASED ON CONSUMER PREFERENCES USING THE CONJOINT ANALYSIS METHOD

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INFO ARTIKEL

Keywords: designing attribute improvements; consumer preferences; Micro.

ABSTRACT

Samase is one of the MSMEs from Bandung that was established in 2014. Samase is engaged in fashion, especially men's Muslim clothing. One of its superior products is koko clothes consisting of koko shirts and koko kurta, but the sales of koko clothes have not been able to meet the set target, this is due to product attributes that are not by consumer desires. This study aims to formulate a combination of attributes and the level of attributes on Samase koko shirt products that are considered important by consumers, by compiling recommendations for improving the right koko clothes attributes according to consumer desires and comparing them with existing attributes. The questionnaire in this study was distributed online to consumers who had bought and used koko clothes products from Samase, totaling 108 respondents. The results of the questionnaire were processed using conjoint analysis to determine consumer preferences. Based on calculations using conjoint analysis, it is known that consumer preferences with the highest utility value are, supernova material, long sleeve size, koko shirt model, deep color, basic collar, printing motifs, and price in the range of Rp. 200,000 - Rp. 300,000.



Introduction

Micro, Small, and Medium Enterprises, or MSMEs, in Indonesia are experiencing a rapid increase. The Head of the Micro Business Empowerment and Development and Facilitation Section of the Bandung City KUMKM Office said that the number of MSMEs in Bandung City based on data from the Central Statistics Agency or BPS was 111,627 or 75% of the total number of MSME groups in March 2021 (Hamza & Agustien, 2019). By 2022, the growth of MSMEs in Bandung City will increase to 180,000 new businesses. Based on data from the Bandung City Statistics Agency, the number of apparel business units as of 2020 was 503 units. Due to the large number of businesses in the textile and clothing sector, companies must design products of good quality, varied, and affordable prices to rise and compete again in the market (Kelara & Suwarni, 2020).

Samase is an MSME engaged in the field of men's Muslim clothing, which was established in 2014. The products provided by Samase are men's Muslim clothing needs, such as Koko shirts, Koko kurta, robes, and sirwal (Marlina & Fatwa, 2021). One of the leading products of Samase is koko clothes consisting of Koko shirts and Koko kurta, with prices in the range of Rp. 229,000 - Rp. 399,000. The target of Samase is men aged

20-50 years who like to wear Koko clothes for daily activities. Samase sells its products offline and online by having an offline store so that potential buyers can see the product directly and through e-marketplaces such as Shopee (Nalini, Rohayati, & Kusmayanti, 2022). In addition, Samase also markets its effects on social media, such as Instagram, to expand the market. The following is Samase's sales data from 2020 to 2022.

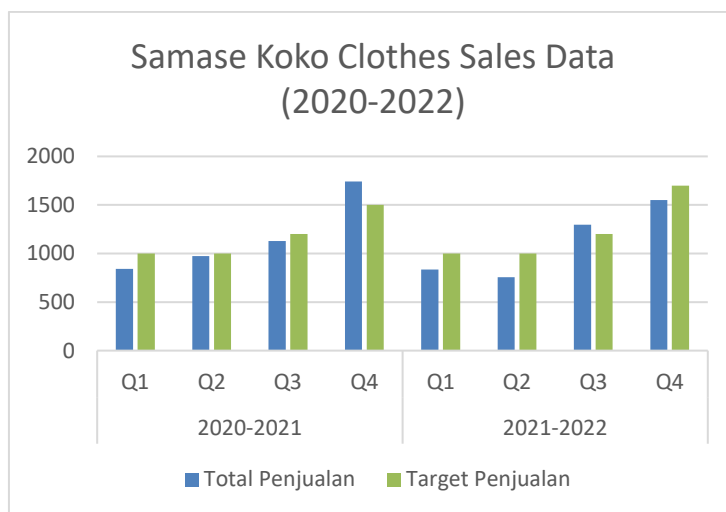


Figure 1. Sales Data of Samase Koko Shirt (2020-2022)
Source: Samase (2022)

Based on Figure 1, the Samase sales target from 2020 to 2022 has not been fulfilled, where sales can be met in one quarter, but in another quarter, the target still cannot be met (Fibrianti, Fauzi, & Arifin, 2013). Based on the statement from Samase, the cause of not achieving the sales target is due to the lack of consumer awareness of Samase compared to other competitors. From the interview results, it is known that competitors who have criteria are brands with similar products to Samase, namely koko shirts and prices in the range of Rp. 200,000 to Rp. 300,000, with the same market segment as Samase. From these three criteria, Samase's competitors are Moslemepic, Coop Design, Al-Achwan, and Fadkhera. According to (Atabaki et al., 2018) in their research, social media activities affect consumer awareness. The following is a table of Samase's Instagram social media followers and competitors: Moslemepic, Coop Design, Al-Achwan, and Fadkhera.

Table 1
Comparison Table of Samase Followers with Competitors

No.	Brand Name	Followers
1.	Moslemepic	205.000
2.	Coop Design	155.000
3.	Al-Achwan	127.000
4.	Fadkhera	121.000
5.	Samase	81.900

Based on Table 1, the level of consumer heart share towards Samase is lower than that of competitors. Another factor that causes the sales target not to be achieved is the company's need to understand consumer preferences. According to (Kotler, Dingena, Pfoertsch, & Pfoertsch, 2016), consumer preference is a choice of likes or dislikes by a person towards a product (goods or services). Preferences are described as consumer attitudes towards products or services as an evaluation of a person's cognitive traits, emotional feelings, and tendencies to act. Therefore, Samase needs to increase consumer purchasing power towards Samase products. To understand consumer preferences and assessments of Samase koko shirt products, a preliminary survey was conducted by conducting in-depth interviews with 15 respondents, men aged 25-45 years who had previously used koko shirt products from Samase (Subagio, 2011). The following is a table of preliminary survey results of several consumers who have bought and used Samase Koko shirts.

Table 2
Preliminary Survey Results

No.	Consumer Feedback	Percentage
1.	Thin shirt material	60%
2.	Collar types are less varied	70%
3.	The choice of motifs is less varied	70%
4.	Lack of color variation	60%
5.	Sleeve size is less varied	50%

Based on Table 2, Samase received various complaints from consumers who have used its products. According to (Amanah, Hurriyati, Gaffar, Layla, & Harahap, 2018), a product is usually accompanied by attributes that include several things, namely product quality, product features, product style, and design. Some of the complaints buyers give include the thin material used, the option of less varied collar shapes, the type of less varied motifs, the variety of colors provided less, and the price being higher than competitors' products. In addition, Samase still needs to improve in responding to suggestions regarding consumer preferences. This affects sales targets and customer loyalty (Kolopita & Soegoto, 2015). Therefore, based on the problems experienced by Samase described above, research is needed on Samase which aims to design koko shirt product attributes according to Samase's consumer preferences using the conjoint analysis method so that products can attract more consumer buying interest because they match consumer desires and Samase can become superior to competitors.

Research Methods

The conceptual model of a study is a diagram that describes the stages and relationships between factors that have been identified to analyze the problem of the study. The following is a conceptual model of the method used in this study.

According to (Malhotra et al., 2017), the conjoint analysis aims to determine the importance of attributes in the respondent's choice process, estimate brand market share, and select the level of the most preferred features.

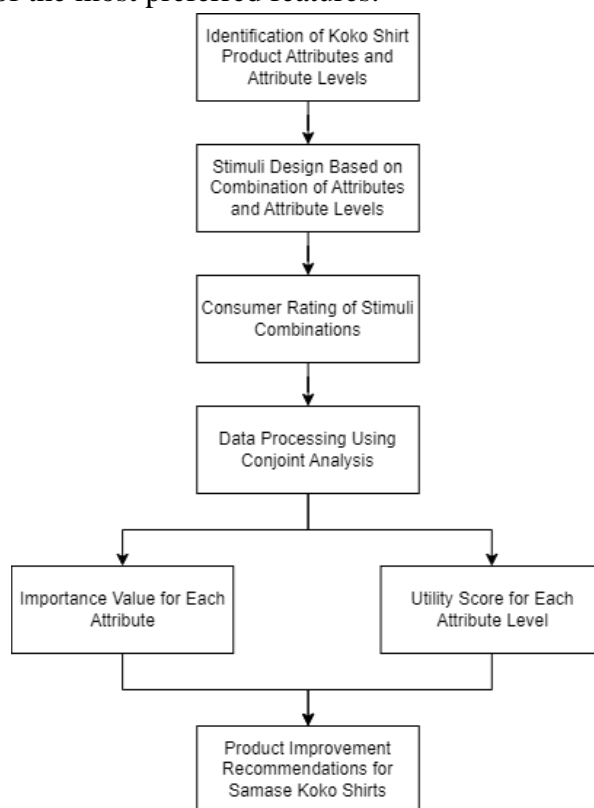


Figure 2. Conceptual Model

Based on Figure 2, there are stages carried out in this study using the conjoint analysis method. First, problem formulation by identifying product attributes and the level of features by consumer preferences was obtained through preliminary surveys of consumers and interviews with Samase. Determining attributes and levels is the first step that must be taken in conducting conjoint analysis. The design attributes and the level of features that will be used for research are obtained from the initial surveys and interviews. Next, create stimuli, namely designing a combination of points and attribute levels that are poured into the form of plan cards and included in the questionnaire.

The questionnaire was distributed to Samase consumers to get a consumer assessment of the combination of attributes that had been made before. The evaluation used a Likert scale and was assessed based on the level of conformity to the respondent's desire for product attributes. According to (Joshi et al., 2015), the Likert scale used has a range of 1-4 where number 1 indicates strongly dislike, number 2 indicates dislike, number 3 indicates like, and number 4 indicates strongly like. Determination of sampling techniques and the number of samples will use non-probability sampling and purposive sampling. This technique is used in sampling based on selection according to the criteria for selecting respondents. The criteria that are considered to represent the sample are male consumers who have bought and used Samase Koko clothes more than or equal to two

times because consumers with these criteria are considered to understand the product better.

The questionnaire output is the level value of the combination chosen by the respondent and processed using IBM SPSS 23.0. The level with the most excellent utility value of each attribute means that it significantly influences consumer purchasing decisions. The selected group of each point will be combined to become an alternative design recommended to Samase to help determine the composition of the new Koko shirt product attributes.

Results and Discussion

Attribute Determination

Determining attributes and levels is the first step to conducting a conjoint analysis (Zhou & Xu, 2020). A literature study was conducted to determine the attributes and levels used in this study. It will be used as a reference in determining attributes and conducting interviews directly with sources from Samase to determine the attributes and their levels. The results of determining the attributes and their levels through literature studies and interviews with Samase parties that have been carried out can be seen in Table 3.

Table 3
Samase Product Attribute and Level Results

No.	Attribute	Level	Information	References
1	Material	1	Poplin	Attribute: Zhao et al. (2020) Level: Interview with Samase
		2	Toyobo	
		3	Supernova	
2	Sleeve Size	1	Short Sleeve	Attribute: Zhao et al. (2020) Level: Interview with Samase
		2	3/4 Sleeve	
		3	Long Sleeve	
3	Model	1	Koko Shirt	Attribute: Zhou & Xu (2019) Level: Interview with Samase
		2	Koko Kurta	
4	Color	1	Deep	Attribute: Zhou & Xu (2019) Level: Interview with Samase
		2	Soft	
		3	Bright	
5	Collar	1	Shanghai	Attribute: (Guan, Qin, & Long, 2019) Level: Interview with Samase
		2	Basic	
6	Motif	1	Plain	Attribute: Guan, Qin, & Long (2019) Level: Interview with Samase
		2	Printing	
7	Price	1	<Rp. 200.000	

2	Rp.200.000- Rp.300.000	Attribute: Zhou & Xu (2019)
3	Rp.300.001- Rp.400.000	Level: Interview with Samase

Stimuli Generation

After determining the attributes and levels, stimuli design is carried out using the Full-profile method approach. This approach can reduce stimuli by using a fractional factorial design (Malhotra et al., 2017). In making these stimuli, statistical tools are needed. The statistical tool used to create stimuli in this study is IBM SPSS 23.0. The attributes and levels will be arranged in an orthogonal design, producing several plan cards. Based on the results of IBM SPSS 23.0, 16 plan cards were obtained. The results of the plan card can be seen in Table 4.

Table 4
Plan Card Combination

Card Number	Material	Sleeve Size	Model	Color	Collar	Motif	Price
1.	Toyobo	Short Sleeve	Koko Shirt	Soft	Basic	Printing	Rp. 300.001 - Rp. 400.000
2.	Toyobo	Short Sleeve	Koko Kurta	Bright	Basic	Plain	< Rp. 200.000
3.	Supernova	Long Sleeve	Koko Kurta	Deep	Basic	Plain	Rp. 300.001 - Rp. 400.000
4.	Poplin	Short Sleeve	Koko Shirt	Deep	Shanghai	Plain	< Rp. 200.000
5.	Poplin	Short Sleeve	Koko Kurta	Deep	Basic	Plain	Rp. 200.000 - Rp. 300.000
6.	Supernova	Short Sleeve	Koko Shirt	Soft	Shanghai	Plain	Rp. 200.000 - Rp. 300.000
7.	Supernova	Short Sleeve	Koko Kurta	Bright	Shanghai	Printing	< Rp. 200.000
8.	Poplin	Short Sleeve	Koko Shirt	Deep	Basic	Printing	< Rp. 200.000
9.	Poplin	Short Sleeve	Koko Kurta	Deep	Shanghai	Printing	Rp. 300.001 - Rp. 400.000
10.	Poplin	Long Sleeve	Koko Shirt	Bright	Basic	Printing	Rp. 200.000 - Rp. 300.000
11.	Poplin	3/4 Sleeve	Koko Kurta	Soft	Basic	Plain	< Rp. 200.000
12.	Toyobo	3/4 Sleeve	Koko Kurta	Deep	Shanghai	Printing	Rp. 200.000 - Rp. 300.000
13.	Toyobo	Long Sleeve	Koko Shirt	Deep	Shanghai	Plain	< Rp. 200.000
14.	Supernova	3/4 Sleeve	Koko Shirt	Deep	Basic	Printing	< Rp. 200.000
15.	Poplin	3/4 Sleeve	Koko Shirt	Bright	Shanghai	Plain	Rp. 300.001 - Rp. 400.000
16.	Poplin	Long Sleeve	Koko Kurta	Soft	Shanghai	Printing	< Rp. 200.000

Questionnaire

The questionnaire consists of three main sections that respondents will fill in: the screening section, respondent identity, and rating plan card. The questionnaire that has been designed will then be pre-tested by distributing the questionnaire to 30 respondents and asking for feedback on the contents of the questionnaire to find out whether the questions can be understood. The pre-test is based on testing the content validity of the questionnaire that has been designed. The questionnaire was distributed online to make it easier to reach respondents and make it easier for respondents to fill out the questionnaire. In this study, the number of respondents' answers that were eligible for processing was 108 respondents.

Data Processing Results

After the questionnaire is filled in by the desired number of respondents, the next step is to process the questionnaire data to determine the level of importance of each attribute and the level in the Plancard combination. Data processing using IBM SPSS 23.0 can be seen in Table 5.

Table 5
Utility Value for Each Level

		Utility Estimate	Std. Error
Material	Poplin	0.039	0.111
	Toyobo	-0.118	0.130
	Supernova	0.079	0.130
Sleeve Size	Short Sleeve	0.047	0.111
	3/4 Sleeve	-0.139	0.130
	Long Sleeve	0.092	0.130
Model	Koko Shirt	0.064	0.083
	Koko Kurta	-0.064	0.083
Color	Deep	0.302	0.111
	Soft	-0.036	0.130
	Bright	-0.265	0.130
Collar	Shanghai	-0.043	0.083
	Basic	0.043	0.083
Motif	Plain	-0.179	0.083
	Printing	0.179	0.083
Price	< Rp. 200.000	-0.231	0.111
	Rp. 200.000 – Rp. 300.000	0.245	0.130
	Rp. 300.001 – Rp. 400.000	-0.014	0.130
(Constant)		3.005	0.100

Based on Table 5. there is a value for each level of each attribute. If a level has a more higher utility value than other levels, then the level is considered more important by respondents; otherwise, if the utility value is lower, the level is considered less critical. Based on the table's results, the level with the highest utility value on the material attribute is the Supernova level, which is 0.079. The level with the highest utility value at the sleeve size attribute is at the Long Sleeve level, which is 0.092. The level with the highest utility value at the model attribute is at the koko Shirt level, which is 0.064. The level with the highest utility value at the color attribute is at the Deep level, 0.302. The level with the highest utility value at the collar attribute is at the Basic level, which is 0.043. The level with the highest utility value at the motif attribute is at the Printing level, which is 0.179. The level that has the highest utility value at the price attribute is at the level of Rp. 200,000 - Rp. 300,000, which is 0.245.

Table 6
Attribute Importance Level

Attributes	Importance Values
Color	21.190
Price	21.120
Sleeve Size	16.625
Material	12.449
Motif	12.284
Model	8.711
Collar	7.620

Based on Table 6. regarding the level of importance of attributes, shows that the most crucial attribute according to respondents when buying Samase koko clothes is color which has an importance value of 21.190%. Next is the price attribute with an importance value of 21.120%. Sleeve size attribute with an importance value of 16.625%. Material attributes with an importance value of 12.449%. Motive attribute with an importance value of 12.284%. Model attribute with an importance value of 8.711%. Collar attribute with an importance value of 7.620%.

Table 7
Correlation Value and Significance

Correlations		
	Value	Sig.
Pearson's R	0.918	0.000

Table 7. contains the correlation results using the Pearson's R reference which is used to determine whether the data model is valid and whether there is a strong correlation between the predicted and actual conditions in this conjoint process, which is 0.918 with

a significant value of 0.000. The model can be said to be valid or have a correlation if the correlation coefficient is equal to or greater than 0.3 with a significant value smaller than 0.05 (Sugiyono, 2019). It can be concluded that the high predictive ability in the conjoint process or the existence of a strong relationship between the predicted state and the actual condition.

Final Results of Research

Table 8
Comparison of Samase Attributes with Consumer Preferences

Attributes	Samase	Consumer Preferences
Color	Deep, Soft	Deep
Price	Rp. 179.000 – Rp 299.000	Rp. 200.000 – Rp.300.000
Sleeve Size	Short Sleeve, 3/4 Sleeve, Long Sleeve	Long Sleeve
Material	Poplin	Supernova
Motif	Plain	Printing
Model	Koko Shirt, Koko kurta	Koko Shirt
Collar	Shanghai	Basic

Table 8. contains a comparison between the level that has been applied by Samase and the level that is the choice of consumer preference. The level of each attribute considered most important by respondents based on the greatest utility value will be used as the preferred level of consumer preference. By making this comparison, it can be seen the difference in consumer preferences with the application carried out by Samase.

Based on Table 8. Several attributes have been determined by Samase, which are the attributes of consumer preferences. Samase has used a deep color for the color of koko shirt products to consumer preferences in the color attribute, namely deep color. Furthermore, Samase provides products with selling prices ranging from Rp. 200,000 - Rp. 300,000 and Koko shirts with long-sleeved models are by consumer preferences. One of the superior product types from Samase is a Koko shirt product which is called "Kemko" because it has a familiar model so it can be used every day, this is also by consumer preferences who prefer Koko shirts with Koko shirt models. For motif attributes, the most demanded level by consumers is printing motifs, but Samase has not provided products with printing motifs. For the material attribute, the most demanded level by consumers is supernova material, but Samase only provides one poplin material. In addition, for the collar attribute, the most demanded level by consumers is the basic collar. However, Samase only provides one collar model: the Shanghai collar for Koko and Koko kurta shirts. Therefore, Samase needs to issue koko shirt products using printing motifs, supernova materials, and basic collars to adjust to consumer preferences.

The recommendations given are by the company's considerations because the results of essential attributes according to consumers are already used by Samase; it is just that there

are differences in the type of motifs, type of material, and type of collar. An illustration of the design of alternative attribute recommendations for Koko shirt products can be seen in Figure 3.



Figure 3. Illustration of Shirt Product Recommendation Design Based on Consumer Preferences

Conclusion

Based on the results obtained in this study using the conjoint method, importance values are obtained for each attribute. The higher the importance values, the more critical the attribute is considered. The attribute considered the most important according to consumers is the color attribute, with importance values of 21.19%. So the color attribute is the most crucial and significantly influences consumers' purchasing decisions. From the results of these calculations, by combining the level of attributes that have the highest utility value, the results of recommendations that can be used as product design for Samase koko shirts are koko shirts with dark (deep) colors with printing motifs, using supernova materials, using Koko shirt models with long sleeves and basic collars, and have prices ranging from Rp. 200,000 - Rp. 300,000. In addition, after comparing Samase attributes with consumer preference attributes, it is known that three Samase attributes are different from consumer preferences. These attributes are the motif, material, and collar attributes. The existing Samase Koko shirt product uses plain motifs, poplin material, and Shanghai collars. Meanwhile, motifs, materials, and collars that match consumer preferences are printing motifs, supernova materials, and basic collars.

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