



Re-Design of Riau Malay Songket Packaging Using Kansei Engineering Method

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ARTICLE INFORMATION

Article history:

Received: 7 January 2025

Revised: 3 May 2025

Accepted: 30 October 2025

Category: Research paper

Keywords:

Packaging design

Kansei engineering

Consumer perception

Malay songket

DOI: 10.22441/ijiem.v7i1.31645

A B S T R A C T

Songket is an attribute of the Riau region worn by men from the Malay tribe. Not only as an attribute of regional clothing, songket is marketed as a souvenir from Riau province. The conditions stated on the songket packaging are very simple, using Oriented Polypropylene plastic packaging material without any packaging design. Meanwhile, as a souvenir product for private agencies and government officials, packaging is required to represent the product. Packaging design based on consumer desires and needs can use the Kansei Engineering method which is used in product development to achieve consumer satisfaction by analyzing human feelings and emotions and pouring them into product design. Collected and distributed to 68 respondents. Respondent responses were subjected to statistical tests and factor analysis with the results showing that there were 9 statements with values above 0.5, namely rectangular, packaging has been formed and ready to use, typical Riau Malay colors, displays business information, and songket motifs as a characteristic of Riau province. After getting the packaging design concept, consultations were carried out with experts. Professional consultations were carried out with people who have knowledge of packaging design, material needs, prices or experts in the field of songket weaving. The packaging design that has been carried out produces a packaging design according to consumer needs to attract consumer buying interest and describe it as a typical product of Riau province in choosing Malay songket products as souvenirs.

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1. INTRODUCTION

Riau Songket is an attribute of Malay cultural clothing which is clearly visible from the crafts that have existed since the era of the Siak Kingdom. The process of making cloth is done

by weaving threads interspersed with gold or silver threads with various motifs, colors and patterns. Currently, the songket model has developed and is not only used for traditional

events, but can also be used at weddings and governmental events.

The Riau Provincial Governmental, through Riau Governor Regulation Number 141 of 2015, has stipulated that civil servants wear clothing made from typical Riau Malay songket, especially on Fridays. Apart from being part of local clothing, songket is also sold as a typical Riau souvenir which is in great demand from various regions (Purwati et al., 2021).

The research was conducted at one of the MSME producing songket weaving in Pekanbaru City, Riau Province. The process of making songket weaving is done traditionally with manual weaving equipment, not machines, thus creating a very unique fabric and showing that this fabric is truly typical of Riau Province. Thus, each songket produced has its own uniqueness with high quality because it is done very carefully by the craftsmen. Malay songket

is sold at a price between IDR 800,000.00 to IDR 5,000,000.00 per songket.

Based on observations, it was found that the packaging used was Oriented Polypropylene plastic without a packaging design. In Table 1, the results of interviews with producers and consumers are displayed.



Figure 1. Packaging in use

Table 1. Observation result advantages and disadvantages of Songket packaging

No	Excess	No	Lack
1	Packaging has an economical price	1	Packaging is easily damaged
2	Easy to order and get	2	Packaging is very simple and plain
3	Products cannot be stacked	3	Traditional aspects are not displayed, as a product of Riau Malay culture
4	Market packaging	4	The packaging does not have a business label
5	The packaging process is easy and fast	5	Exposure to sunlight affects the color of the product
		6	The product cannot stand being packaged in plastic (evaporates)
		7	The packaging does not match the very high price of the product
		8	The packaging cannot be wrapped tightly

When marketing local cultural products, quality is not the only aspect that attracts buyers. Attractive and safe packaging is also an added value. Especially for middle to upper class consumers, products need to have their own advantages. The quality of songket weaving and attractive packaging design must be prioritized. With competitive product prices, packaging can give a luxurious impression to an item and increase its selling appeal. With these advantages, the songket weaving business can compete with other weaving businesses.

In research (Putri et al., 2022) it is explained that product packaging design has a more significant impact compared to advertising attractiveness, which has a greater influence on purchasing decisions. Research reveals that 90% of respondents enjoy and like a product after seeing its appearance. About 92% of respondents who found the packaging attractive expressed interest, and 89% said they would

make a purchase. As many as 73% of consumers were impressed with the product packaging and planned to buy the product again. As a product of regional culture, packaging development can involve elements of Riau Malay culture, so that when consumers see the packaging, they realize that songket is a unique product from Riau Malay culture. The aim is to introduce and display traditional Riau Malay cultural products. Therefore, the aim of this research is to design packaging for Riau Malay songket products in selecting Malay songket products as souvenirs, based on consumer perceptions that characterize traditional Malay culture.

The phenomena that occur in the Rumah Tenun MSME are: (1) Rumah Tenun MSME does not have packaging that is identical to typical Riau Malay products, (2) Rumah Tenun MSME uses

Oriented Polypropylene plastic packaging that is not comparable to the price of the product.

In designing packaging, it is important to create a design concept by paying attention to shape, material, color and design elements to make the product more attractive. By determining and paying attention to the packaging development concept, attractive designs and shapes can be produced according to consumers' wishes, so that they will attract consumers' interest in buying (Pratiwi et al., 2023). In efforts to develop packaging, it is important to involve consumer preferences to make it more attractive in terms of their emotions and feelings. So that consumer satisfaction and desires will be realized if the product produced can meet the needs, hopes, desires and does not give rise to complaints in choosing the product (Deborah et al., 2024). One product development method that focuses on consumer preferences is Kansei Engineering. Consumer preferences can be shown through their emotional expressions or images of a product (Kansei Consumers) (Syahputra & Sari, 2021). This process makes it possible to model customer feelings or emotions and then translate them into design parameters, such as design concepts, packaging elements, and prototypes (Delfitriani & Uzwatania, 2022).

2. LITERATURE REVIEW

Packaging has an important role because it is related to the product being packaged and is the selling point of the product and displays the product's image. This selling value increases when the product gets added value from an attractive packaging design. Meanwhile, product image is related to consumer perceptions of the product, the better the packaging, the better the perception of the product. In other words, products with good packaging will give a positive impression to consumers (Pramesti, 2024).

Consumer behavior is behavior that consumers directly display to search for, buy, use, evaluate and consume products and services. In addition, consumer behavior can also be defined as the study of individuals, groups or organizations in the process by which they select, use and dispose of products, services, experiences or ideas to satisfy needs and the impact of this

process on consumers and society (Dilla et al., 2020). Packaging development using a psychological approach can utilize the Kansei engineering method, where all human senses, sight, hearing, feeling, smell, taste and cognition are involved simultaneously. If product designers can take advantage of this opportunity and develop it, they will produce emotional satisfaction which leads to loyalty and happiness (Fajri Hasibuan, 2020).

Kansei engineering has several benefits as a method for designing and developing products. The advantage of this method is that consumers can imagine ideas for similar products because the stages in Kansei engineering will compare similar products. This ability is to provide more targeted information regarding desires for a product (Puspasari et al., 2023). According to (Engelberth Ivangelist Lamalouk & Simanjuntak, 2023) the working principles of Kansei engineering are: (1) Human psychological feelings, (2) Kansei engineering method, (3) Design a product.

The challenge faced is the need to quickly respond to diverse and changing customer demands. So, it is necessary to pay attention to all aspects of the quality of the products offered (Mulyati et al., 2020). One important factor in maintaining product quality is packaging. Packaging design always includes product information so that it can be conveyed to buyers. Currently, the role of packaging is not only to protect products, but also as an efficient marketing tool (Lamatinulu et al., 2022) The Kansei engineering method was created to approach consumers in order to translate consumer kansei (emotions) into product design features (Nurseptiana et al., 2023).

3. RESEARCH METHOD

Research methodology is used to determine the steps in research. The research steps carried out are as follows:

1. Sample Determination and Sampling Techniques

This research does not know for certain the number of consumers who buy songket cloth products. Thus, it can use the Paul Leedy formula to calculate the minimum sample. The formula is (Puspita, 2022) :

$$n = \left(\frac{z}{e}\right)^2 (p) (1-p) \quad (1)$$

The number of samples is :

$$\begin{aligned} n &= \left(\frac{z}{e}\right)^2 (p) (1-p) \\ &= \left(\frac{1,64}{0,10}\right)^2 (0,5) (1 - 0,5) \\ &= 67,24 \approx 68 \text{ respondents} \end{aligned}$$

The sample selection technique used was purposive sampling. Purposive sampling is a method for selecting samples based on certain criteria. In this technique, sample selection is carried out by considering certain characteristics or attributes that are considered relevant to previously known population characteristics (Suriani et al., 2023).

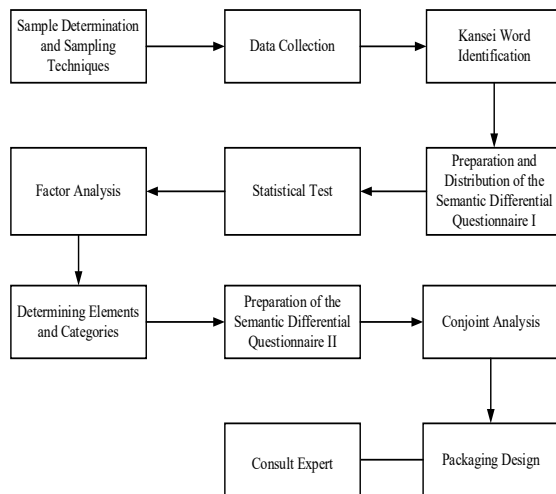


Figure 2. Study framework

2. Data Collection

Primary data is very crucial data in research. Primary data was obtained through questionnaire interviews. Secondary data is used as additional information in research, which acts as a support for primary data. In this research, examples of secondary data include packaging models and packaging materials. Secondary data was obtained from the internet, journals, articles and similar competing products (Engelberth Ivangelist Lamalouk & Simanjuntak, 2023).

3. Kansei Word Identification

Identification of the word kansei was obtained through observation, interviews and references from books and journals, where observations and interviews were carried out directly with consumers and producers at the research location. In (Faisal et al., 2021) it is explained that the kansei

words obtained from interviews are then grouped. The purpose of this grouping is to combine similar kansei words into new kansei words that can represent the group. Meanwhile according to (Ushada et al., 2019) Kansei words are a method to identify consumer sensibility towards new products in Kansei engineering. Kansei words are one part of kansei values in the form of adjectives that can be used to determine quality attributes.

4. Preparation and Distribution of the Semantic Differential Questionnaire I

The semantic differential I questionnaire must be prepared first before being distributed. Kansei words obtained from interviews with consumers are filtered and grouped as statements for the semantic differential I questionnaire. (Rezeki & Pitaloka, 2020) states that the kansei words that have been grouped are then entered into the semantic differential I questionnaire and given a scale value of 5, namely Very Not Agree indicates that the respondent's perception of the packaging is very in line with the Kansei word right column (scale 1), Disagree (scale 2), Neutral (scale 3), Agree (scale 4) and Strongly Agree (scale 5). The questionnaire was distributed to respondents who already knew about songket packaging. In (Faisal et al., 2021) explains that the aim of distributing the questionnaire is to identify kansei words that describe respondents' feelings, then they will be used in the semantic differential II questionnaire to design new packaging.

5. Statistical Test

The questionnaire results obtained were analyzed through statistical tests, namely validity tests, reliability tests and adequacy tests using SPSS 26.0 software. In (Teni & Agus Yudianto, 2021) explains that a test result is considered valid if the value $R_{count} > R_{table}$, while the data is considered invalid if $R_{count} < R_{table}$ the value of R_{table} for 68 respondents is 0.2387. If the statement is invalid, it will be eliminated and the next iteration will be carried out until all data is declared valid. A test is considered reliable if the Cranbach alpha value is more than 0.5. (Hadiyansyah et al., 2021) states that data is considered sufficient if the value $N' < N$,

where N is the number of samples, namely 68 respondents.

6. Factor Analysis

The next stage is factor analysis by conducting the Kaiser Meyer Olkin test with SPSS 26.0 software. (Mahmudan, 2020) explains that the Kaiser Meyer Olkin test results obtained will determine that the data can be subjected to further factor analysis. If the Kaiser Meyer Olkin value is above 0.6 then the data is considered worthy enough for further factor analysis. (Setianingsih & Asmianto, 2024) revealed that the Barlett test was carried out by looking for the Chi-Square value and determining the significance value. If the significance value is less than 0.05, it indicates that the variables in the questionnaire have a relationship with other variables and further factor analysis can be carried out. Meanwhile, the Measures of Sampling Adequacy test is used to assess how strong the relationship between existing items is. Data is considered valid if the results are >0.5, and the items are closely correlated with each other. However, if the results are <0.5 the data is considered invalid and will be eliminated, then the process is repeated until all data is declared valid.

7. Determining Elements and Categories

Determining elements and categories aims to produce variations in the sample which will be the subject of the second questionnaire. The samples were divided into packaging elements determined by the researcher which were appropriate to the songket packaging. When defining elements and categories, each category will be given a notation on the design elements used to combine each element according to its category.

8. Preparation and Distribution of the Semantic Differential Questionnaire II

In the second questionnaire, respondents were asked to provide an assessment of each design element displayed in the form of a combination of stimuli that had been prepared. The aim of the semantic differential II evaluation is to analyze the relationship between kansei words and the subject's description of the packaging design elements that have been provided. The value of each packaging design element stimulus

for each kansei word from the respondent's assessment was then calculated. The results of the average value of packaging design elements from the results of the semantic differential II questionnaire are used as input data in conjoint analysis (Yola et al., 2020).

9. Conjoint Analysis

Carrying out a combined analysis of the results of distributing questionnaires and calculating the utility value of packaging design attributes. The highest utility test results are an important attribute that is the chosen specification for designing songket packaging designs.

10. Packaging Design

The packaging design for songket was made based on the design concept and selected specifications, which were obtained through kansei word data processing which had been carried out by factor analysis and conjoint analysis with the highest utility value.

11. Consult Expert

The final stage (Yola et al., 2020) explains that this step aims to identify weaknesses and recommendations regarding material requirements, costs, as well as suggestions for improvements to the design that has been created. The aim is to serve as a reference for the things that are needed before starting the production process.

4. RESULT AND DISCUSSION

The songket weaving business is a micro, small and medium business fostered by Bank Indonesia. The weaving business produces and markets typical Riau songket products. Data collection is necessary to obtain information that will be used in data processing. The data obtained are as follows:

Kansei Word Identification

Data collection is carried out to follow up on packaging problems. Kansei word is obtained through distributing open questionnaires to consumers. Table 2 shows the results of kansei word identification carried out on respondents.

Table 2. Kansei word identifier result

No	Kansei Word
1	The rectangular shape has a traditional feel
2	The product motif is visible from outside the packaging
3	The packaging is formed and ready to use

4	Identical colors typical of Riau Malays
5	Displays business profile information and business logo
6	Showing it as a characteristic of Riau
7	The quality of the screen printing is neat, smooth and durable
8	Featuring a songket motif design typical of Riau Malay weaving
9	The product is protected from exposure to sunlight and does not change color
10	Products are safe in the process of shipping goods and traveling long distances
11	Stack-resistant packaging

Preparation and Distribution of the Semantic Differential Questionnaire I

The preparation and distribution of the semantic differential I questionnaire was carried out based on 11 selected Kansei words. With a sample size of 68 respondents.

Validity Test

The validity test was carried out using SPSS 26 software. Data is valid if $R_{count} < R_{table}$. The R_{table} value for 68 respondents was 0,2387 which was obtained from the value $df = N - 2$.

Table 3. Iteration 2 validity test results

No	Statement	Statement	R_{count}	R_{table}	Ket
1	S1	The rectangular shape has a traditional feel	0,588	0,2387	Valid
2	S3	The packaging is formed and ready to use	0,294	0,2387	Valid
3	S4	Identical colors typical of Riau Malays	0,686	0,2387	Valid
4	S5	Displays business profile information and business logo	0,714	0,2387	Valid
5	S6	Showing it as a characteristic of Riau	0,479	0,2387	Valid
6	S8	Featuring a songket motif design typical of Riau Malay weaving	0,402	0,2387	Valid
7	S9	The product is protected from exposure to sunlight and does not change color	0,655	0,2387	Valid
8	S11	Stack-resistant packaging	0,779	0,2387	Valid

Validity testing can be carried out until all statements are declared valid. If there are invalid statements, they will be eliminated and the second iteration of the validity test will continue. So the final results of the second iteration of the validity test have been presented in Table 3 showing that there are 8 semantic differential I questionnaire statements above $R_{table} \cdot 0.2387$.

Reliability Test

The reliability test was carried out on 68 respondents with the results of the validity test being 8 statements which were declared valid in the second iteration. so the results of the reliability test can be seen in Table 4 showing that Cronbach's alpha is 0.727, this value exceeds the value of 0.60 so it is said to be reliable according to reliable (close) criteria.

Table 4. Reliability test results

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0,727	0,727	8

Adequacy Test

The data adequacy test was carried out on 8 statements which were declared valid in the

second iteration of the validity test from 68 respondents. The results of the data adequacy test can be seen below.

Known:

$$k/s = \frac{2}{0,05}$$

$$k/s = 40$$

$$N = 68$$

$$\begin{aligned}
 N' &= \left[\frac{\frac{k}{s} \sqrt{N \sum (X_i^2) - (\sum X_i)^2}}{\sum X_i} \right]^2 \\
 &= \left[\frac{40 \sqrt{68 (25506) - (1305)^2}}{1305} \right]^2 \\
 &= \left[\frac{40 \sqrt{1734408 - 1703025}}{1305} \right]^2 \\
 &= \left[\frac{40 \sqrt{31383}}{1305} \right]^2 \\
 &= \left[\frac{7086,08}{1305} \right]^2 \\
 &= [5,43]^2 \\
 &= 29,4849
 \end{aligned}$$

Based on the data adequacy test, an N' value of 29,4849 was obtained. The results obtained are declared sufficient because the N' value is smaller than the N value, namely 68, so that further factor analysis can be carried out.

Factor Analysis

Based on the first iteration of the Measures of Sampling Adequacy test, it was found that 2 statements had a value <0.5, which means that the statement will be eliminated and the Measures of Sampling Adequacy test will continue to the second iteration. In the second iteration, the Kaiser Meyer Olkin and Bartlett's test values were obtained which are presented in Table 5.

Table 5. Kaiser Meyer Olkin and Bartlett test results iteration 2

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0,733
Bartlett's Test of	Approx. Chi-Square	122.232
Sphericity	Df	36
	Sig.	0,000

Table 6. Test results for measures of sampling adequacy iteration 2

No	Statement	Statement	MSA Value Test	MSA Value	Information
1	S1	The rectangular shape has a traditional feel	0,710	0,5	Valid
2	S3	The packaging is formed and ready to use	0,737	0,5	Valid
3	S4	Identical colors typical of Riau Malays	0,762	0,5	Valid
4	S5	Displays business profile information and business logo	0,769	0,5	Valid
5	S6	Showing it as a characteristic of Riau	0,665	0,5	Valid
6	S8	Featuring a songket motif design typical of Riau Malay weaving	0,578	0,5	Valid
7	S9	The product is protected from exposure to sunlight and does not change color	0,747	0,5	Valid
8	S10	Products are safe in the process of shipping goods and traveling long distances	0,679	0,5	Valid
9	S11	Stack-resistant packaging	0,784	0,5	Valid

Based on Table 5, it is known that the Kaiser Meyer Olkin test value reached 0.733, indicating that the data is sufficient for factor analysis, because it is in the range 0.7 – 0.8. In the Bartlett's test, a Chi-Square value of 122,232 was obtained with a significance value of 0.000. The significant value is below 0.05, which means the variables used are correlated with other variables. In Table 6, there are the results of Measures of Sampling Adequacy iteration 2,

which shows that there are 9 statements with a relative error that is smaller than 0.5.

Determination of Elements and Categories

Songket packaging design consists of 6 elements which include color, packaging design, material, traditional values, information and physical form. The determination of elements and categories has been described in Table 7.

Table 7. Determination of categories and elements

No	Element	Category	Notation
1	Color	Aesthetic	X ₁₁
		Typical of Riau	X ₁₂
2	Packaging Design	Bitmap	X ₂₁
		Vector	X ₂₂
		Hardbox	X ₃₁
3	Material	Kraft paper	X ₃₂
		Corrugated	X ₃₃
		Woven fabric motif	X ₄₁
4	Traditional Values	Weaving pattern	X ₄₂
		Image of traditional house	X ₄₃
		Written from	X ₅₁
5	Packaging Information	Barcode from	X ₅₂
		Log box	X ₆₁
6	Physical Form	The product motif is visible from outside the packaging	X ₆₂

Elements and categories were combined with stimuli using an orthogonal array in SPSS 26.00 software. In this way, 16 combinations of

stimuli were obtained to be used as the contents of the semantic differential II questionnaire.

Conjoint Analysis

After the semantic differential II questionnaire was distributed to 68 respondents. At this stage, the respondent's answer is calculated by obtaining a constant value obtained by dividing the total weight of all respondents answers (Σ weight) by the number of statement (n).

a. Constant Value Calculation

$$\frac{\Sigma \text{Bobot}}{n} = \frac{218 + 235 + 233 + 225 + 236 + 221 + 229 + 219 + 221 + 223 + 216 + 230 + 215 + 210 + 225 + 223}{16 \times 68}$$

$$= \frac{3579}{1088} = 3,39$$

b. Calculation of Design Attribute Utility Values

Utility Value = X attributes - X total data

Example :

$$\begin{aligned} \text{Aesthetic} &= \frac{218+225+229+221+216+215+230+210}{8 \times 68} \times 3,29 \\ &= \frac{1764}{544} - 3,29 \\ &= 3,24 - 3,29 \\ &= -0,05 \end{aligned}$$

Table 8. Recapitulation of overall utility values

No	Element	Category	Constant	X Items	Utility
1	Color	Aesthetic	3,29	3,24	-0,05
		Typical of Riau		3,35	0,06
2	Packaging Design	Bitmap	3,29	3,27	-0,02
		Vector		3,31	0,02
3	Material	Hardbox	3,29	3,31	0,02
		Kraft paper		3,30	0,01
		Corrugated		3,24	-0,05
4	Traditional Values	Woven fabric motif	3,29	3,27	-0,02
		Weaving pattern		3,31	0,02
		Image of traditional house		3,30	0,01
5	Packaging Information	Written from	3,29	3,31	0,02
		Barcode from		3,27	-0,02
6	Physical Form	Log box	3,29	3,30	0,01
		The product motif is visible from outside the packaging		3,28	-0,01

Table 9. Factor importance analysis values

No	Factor	Item	Utility
1	Color	Typical of Riau	0,06
2	Packaging Design	Vector	0,02
3	Material	Hardbox	0,02
4	Traditional Values	Weaving pattern	0,02
5	Packaging Information	Written from	0,02
6	Physical Form	Log box	0,01

The results of respondents responses to the semantic differential II questionnaire were added together and looked for constant values for each category, the results of constant values for each element can be seen in Table 8. The next step was to look for utility values, for each calculation that was obtained, the highest Utility value was conjoint analysis. selected in determining the songket packaging design. The results have been presented in Table 9 above.

Packaging Design

The design was made based on the results of testing the feasibility of factor analysis in the Measures of Sampling Adequacy test. There are

9 statements produced from kansei words that are valid at Measures of Sampling Adequacy > 0.5, as presented in Table 6, as well as 6 items with the highest utility value from the conjoint analysis which are displayed in Table 9. The packaging design can be seen in Figure 3 and Figure 4.

Explanation of the specifications and design concept for songket packaging design, namely: (1) The rectangular shape with traditional nuances adapts songket products with an inner box measuring P = 35 cm, L = 20 cm and T = 8 cm and an outer box measuring P = 35 cm, L = 20 cm and T = 7 cm, this is because it makes it easier for consumers to open the packaging, (2) The packaging has been formed when it is printed and is ready to use a hardbox shape, (3) The color is identical to the characteristics of Riau Malays, red is one of the typical colors Riau Malay which symbolizes courage, enthusiasm, strength and represents nobility and nobility, (4) Displays profile information and business logos, displays information in the form

of contacts, addresses and business logos and explains what MSMEs sell.

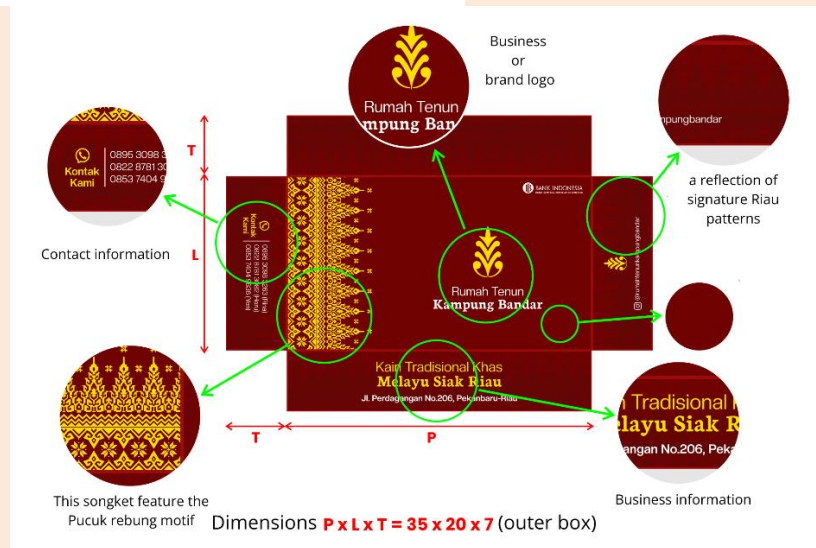


Figure 3. Outer box packaging display

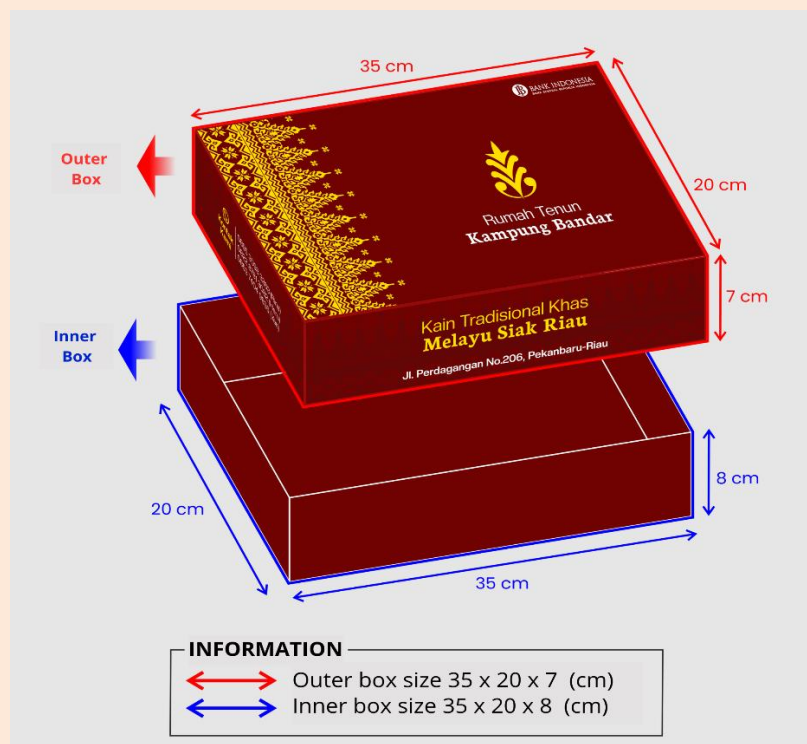


Figure 4. Packaging size

The information is displayed in written form so that consumers can read it directly, (5) Displaying it as a characteristic of Riau, the packaging design displays designs and writing in gold and silver colors, such as weaving using gold and silver threads so that it looks beautiful and luxurious and vector designs as design quality, (6) Displaying a songket motif design typical of Riau Malay weaving, one of the

characteristic motifs of Riau Malay weaving is bamboo shoots. Bamboo shoots symbolize hope and progress, because the shape of bamboo shoots that point upwards symbolizes the peak of glory and wisdom, (7) The product is protected from exposure to sunlight and does not change color, the shape is rectangular and uses thick and environmentally friendly hard box material. protected from sunlight, (8) The

product is safe in the process of sending goods and traveling long distances, the shipping process can use thick and environmentally friendly hardbox material (9) Stack-resistant packaging, stack-resistant packaging can use thick and environmentally friendly hardbox material. And using 6 elements of fact analysis value.

Consult Expert

After the packaging is designed, it is important to consult with experts regarding design, costs and materials in the production process. So you know the details of packaging costs before and after improvements in songket packaging production.

Currently, the production cost of songket packaging using cardboard material for paperbags and Oriented Polypropylene plastic packaging without a design is IDR 7,350.00 After improvements to the songket packaging based on consumer perceptions using the Kansei engineering method, box-shaped packaging was produced made from environmentally friendly hardboxes with typical Riau colors, involving woven patterns, business information and using paper bags with a total packaging production cost of IDR 39,000.00.

The results of the study showed that there were 9 statements with values above 0.5 and 6 factor analyses that became the packaging design concept. If calculated the production cost of the previous songket packaging with cardboard material for paper bags and Oriented Polypropylene plastic packaging without design is IDR 7,350.00. After the improvement of the songket packaging based on consumer perception with the Kansei Engineering method is IDR 39,000.00. The production cost is very different because after the improvement of the box-shaped packaging made of environmentally friendly hardbox with typical Riau colors, concerning woven motifs, business information and using paper bags. Meanwhile, in the (Nurseptiana et al., 2023) study, the results of the study contained 9 statements with values above 0.5 and 4 factor analyses that became the packaging design concept. However, in this study there was no comparison

of production costs before and after improvements.

Limitations

The limitations in this study are the use of sampling techniques that are aimed at taking samples and the limitations of variables, not all consumers are factors that influence the research.

5. CONCLUSION

The results of songket packaging are based on consumers' perceived feelings by applying the Kansei engineering method to produce 6 basic packaging elements for developing songket packaging. The packaging elements are in the form of typical Riau packaging colors with a vector packaging design type, hardbox material, traditional values featuring woven patterns, involving business information as a marketing medium and a rectangular physical packaging shape. The packaging design is supported by additional items obtained from valid data in the Measures of Sampling Adequacy test, namely a rectangular shape with traditional nuances, the packaging has been formed and is ready to use, identical colors typical of Riau Malays, displaying business profile information and displaying the business logo as a characteristic Typical of Riau, featuring a songket motif design typical of Riau Malay weaving, the product is protected from exposure to sunlight and does not change color, the product is safe in the process of sending goods and traveling long distances and the packaging is resistant to stacking. This packaging design is in accordance with the wishes and needs of consumers because it is obtained from the interpretation of the user's perception of the Songket Malay packaging.

Suggestion

The calculation stages of the cost of goods sold in determining the price in accordance with the expected profit are not implemented. In addition, more identification is needed on kansei words so that further research can be analyzed in depth.

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