

# **Consumer Preferences on Packaging Characteristics: A Case of SME Food Industry**

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## **Abstract**

The present study aims to determine whether there are differences in the preferences of the category groups on the packaging in the food industry. The data collection was conducted by distributing online questionnaires through social media to respondents who had profiles by those determined by their qualifications. The number of respondent data that has been collected is 148 respondents. The research method used is a comparative quantitative method with the Kruskal Wallis test. The results reveal several important insights. Female gender characteristics have different preferences in all packaging design assessments of packaging no 4. Income characteristics with a scale of IDR 3,000,000-5,000,000 have different preferences in ratings 1 and 2 of packaging no 1. Age characteristics with a scale > 35 years have different preferences in all packaging design ratings on packaging no 2. In the selection of suitable packaging colors, there is no significant difference between each group. Pastel orange is the color that respondents consider most suitable for the packaging. The research insight can be used as references for companies in the food industry and the theoretical findings in better understanding the consumers.

## **Keywords**

Consumer, Preferences, Packaging, Food, Industry

## **1. Introduction**

The role of Small Medium Enterprises (SMEs) is undoubtedly influencing the sustainability of the economy in many countries, including Indonesia majorly. SMEs tried to provide innovative offerings to attract consumers in tight competition, such as technology, promos, and visual uniqueness (Susmonowati and Royani, 2020; Wallenburg et al, 2021). One of the considerations is the packaging. Packaging is the physical form where the consumers will be exposed first to a product. The same kind of meal will have different popularity and average sales in the food industry because the company can attract consumers. Further, the packaging itself can be considered as the value proposition offered by the SMEs to differentiate with other competitors. Some companies even use unique packaging for each of their products. Previous studies reveal how the packaging will differentiate consumer preferences (Klaiman et al., 2016; Ogba and Johnson, 2010). In the packaging dimension, many aspects can be elaborated to improve the impression to consumers. Few of the highlighted are colors and shapes. Although many pieces of evidence study discuss the colors and shapes of packaging (Swasty et al., 2021; Vladić et al., 2015), scientists are still struggling to find the suitable composition to attract the consumers maximally. While few big companies can show their identities like Apple and Microsoft, the situation is different with SMEs. The present study reveals the consumers' preferences regarding colors and shapes for the food industry. By understanding the insight of colors and shapes, the SMEs food industry can improve its packaging to attract consumers more.

### **1.1 Objectives**

The research objective of this paper is to know the preferences of consumers in terms of colors and shapes. The result contributes to theoretical and practical aspects for engaging better with consumers' preferences. The result can also help the food industry prepare the packaging composition based on their value proposition in response to consumer preferences.

## 2. Literature Review

Many researchers have explored packaging colors and design in many previous research studies and still lead to many contribution opportunities to be discussed. One case study in Tea Packaging mentions how the shape and the material of packaging can influence consumers' intention to buy (Mufreni, 2016). Another research reveals how the packaging attributes affect consumer purchase decisions (Hanifawati et al., 2017). Hanifawati et al (2017) show the differences between respondents' profiles and their characteristics in choosing the packaging. Other research shows how the packaging can influence the consumers' impulsive buying (Christy, 2015). The insight from Christy's finding is how the packaging changes the decision from not buying to buying a product. In a similar industry, such as drink packaging, past research shows how the packaging and price influence the isotonic purchase decision (Resmi and Wismiarsi, 2015). In instant noodle food packaging, where less attention is given to the package, research shows how packaging in terms of color, shape, and labels can influence consumers' buying intention between 21-and 25 years old (Ferdinand, 2008).

## 3. Methods

The framework of this research began when the highlighted packaging shapes and colors were analyzed for consumers' preferences. The research will do a comparative analysis to look at the insight from different cases. Primary data with the purposive online questionnaire was extracted within a semester (September-February 2021). The eligible respondents are adults (more than 17 years old) and have income for spending. The analyses performed were descriptive and different tests. The descriptive statistic consists of mean and standard deviation. The different tests were performed with Kruskal Wallis. The measured items regarding colors are pink, orange, purple, white, and light blue (see Figure 1). As for the packaging: wide flat, wide big, long slop box, and long with grip (see Figure 2).



Figure 1. The variation colors



Figure 2. The variation shapes

#### 4. Data Collection


The present research collects 148 respondents. The respondents come from 69 males and 79 females. The respondents were from 18-25 years old (108 people), followed by more than 35 years old (18 people), 26-30 years old with 13 people, 31-35 with eight people, and one with less than 17 years old. Their income was from IDR 1-3 million with 95 people, 3-5 million with 30 people, eight people with 5-7 million, one with 7-9 million, and 14 with more than 9 million. Most people are also students (94 people), 12 are entrepreneurs, 39 are private employees, and 3 are others. Most of the colors were distributed evenly from the data collection, as shown in Table 1. Table 2 presents the main functions of packaging based on respondents answer. The questionnaire illustrative is shown in Figure 3.

Table 1. Name of the table

No	Packaging Colors	Frequency
1	Red	24
2	Orange	56
3	Purple	39
4	Blue	22
5	White	7

Table 2. Packaging Functions

No	Function	Frequency
1	Protect the product	50
2	Increase the attraction of visual product	74
3	Signature of the product	11
4	Create differentiations	8
5	Others	5



**Perbandingan Desain Packaging Zegen Art Dounat**

Zegen Art Dounat mengembangkan inovasi dengan memadukan kearifan lokal dan juga modern menjadi satu yang dibalut dengan seni.

Produk yang dibuat oleh Zegen Art Dounat adalah yakni donat berbahan dasar ubi cilembu yang dikemasikan dengan seni berupa karakter (seperti pada header diatas). Tidak hanya karakter saja, Zegen Art Dounat juga menyediakan varian klasik bagi penggemar donat ubi cilembu yang tidak terlalu menyukai topping yang bermacam macam.

Kuesioner ini dilakukan untuk mengetahui penilaian responden terhadap desain packaging mana yang cocok dengan poin poin yang ingin di highlight oleh donat ubi cilembu karakter Zegen Art Dounat.

**\* Wajib**

1. Menurut anda, apa kegunaan utama dari kemasan bagi produk makanan? \*

Tandai satu oval saja.

Melindungi produk

Meningkatkan daya tarik dari visual produk

Tanda pengenal brand produk

Membuat suatu produk berbeda dari yang lain

Yang lain: \_\_\_\_\_

2. Menurut anda, warna apa yang cocok untuk desain kemasan produk Zegen Art Dounat? \*

Tandai satu oval saja.

Merah muda pastel

Orange pastel

Ungu pastel

Putih

Figure 3. The questionnaire form (presented in Indonesian language)

Based on the Kruskal Wallis, several insights were explored. First, there are no significant differences between consumers groups based on gender to package colors (Chi-Square 0.080, df 1, Asymp.Sig 0.778). Second, there is no difference between income to colors selection (Chi-Square 6.434, df 4, Asymp.Sig 0.169). Third, there is no difference between groups based on age to color selections (Chi-Square 3.8,33 df 4, Asymp.Sig 0.429). In the statistical data that has been analyzed, packaging design 4 is the packaging design with the most distinct preference differences between

the male and female sexes. While packaging design 1 is the same, there is no significant difference in what is done. Packaging designs with a slide form or package 4 have a higher preference than the female gender in all packaging designs 4. The insight means that female and male sexes have different preferences for packaging design four and have similar preferences for packaging design 1, which is the current packaging design. In this study, several things affect the differences in preferences of female and male respondents on packaging design 4. The first is that there are more female respondents than males, thus making the assessment calculation bigger. The second is because of the different ways of thinking between women and men. Men usually think more realistically and logically, while women think using their hearts and feelings. Finding means that men usually think more about safe and straightforward packaging, while women prefer packaging that is indeed felt to make them interested in the product, both in terms of color, benefits, motifs, and the use of the packaging. Because of this, an enterprise will rethink choosing a packaging design four that has a higher preference for the female gender, who is also a potential target for the product. Several things need to be considered, namely, packaging materials that can protect the product well. However, an enterprise will also consider in terms of male preferences as well as other packaging designs that have a high rating. The revelation is helpful so that the packaging design research can increase product sales and become a superior product for classy donuts for both men and women.

Based on the statistical data that has been explored, the income scale of IDR 3,000,000-5,000,000 has a higher difference in preference for packaging design one on the suitability assessment (assessment 1) and packaging that seems expensive and classy (assessment 2). However, it is precisely in the assessment of packaging design that respondents are interested in buying the product (assessment 3). In all packaging designs, there is no significant difference. Respondents with an income scale of IDR 1,000,000 - > 9,000,000 have the same difference in preferences regarding assessing all types of packaging. The factors that influence the differences in preferences for packaging design are one on an income scale of Rp. 3,000,000-5,000,000 in this study are the frequency of respondents who are not evenly distributed on each income scale, which can affect differences in preferences because the respondents' preferences obtained are also less than the respondents' preferences. on an income scale of IDR 1,000,000-3,000,000. In addition, external factors can also influence these differences of opinion. Preferences depend not only on physical stimuli but also on stimuli related to the surrounding environment and individual circumstances. These factors are the environmental factor where the respondent lives, which is because someone who has an average salary lives in an area where there are many products with 'common' packaging. Such as donuts on the roadside with plastic bag packaging, so sometimes people do not seem concerned with the packaging but are more concerned with taste. Due to the difference in preferences that only differ in packaging design 1 with a suitability assessment and an expensive and classy impression can be included in consideration of making packaging design decisions on the income scale. The insight is because the packaging design one according to respondents with the highest income of IDR 3,000,000-5,000,000 the difference is the second group of respondents with the highest frequency after respondents with an income scale IDR 1,000,000-3,000,000. In addition, it cannot be denied that everyone's preferences are different and varied depending on individual tastes and other factors. However, in the research conducted, each respondent's preference is important for more attractive packaging in the future for the target segment.

In the statistical data that has been managed, packs 4 and 5 have the same preferences in all age categories. In other words, there is no significant difference. Whereas in packaging design 2, ages with a scale of >35 years have different packaging preferences for all assessments. Packaging 2, which has a design like pizza packaging, is preferred by respondents with an age scale of >35 years. Factors that influence differences of opinion on the age scale >35 years are the difference in generation with other age scales, resulting in different perspectives and opinions. Each generation has quite striking differences due to differences in the environment and the way it developed during those generations, resulting in differences in values, beliefs, and opinions between one generation and another. Generations aged 35 years and over, Generation Y to Generation X, usually think more about product quality and care less about current trends. As for Generation Z, on average, they like products that they think are cool. Because of this difference is a factor that causes a significant difference between the age scale of 17-34 years and >35 years concerning packaging design 1, which is the usual donut packaging design. Based on the difference in preferences for packaging design 1, the enterprise will reconsider the opinions of consumers who are generations Y and X. The result needs to be done because the age of this generation is people who often and like to hold events and meetings, such as social gatherings, meetings, birthdays, and other celebrations that are part of the target segment of the enterprise. By adjusting product packaging according to the preferences of the enterprise segment target on age characteristics, it is hoped that the enterprise products can be chosen as a treat at events by many people and increase product sales. The selection made in this research section is to choose a suitable color for the sweet potato donut product with the enterprise character.

The packaging color research was carried out because packaging plays a crucial role in communicating with customers. The colors proposed as choices are pastel pink, pastel orange, pastel purple, pastel blue, and white. There are no significant differences in the five packaging colors chosen in this research for the three characteristics of the respondent's profile. Men and women on an age scale of 17 - >35 years with an income of IDR 1,000,000 -> 9,000,000 have the same preference for the color of the packaging. The packaging color of pastel orange was the most chosen choice by the respondents, with a frequency of 56 people. As for the color that the respondents chose the least, it was white with a frequency of 7 people. Based on the analysis conducted by the researcher, respondents thought that the orange color was more suitable for sweet potato donuts, which described the color of the sweet potato itself. So most likely, researchers will develop product packaging by taking pastel orange as the primary color of the enterprise packaging.

## **5. Results and Discussion**

The researcher's data analysis shows that the packaging category 1 group with white color has the lowest ranking order. The fifth order with the frequency of respondents who choose in that order is 57 people. The first order is packaging design 5, a pastel orange color with the frequency of respondents choosing as many as 47 people in that order. Several groups have different preferences for the form of packaging design. The female gender category group has different preferences on packaging design 4, the income category group of IDR 3,000,000 - 5,000,000 has different preferences on packaging design 1, and the > 35-year-old category group has different preferences on packaging design 2. Several things affect the differences in preferences of each group of respondents, namely the ways of thinking of men and women are different, income that affects different living environments, and generations with different perspectives and tastes.

Based on the research results that have been carried out, the enterprise made several decisions as follows: 1) the female gender category group prefers packaging design 4, which means the enterprise must develop a packaging design four because 60% of the enterprise's consumers are women. 2) the income category group on a scale of Rp.3,000,000-5,000,000 has different preferences for packaging design 1. The income category group has a preference if the packaging design 1 is a packaging that seems expensive and classy and is suitable for sweet potato donut products. However, because the enterprise wants to develop packaging designs and colors that are more attractive to consumers, preferences from the income category of IDR 3,000,000 - 5,000,000 will be stored as a database of consumers satisfied with the current 80 enterprise packages. 3) the age category group >35 years has different preferences for packaging design two which is shaped like pizza packaging. The enterprise will include packaging design 2 as another option because the enterprise consumers with an age scale of >35 years are in the percentage of less than 20%. 4) pastel orange color will be taken as the following enterprise packaging design color because most of the respondents chose that color as a packaging color that matches the enterprise products. The first thing that can be followed up for the enterprise's development and growth regarding packaging design is to hold discussions with partners. The discussion is related to packaging design 4, which follows the preferences of the female gender category, whose percentage is more than half of the enterprise's consumers. Then after a joint decision is made, the packaging will be made. 4. After the packaging is made, it will be executed by conducting a market test, which will be used as product packaging based on the preorder made. From the market test, consumers will be given a questionnaire regarding the new enterprise packaging, and if from the questionnaire, the packaging does not meet consumer expectations, further research will be carried out on which parts are not suitable and which target segment feels the packaging not suitable. However, the researcher will not immediately decide to re-create the packaging from the research results but will focus on more detailed follow-up research on packaging design. With the packaging design research that has been carried out, it is hoped that the enterprise can develop product packaging that is suitable for Cilembu sweet potato donuts, which look expensive and classy and are able to attract consumer buying interest based on the characteristics of the target segment of the enterprise. The expected research is to be input that can support the growth of the enterprise's business in terms of packaging. Further, it will come following consumers' expectations in developing the enterprise's business.

Recommendations that the author can give for similar businesses that are also engaged in the bakery sector are the first. As a businessman in the bakery sector, the packaging is an important thing that must be designed as attractively as possible to attract consumers' attention other than the product's function. Sometimes many businesspeople in the bakery sector think that plastic packaging and logo stamps are enough as long as the products they make are delicious. The color and the design of the packaging are essential to attract consumers. Second, segmentation must be clearly and precisely defined based on the research results conducted by researchers. Gender groups, income scales, and ages have different preferences for several packaging designs but have the same preference for the color of the packaging

design. Because of this, determining the right segmentation is the main point that entrepreneurs must hold. Determining the appropriate segmentation can make entrepreneurs more focused on the characteristics of the targeted segment. The essential attributes of a product, such as packaging, can match the segment's preferences and be able to attract consumer interest in the products made. The third is that research must be carried out in planning the manufacture of new packaging. Research carried out in packaging design development must follow the target segment and under the plotted points in the packaging design. In addition to packaging design, packaging color is also the most dominant visual in attracting consumers. Color is one of the influential graphic elements of packaging because when looking at the packaging, consumers tend to pay attention to the color of the packaging first before observing other visual elements. Therefore, research needs to be done so that entrepreneurs can determine what packaging designs and colors are preferred by consumers without reducing the purpose of research to develop products for a broader market share.

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