

Consumer Preference and Loyalty for Purchase of Processed Banana Products in Makassar City

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ABSTRACT : This study aims to describe the characteristics of consumers of processed banana products in Makassar City, to describe the type of product (product variant) and the price of processed banana products, to analyze consumer preferences for processed banana product attributes, to analyze the level of consumer loyalty towards purchasing processed banana products in Makassar City. Data analysis used is descriptive analysis and arithmetic mean (arithmetic mean). The results of this study indicate that the consumer characteristics of the three processed banana products are: female gender with the age of the respondent being 22 years old; the work of the majority of respondents is student/student; and the average education of the respondents is S1 graduates. Product types (product variants) Big Bananas, Piscok Super and PiscokLumer, namely rolls and bites and prices for big bananas start from Rp. 25,000 - Rp. 30,000/pack, Piscok Super has a price of Rp. 19,000 - Rp. starting from IDR 15,000 - IDR 25,000 / pack. Consumer preferences for the attributes of the three brands of processed banana products are crunchy texture, attractive packaging, good taste, moderate price and pleasant aroma. The level of consumer loyalty from the three brands of processed products, namely big bananas, piscok super and melted piscok, is the most loyal consumer of big bananas, while consumers with a low level of loyalty are melted piscok.

KEYWORDS : *Preference, Consumer Loyalty, Processed Banana Products*

I. INTRODUCTION

Most agricultural products require further processing to be able to produce products that are more economically valuable. One of them is banana. In Indonesia, bananas are abundantly produced and could get rotten quickly. Therefore, processing is needed. Bananas are the fruit most consumed by Indonesian. Bananas have a good taste, cheap, and easy to process into commercially valuable products. In Indonesia, there are hundreds of types of bananas that grow. However, the great potential of bananas has not been fully utilized to boost the Indonesian economy. Bananas are rich in minerals such as potassium, magnesium, phosphorus, calcium and iron. Compared to other types of plant foods, banana minerals, especially iron, can be absorbed almost entirely by the body. Banana iron content based on dry weight reaches 2 mg per 100 grams and zinc 0.8 mg per 100 grams. Diversification of processed banana products is an alternative to maintaining the shelf life of bananas after harvest and makes the taste of bananas more varied [1].

Some of the businesses in Makassar, South Sulawesi that use bananas as the main raw material is Big Bananas, Piscok Super and PiscokLumer. Big Bananas, Piscok Super and PiscokLumer are micro, small and medium enterprises (MSMEs) engaged in the processing of bananas into modern food products in Makassar City.

Makassar City as the capital city of South Sulawesi Province has a population of 1,423,877 people spread over 15 sub-districts [2], with great potential for the growth and development of culinary businesses. The resulting product is made from bananas which are processed in such a way as to become banana nuggets and banana rolls with various topping variants. Big Bananas, Piscok Super and PiscokLumer must be able to innovate and be creative to face increasingly competition. On the other hand, consumer preferences, which always tend to change, need to be understood by producers. This understanding is especially important to continue to be able to provide banana-based processed food products in the form consumers need and what they want, in terms of taste, quality, crispiness and by prioritizing halal and good principles in the production process.

Consumer satisfaction is the result felt by the buyer for the performance of a business that meets his expectations. Satisfied customers tend to stay loyal, buy more, and are less sensitive to price changes. Loyalty is a proof that consumers have a positive attitude towards the company [3]. Thus, this research was conducted to identify consumer characteristics, preferences and consumer loyalty to processed banana products (Big Bananas, Piscok Super, and PiscokLumer).

II. RESEARCH METHODS

This research was conducted in Makassar City. The selection of the research location are Big Bananas, Piscok Super and PiscokLumer. The research was conducted in July - December 2022. The number of samples (consumers) refers to the opinion of [4], that the study sample size is between 30-500 respondents. Based on this opinion, we determined took 30 respondents from each store.

Types and sources of data in the form of primary data and secondary data, both quantitative and qualitative. Primary data includes: 1) Consumer characteristics, namely: age, education, gender, and occupation. 2) Consumer preferences for processed banana product attributes, namely: texture, packaging, taste, price and aroma. 3) Consumer loyalty, namely the reason consumers consume processed bananas due to price factors (switcher/ price buyer), habitual factors, satisfaction factors in consuming before (satisfied buyer) liking the brand, and committed buyer. The data in this study were obtained directly from respondents by distributing online questionnaires that had been prepared via the Google form (<https://forms.gle/WJHGJxkXSzD6een29>). Secondary data includes: an overview of the research location. Methods of data analysis carried out qualitatively and quantitatively. Qualitative data is presented in descriptions or descriptions and quantitative data is used to analyze consumer preferences for processed banana product attributes, as well as the level of consumer loyalty used pyramid analysis of consumer loyalty [5].

To determine the level of consumer preference for the attributes of processed banana products, rating data is used with a Likert scale rating rule of 1-3 points. Processed banana product attributes include texture, packaging, taste, price and aroma. Answers are provided according to predefined attribute criteria. The answer that least corresponds to the respondent's wishes is given a score of one, a mediocre answer is given a score of two, while the answer that best suits the respondent's wishes is given a score of three. The attributes, criteria and preference indicators for processed banana products can be seen in Table 1 below.

Table 1. Attributes, Criteria and Preference Indicators for Processed Banana Products

Attribute	Banana Processed Attribute Criteria	Score
Texture	Hard, moderate, crunchy	1-3
Packaging	Not interesting, quite interesting, interesting	1-3
Flavor	Unpleasant, ordinary, delicious	1-3
Price	Expensive, medium, cheap	1-3
Aroma	Unflavored, plain, flavorful	1-3

Information :

3 = Crunchy/Interesting/Delicious//Cheap/Flavorful

2 = Moderate/Quite interesting/Ordinary/Medium/Plain

1 = Hard/Not interesting//Unpleasant/Expensive/Unflavoured

To simplify classification, the class interval formula is used as follows: [6]

Range

Interval = _____

Category

Range (R) = highest score - lowest score

Category (C) = number of classes

The results of these calculations are used to determine consumer preference criteria for processed banana products based on the five specified attributes. The consumer preference criteria are as follows.

- Value interval 1 - 1.66: dislike criteria
- Value interval 1.67 - 2.33: moderate criteria
- Value interval 2.34 – 3: liking criteria

The consumer loyalty measured the percentage of which consists of consumers consuming because of the price factor (switcher/pricebuyer), habitual buyer, satisfaction factor in consuming before (satisfied buyer), liking the brand, and committed buyer. Is is done by calculating the existing brand loyalty level factors based on the respondents' answers to the questionnaire. The analysis used is the arithmetic mean analysis from respondents to determine the level/type of consumer loyalty [7], as shown in Figure 1 below.

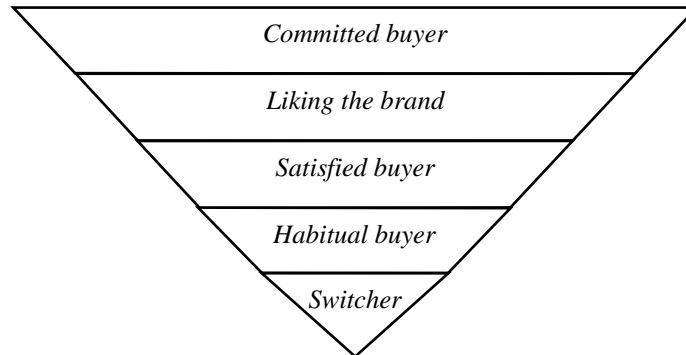


Fig. 1. Level of consumer loyalty

Measuring the value of respondents' answers using the Likert scale range. Likert scale measurement with four modified categories by eliminating neutral answers. This is done because the Likert scale with four scales can capture research data more accurately by eliminating categories of answers that have multiple meanings. The categories are as follows:

- Strongly Disagree: score 1
- Disagree: score 2
- Agree: score 3
- Strongly Agree: score 4

Table 2. Analysis of Consumer Loyalty of Processed Banana Products

Level of Consumer Loyalty		X	F	fX	X ₂	f. X ₂	%
Product Name	Answer						
Big Bananas, Piscok Super, and PiscokLumer	Strongly disagree		1				
	Don't agree		2				
	Agree		3				
	Strongly agree		4				
Total =							
Avearage =							
Loyalty level							

Source: [7]

Information :

- X = weight of each answer
- F (n) = number of respondents who answered
- % = percentage of respondents who answered

By calculation using:

$$\text{Average} = \frac{\text{Amount of value}}{\text{Amount of data}}$$

$$\text{Standard deviation} = \sqrt{\frac{\sum fx^2 - \frac{(\sum fx)^2}{n}}{n-1}}$$

$$\text{Consumerloyaty} = \frac{\text{Total respondents agree + strongly agree}}{n} \times 100$$

III. RESULT AND DISCUSSION

Consumer Characteristics

Descriptive analysis is used to find out how the characteristics of consumers of Big Bananas, Piscok Super and PiscokLumer products, where the characteristics of the respondents analyzed in this study are: age, gender, occupation and education.

Table 3. Characteristics of Respondents Processed Banana Products (Big Bananas, Piscok Super and PiscokLumer)

No	Characteristics	Processed Banana Products		
		Big Bananas	Piscok Super	PiscokLumer
1.	Age	22 years	22 years	22 years
2.	Gender	Woman	Woman	Woman
3.	Profession	Student	Student	Student
4.	Education	Bachelor	Bachelor	Bachelor

Source: Primary data analysis, 2022.

Based on Table 3, the characteristics of respondents to processed banana products (Big Bananas, Piscok Super and PiscokLumer), show that the average respondent characteristics are respondents with the type female, 22 years old, student and the respondent's education is a bachelor's degree. The results of the study are in line with the results of research by [8], which state that consumers who like contemporary food and drinks are teenagers to young adults with an age range of 17 to 28 years, who on average are students.

Consumer Preferences

Each consumer has different criteria both from the individual characteristics and the characteristics of the desired product according to their preferences. Preferences that consumers have for a product is the beginning of the consumer loyalty stage for the product [9]. Consumer preferences are whether consumers like or dislike processed banana products for the three brands studied, namely Big Bananas, Piscok Super and PiscokLumer.

Consumer preferences for processed banana products Big Bananas, Piscok Super and PiscokLumer can be seen from the frequency with which consumers choose the attributes of the three brands. The attributes of processed banana products studied were texture, packaging, taste, price and aroma.

Table 4. Consumer Preferences for Processed Banana Products (Big Bananas, Piscok Super and PiscokLumer)

No	Preferences	Processed Banana Products		
		Big Bananas (average score)	Piscok Super (average score)	PiscokLumer (average score)
1.	Texture	2,8	2,4	2,5
2.	Packaging	2,9	2,7	2,6
3.	Flavor	2,9	2,8	2,8
4.	Price	1,6	1,7	1,8
5.	Aroma	3,0	2,9	2,7
Total		13,2	12,5	12,4

Source: Primary data analysis, 2022.

Based on Table 4, consumer preference for processed banana products Big Bananas has a total score of 13.2; Piscok Super has a total score of 12.6 and PiscokLumer has a total score of 12.4. Among the three processed banana products, the highest score for consumer preferences was for Big Bananas, followed by Piscok Super and the lowest score was PiscokLumer. The order of consumer preference for Big Bananas products that has the highest score is Aroma, the second is packaging, the third is taste, texture and the last is price. The

highest order of consumer preferences for PiscokSuper products is aroma, followed by taste, packaging, texture and price. In the PiscokLumer product, the first order that has the highest value is taste, then aroma, packaging, texture and the lowest preference value is price. The results of the study found that of the various attributes of consumer preferences for the three types of processed banana products, the most preferred by respondents were aroma and taste. In line with this according to [10], this taste attribute is related to the level of consumer confidence in the product. The price attribute is not a major consideration for consumers in making purchases because the prices offered by producers are relatively affordable (IDR 15,000–30,000/box), where [11] stated that the affordability factor had a significant effect on increasing consumer interest in buying a product.

Consumer Loyalty

Consumer loyalty is very important to analyze to find out after consuming a product, consumers will feel satisfied or dissatisfied. Consumers who are satisfied and repurchase a product indicate that these consumers are loyal to a brand.

The level of consumer loyalty to Big Bananas, Piscok Super and PiscokLumer products is assessed by loyalty analysis which divides the criteria into five, namely the switcher/ price buyer, habitual buyer, satisfied buyer, liking the brand, and committed buyer.

Table 5. Recapitulation (Combined) Calculation of Consumer Loyalty for Processed Banana Products (Big Bananas, Piscok Super and PiscokLumer)

No	Loyalty	Processed Banana Products		
		Big Bananas (%)	Piscok Super (%)	PiscokLumer (%)
1.	Switcher Buyer	56	66,6	60
2.	Habitual Buyer	60	63,3	73,3
3.	Satisfied Buyer	96,6	86,6	90
4.	Liking The Brand	90	80	90
5.	Commmitted Buyer	100	96,6	93,3

Source: Primary data analysis, 2022.

Table 5 sums up the recapitulation of consumer loyalty calculations for processed banana products Big Bananas, Piscok Super and PiscokLumer based on the level of loyalty:

- 1) The percentage value of the switcher buyers of Piscok Super products is greater than PiscokLumer and Big Bananas. Consumers of PiscokSuper and PiscokLumer are quite sensitive to price changes of 60% - 63% compared to consumers of Big Bananas with only 56%.
- 2) The percentage value of habitual buyers of PiscokLumer products is greater than that of PiscokSuper and Big Bananas products. Consumers of PiscokLumer and PiscokSuper buy processed banana products by 73% and 63% based on the habitual factors. This figure is slightly higher than Big Bananas products, only 60%.
- 3) The percentage of satisfied buyers from Big Bananas is greater than PiscokLumer and PiscokSuper. Big Bananas consumers feel more satisfied consuming the products by 96%, so it is said that the satisfaction level of Big Bananas consumers is higher than the other two brands.
- 4) The percentage value of liking the brand for Big Bananas and Piscok Super products is 90%, and this value is greater than that of Piscok Super products.
- 5) The percentage value of committed buyers of Big Bananas products is greater than PiscokSuper and PiscokLumer, meaning that consumers who buy Big Bananas products are loyal. The group of buyers who are loyal to Big Bananas is 100%. PiscokSuper consumers are loyal by 96.6% and PiscokLumer by 93.3%.

The results of calculating consumer loyalty to processed banana products of Big Bananas, Piscok Super and PiscokLumer in this study are in line with [12] which examined the satisfaction and loyalty of AAA Coffee Consumers in Kerinci Regency "where AAA Coffee consumers are loyal consumers seen from committed buyer (68%), liking the brand (68%), satisfied buyer (70%), habitual buyer (69%) and switcher buyer (57%).

Brand Switching Matrix

Brand Switching Matrix is used to see the shift of each respondent from one brand to another. Analysis of brand switching matrix on Big Bananas, Piscok Super, and PiscokLumer can be seen in Table 6 below.

Table 6. Analysis of Brand Switching Matrix Calculation of Processed Banana Products

To From	Big Bananas	Piscok Super	Piscok Lumer	Total	%
Big Bananas	21	6	3	30	33
Piscok Super	7	18	5	30	33
Piscok Lumer	9	5	16	30	33
Total	37	29	24	90	100

Source: Primary data analysis, 2022.

Table 6 shows that out of 30 respondents of processed Big Bananas, there were 21 people who would continue to consume Big Bananas, 6 people would switch to processed Piscok Super, 3 people would switch to processed PiscokLumer. Meanwhile, out of 30 respondents of PiscokLumer, 18 people will continue to consume Piscok Super bananas, 7 people will switch to Big Bananas, 5 people will switch to PiscokLumer bananas. As for PiscokLumer bananas, from 30 respondents, 16 people will still consuming processed PiscokLumer bananas, 9 people will switch to processed Big Bananas, and 5 people will switch to processed Piscok Super bananas. Next is calculating the transition probability matrix and the percentage of loyal consumers can be seen in the following table:

Table 7. Transition Probability Matrix of Processed Banana Products in Makassar City

To From	Big Bananas	Piscok Super	Piscok Lumer	ProT	Unloyal (%)
Big Bananas	0,7	0,2	0,1	35,66	30
Piscok Super	0,23	0,6	0,17	51,08	40
Piscok Lumer	0,3	0,17	0,53	62,86	46,6

Source: Primary Data After Processing, 2022

Based on Table 7, it can be seen that the transfer rate of processed banana products in Big Bananas is at least 35.66%, followed by Piscok Super, which is 51.08% and the least is PiscokLumer, which is 62.86%. Thus it can be interpreted that consumers of processed banana products Big Bananas are very loyal consumers because the shift is very small, then followed by consumers of processed bananas with the Piscok Super brand which are higher and more loyal than consumers of processed bananas with the PiscokLumer brand. The results of this study are different from the results of research conducted by Gadung et al (2015) and Murniati (2015) regarding consumer loyalty to SinarBaru Cap Bola Dunia ground coffee which states that consumers are at a percentage level of unloyal to switch to another brand of greater than 50%.

IV. CONCLUSION AND RECOMMENDATIONS

Conclusion

The dominant characteristics of the respondents from the three processed banana products, namely Big Bananas, Piscok Super and PiscokLumer are women, 22 years old, and the average respondent's education is Bachelor degree. The types of products are rolls and bites. The three brands have various flavors, namely choco peanut, tiramisu milo, cappuccino peanut, greentea milo, chocooreo, nutella, vanilla, strawberry and chocomaltin. Prices for Big Bananas start from IDR 25,000-30,000/pack, Piscok Super has a price of IDR 19,000- 33,000/pack and Piscok Super starts from IDR 15,000- 25,000/pack. Consumer preferences for the attributes of the three brands of processed banana products are crunchy texture, attractive packaging, good taste, moderate price and pleasant aroma. Big Bananas has the most loyal consumers comparing with the other two brands. Big Bananas, Piscok Super and PiscokLumer brands are expected to maintain their position at the consumer level by producing new flavor variants or innovating the packaging or product size or volume. So that consumers do not easily switch to other brands, because currently processed products from bananas are on the rise, so this research is expected to be information material for banana processed SMEs to be able to make product or service improvements for their companies.

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