Preliminary Study of Consumer Preference in Decision Making Processed Fish Products in Bekasi (Case Study of Bandar Djakarta Restaurant, Bekasi)

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Authors' contributions

Article Information

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ABSTRACT

Consumer preference is a consumer attitude towards a product choice. The needs and desires of consumers are very varied and can change because of the factors that influence consumers in choosing products. This study aims to analyze consumer preferences and what attributes are considered by consumers in making decisions to choose processed fish products. This research was conducted at Bandar Djakarta Restaurant, Summarecon, Bekasi City in February - March 2021. Primary data collection techniques used accidental sampling of 30 respondents, while secondary data was obtained from Bandar Djakarta Bekasi, FPIK Unpad Library and Unpad Public Library. The analytical tool used to determine consumer preferences is the measurement of attitudes using the Likert scale and the attribute analysis tool that is considered in product selection, namely the Chi Square analysis. Based on the results of the analysis of the level of consumer preference at the Bandar Djakarta Restaurant, it shows that the most preferred processed product is shrimp. The attributes that are considered in purchasing processed shrimp products are consecutively good taste, low price, and easy to find, high nutrition and family preference at the same level.

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1. INTRODUCTION

Bekasi City is an area that has the potential for marketing fishery products. Some people know only a few types of fish that are distributed close to their homes, in the end this information becomes their personal preference. The more fish in the community, the more likely people are to consume fish [1]. According to [2] Bekasi City is a city with low consumption of fish among its people, which is only 22%.

Although various programs to increase fish consumption have been implemented, Indonesian fish consumption is still considered low. Based on the description above, it can be concluded that fish consumption in Indonesia is still low compared to other countries. The level of Indonesian fish consumption in 2013 amounted to 35.14 kg/cap/year [3]. Fish consumption in Korea is 54 kg/cap/year, the Netherlands 52 kg/cap/year, Spain 41 kg/ cap/year, and France 35 kg/cap/year [4]. So, it is necessary to further study the pattern of fish consumption in Indonesia.

One type of healthy food is fish. Fish provides a variety of proteins, fats (omega 3 fatty acids), vitamins (vitamin A, vitamin D, vitamin B6, vitamin B12), and minerals (iron, iodine, selenium, zinc, and fluorine) which is needed by the body [5]. Various benefits obtained when consuming fish are meeting the needs of 10 essential fatty acids, lowering blood pressure, lowering cholesterol levels, losing weight, stimulating brain growth and intelligence, healthy eyes, preventing wrinkles and the skin aging process, and preventing serious diseases such as heart disease, breast cancer, and prostate cancer [6].

Consumer preference is a consumer's attitude towards a choice of product brands that are formed through evaluation of various brands in the various options available [7]. Restaurant is a business that operates in the service sector. One of the strategies in managing a restaurant business is to provide facilities that are not only focused on the taste aspects of the food, but also on the nuances of the room the restaurant offers so that it can always compete [8].

2. MATERIALS AND METHODS

This research was conducted at the Bandar Djakarta Restaurant, Bekasi City, West Java Province, Indonesia. Implemented in February-March 2021.

The method used in this research is a case study method, a case study is a study of the status of the research subject with respect to a specific or typical phase of the whole personality. This method will explain the results of a descriptive data analysis. The data used consists of primary data and secondary data. Primary data was obtained directly through questionnaires or interviews for consumer with accidental sampling method. The number of questionnaire participants at the time of data collection were 30 people.

2.1 Data Analysis

The data analysis method used in this research is descriptive method. Descriptive analysis is used to analyze consumer preferences for purchasing processed seafood products by calculating the percentage of the number of respondents who are presented in a simple tabulated form. Data analysis used supporting software for IBM SPSS Statistics 22 and Microsoft Office Excel 2019.

There are three data analyzes used in this study, namely the validity test to test whether the measuring instrument used is valid or invalid, the reliability test to test whether the measuring instrument used is reliable or not, and Chi Square analysis to analyze the product attributes under consideration consumers towards the purchase of processed seafood products.

2.2 Validity and Reliability Test

Research results are valid if there is a similarity between the data collected and the data that occurs on the object under study [9]. To test the validity of the construct, it was done by correlating the score of the questions with the total score. Then use the Product Moment correlation technique as follows:

$$r_{xy} = \frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{\{n \sum x^2 - (\sum x)^2\}\{N \sum y^2 - (\sum y)^2\}}}$$

Where:

r = Product Moment Correlation Coefficient
x = Score of Each Item
y = Total Score
n = Sample Size

The Alpha formula is used to find the reliability of instruments whose scores are not 1 or 0 [6], for example a questionnaire or description form questions to find reliability for all items is to correct the correlation number obtained with the r table.

The Cronbach Alpha (α) statistical test formula is as follows:

$$CA = \left(\frac{k}{k-1}\right)\left(1 - \frac{\sum \sigma_b^2}{\sigma_t^2}\right)$$

Where:

CA   = Coefficient *Cronbanch Alpha* (α)
K = Number of questions in item
σ_b^2 = Item Variance
σ_t^2 = Total Variance

2.3 Chi Square Test

Chi Square or chi square is used to test the comparative hypothesis (test for differences) on the average k independent samples with each sample having several classes or categories [10]. The basic Chi Square formula is as below.

$$X^2 = \frac{(O_i - E_i)^2}{E_i}$$

Where:

X^2 = Chi Square Value
O_i = Observed value
E_i = Expected value

3. RESULTS AND DISCUSSION

The Bandar Djakarta Restaurant in Bekasi City is located in Bekasi City, which is on Jalan Bulevar Ahmad Yani Blok F, MargaMulya, North Bekasi, and the Bandar Djakarta Restaurant in Bekasi City during the pandemic operates every day from 10:00 to 20:00. Mr. Harry R. Simanjuntak as the manager explained that the Bandar Djakarta Bekasi City Restaurant can accommodate 200 customers every day, with the help of 30 employees. Bandar Djakarta Kota Bekasi has a seafood menu price range of IDR 90,000-130,000 / per 100 gr. The Bandar Djakarta restaurant has a range of 24,500-70,000 / 100 gr and for other fish the price is Rp. 55,000 - Rp. 220,000 with sizes from M-XXL. Seafood ingredients are delivered directly to the Bandar Djakarta Restaurant, Bekasi City. So far there have been no obstacles in the procurement of seafood ingredients.

3.1 Consumer Preferences of Processed Fish Products at Restaurant Bandar Djakarta

The process of making consumer decisions in buying processed fish products is also influenced by consumer preferences. The preferences of consumers of processed fish products are the choices that consumers like or dislike about processed fish products to be consumed.

The table shows that the frequency of buying products preferred by the Bandar Djakarta Restaurant respondents varies widely. Based on the table above, it is known that of the 30 respondents, 15 of them have the frequency of buying processed fish types of shrimp, in the second place, 10 are the frequencies that buy processed fish types of squid and the last order there are 5 frequencies that buy groupers. Consumers prefer shrimp because according to [11] Shrimp is a food source of high-quality animal protein which is good for health.

Table 1. Preferred processed fish product

No.	Types of Processed Products	Percentage	Participants
1.	Squid	33.3%	10
2.	Shrimp	50%	15
3.	Grouper	16.7%	5
Total		100%	30

Source: Primary Data (2020)

Table 2.Chisquare test for processed fish product

No.	Types of Processed Products	X^2	df	X^2 *Table*	*p* (sig.)
1.	Squid	3.60	3	7.82	0.308
2.	Shrimp	8.13	3	7.82	0.043
3.	Grouper	10.27	3	7.82	0.016

Source: Primary Data (2020)

According to Table 2 above, it can be defined to show that there are differences in consumer preferences for products and there is one product that is not significantly different. Each product observed was significantly different from the table at a significant level of 95%. Based on this table, there are differences in consumer preferences for shrimp and grouper products, while squid products have significant differences (based on statistic rule 0.05 > *p*(sig.)).

Table 3 shows that consumers of processed squid products have a level of liking at the level of normal, like it and really like it with a percentage of 30%. Consumers of processed shrimp products are dominated by consumers who really like these processed products with a percentage of 46.7%. Consumers of processed grouper fish are dominated by consumers who do not like these processed products with a percentage of 50%, and only 16.7% of consumers really like these processed products.

Based on the results of the study, the attributes considered in choosing processed squid products are delicious taste, low price, high nutrition, easy to find, family-friendly and easy way of serving. The attributes that are considered in selecting processed shrimp products are delicious taste, low price, easy to find, high nutrition and family preference at the same level. The attributes that are considered in selecting processed grouper products are high nutrition, low price and easy to find, respectively.

3.2 Validity and Reliability Test for Processed Products at Restaurant Bandar Djakarta

Based on the preference items above, according to [12] an item is said to be valid if it has a validity value greater than 0.3 so that most of the items above can be said to be valid. According to [13] if $\alpha > 0.90$ then reliability is perfect. If α is between 0.70 - 0.90, the reliability is high. If α is 0.50 - 0.70, the reliability is moderate. If $\alpha < 0.50$ then reliability is low. However, the number of Cronbach's α for all types of processed product were below 0.50, this low value is caused by one or more unreliable question and the low number of the consumer who participate in research.

Table 3. Matrix of consumer preference for processed fish products

No.	Types of Processed Products	Preference				Total
		Do not like it	Normal	Like it	Really Like it	
1.	Squid	10%	30%	30%	30%	100%
2.	Shrimp	13.3%	23.3%	16.7%	46.7%	100%
3.	Grouper	50%	20%	13.3%	16.7%	100%

Source: Primary Data (2020)

Table 4. Matrix of consumer reasons for buying processed fish products at restaurant bandar djakarta

No.	Types of Processed Products	Reason					
		Cheap Prize	Easy to Find	High in Nutrition	Good Taste	Easy Serving Method	Liked by Family
1.	Squid	23.33%	10.00%	13.33%	43.33%	3.33%	6.67%
2.	Shrimp	26.67%	10.00%	10.00%	43.33%	0.00%	10.00%
3.	Grouper	20.00%	13.33%	66.67%	0.00%	0.00%	0.00%

Source: Primary Data (2020)

Table 5. Validity and reliability test matrix

No.	Types of Processed Products	Validity Value						Cronbach's α
		Things to Consider	Smell	Color	Taste	Price	Reason to Buying	
1	Squid	0.389	0.533	0.327	0.591	0.464	0.543	0.302
2	Shrimp	0.381	0.261	0.052	0.769	0.294	0.7	0.263
3	Grouper	0.383	0.118	0.725	0.661	0.101	0.537	0.307

Source: Primary Data (2020)

Likert scale questions is:

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Fig. 1. Qualification of the value of the Cronbach alpha coefficient [10]

Table 6. Chi square test for processed squid products preference

No.	Preference	X^2	df	Table	p (sig.)
1.	Things to Consider	3.600	3	7.8147	0.308
2.	Smell	12.133	3	7.8147	0.007
3.	Color	29.467	3	7.8147	0.000
4.	Taste	17.000	4	9.4877	0.002
5.	Price	12.200	2	5.9915	0.002
6.	Reason to Buying	19.600	5	11.0705	0.001

Source: Primary Data (2020)

Table 7. Chi square test for processed shrimp products preference

No.	Preference	X^2	df	Table	p (sig.)
1.	Things to Consider	13.467	3	7.8147	0.004
2.	Smell	3.600	3	7.8147	0.308
3.	Color	34.267	3	7.8147	0.000
4.	Taste	26.000	4	9.4877	0.000
5.	Price	2.133	1	3.8415	0.144
6.	Reason to Buying	13.333	4	9.4877	0.010

Source: Primary Data (2020)

Table 8. Chi square test for processed grouper products preference

No.	Preference	X^2	df	Table	p (sig.)
1.	Things to Consider	0.667	3	7.8147	0.881
2.	Smell	21.467	3	7.8147	0.000
3.	Color	3.333	1	3.8415	0.068
4.	Taste	2.333	4	9.4877	0.675
5.	Price	30.200	2	5.9915	0.000
6.	Reason to Buying	15.200	2	5.9915	0.001

Source: Primary Data (2020)

3.3 Chi Square Test for Processed Products at Restaurant Bandar Djakarta

The table above shows that there are differences in consumer preferences for processed squid based on attributes except for the part that is considered. Each attribute in the observed squid product is significantly different (based on statistic rule 0.05 > p(sig.)). with a significant level of 95%, which means that the null hypothesis (H_o) is rejected, and the alternative hypothesis (H_a) is accepted as X^2 is calculated to be greater than X^2 table, so that there are differences in consumer preferences for attributes. which is contained in the processed squid by the respondents of the Bandar Djakarta Bekasi Restaurant. The most influential attributes in consumer selection are product smell, product color, product taste, product price, and reason for buying the product.

The table above shows that there are differences in consumer preferences for processed shrimp based on attributes except in the product smell and product price sections. Each attribute in the observed shrimp product is significantly different (based on statistic rule 0.05 > p(sig.)) with a significant level of 95%, which means that the null hypothesis (Ho) is rejected, and the alternative hypothesis (Ha) is accepted as X^2 is calculated to be greater than X^2 table, so that there are differences in consumer preferences for the attributes contained. on shrimp processing by respondents in Bandar Djakarta Bekasi Restaurant. The most influential attributes in consumer selection are the things considered by the product, the color of the product, the taste of the product and the reasons for buying the product.

The table above shows that there are differences in consumer preferences for processed grouper based on attributes except for the part considered, product color and product taste. Each attribute in the observed squid product is significantly different (based on statistic rule 0.05 > p(sig.)) with a significant level of 95%, which means that the null hypothesis (Ho) is rejected, and the alternative hypothesis (Ha) is accepted as X^2 is calculated to be greater than X^2 table, so there are differences by the Bandar Restaurant respondents. Djakarta Bekasi. The most influential attributes in consumer selection are product smell, product price, product taste and reasons for buying the product.

4. CONCLUSION

Based on the description of the discussion, several conclusions can be made, including:

Consumers at Bandar Djakarta restaurants tend to prefer processed shrimp products over processed squid or grouper fish. And each favorite product has several parts, namely the attributes in each product. Attributes that are considered in selecting processed squid products are delicious taste, low price, high nutrition, easy to find, family-friendly and easy serving methods. The attributes that are considered in selecting processed shrimp products are delicious taste, low price, easy to find, high nutrition and family preference at the same level. The attributes that are considered in selecting processed grouper products are high nutrition, low price and easy to find, respectively.

5. SUGGESTION

Based on the description of the above discussion, several suggestions are needed, namely an evaluation of Bandar Djakarta Restaurant business actors is needed to continue to improve product quality and improve restaurant quality, to keep the taste of product because it is the most considered attributes.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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