Analysis of Factors Influencing Fresh Fish Consumer Satisfaction at Supermarket X, Bandung Regency

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Original Research Article

ABSTRACT

This research is entitled Analysis of Factors Influencing Fresh Fish Consumer Satisfaction in Supermarket X, Bandung Regency. The purpose of this research was to determine what factors influence consumer satisfaction with fresh fish at Supermarket X in Bandung Regency. Supermarket X is one of the largest supermarkets in Bandung Regency, which provides basic needs products such as food ingredients for cooking including the availability of fresh fish. Data was obtained through a questionnaire distributed to 104 Supermarket X customers for 1 month, from mid-April to mid-May. The type of research used is descriptive research using a quantitative approach. To determine the value of each attribute using IPA analysis (*Importance Performance Analysis*), The results of this research show, in calculations using IPA (Importance Performance Analysis) the consumer satisfaction factor is divided into two, namely satisfied and disssatisfied. Satisfactory attributes are product performance, reliability, durability, conformance, price affordability, price compatibility with quality, price compatibility with benefits, tangible services,

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reliability, responsiveness, assurance and certainty, empathy, additional costs incurred and strategic location. While the unsatisfactory attributes, namely, the affordability of prices and the superior quality of fresh fish, are still inferior to other supermarkets.

Keywords: Fresh fish; importance performance analysis; consumer satisfaction; supermarket.

1. INTRODUCTION

Indonesia is a region with vast waters. Nearly three-quarters of Indonesia's territory is water. The following questions prove that Indonesia is a country with high marine natural resource potential. Fishery and marine is a sector that has an important role in the development of the national economy, especially in providing employment, protein food, and foreign exchange. Indonesia itself has a low level of fish consumption, but over time the level of fish consumption in Indonesia is increasing. Based on data from the Ministry of Fisheries and Fisheries (KKP), fish consumption in Indonesia in 2022 is 56.48 kilograms (kg) per capita. This number increased by 2.39% compared to 2021 which obtained a figure of 55.16 kg/capita. Consumption of fish is very important, especially when viewed from the nutritional value contained in fish. According to Ciptanto [1], the nutritional value contained in fish is very important because it has a higher digestibility value and biological value compared to other animal meats. Fish contains protein in which it contains perfect essential amino acids. Fish meat consists of 15-24% protein, 1-3% glycogen/carbohydrates, 1-22% fat, 66-84% water, and 0.8-2% other organic matter. Consumption of animal protein other than chicken meat such as fish is an alternative to fulfilling protein nutritional adequacy at prices that are relatively affordable to the public Atikah et al. [2]. Even though fish consumption figures have improved and increased from year to year, the value of fish consumption is still much lower than the value of fish stocks. According to the research results of Suryawati et al. [3], considerations in consuming fish that consumers like and pay attention to are nutritional content, good taste, and ease of obtaining it.

West Java is one of the regions that has a low level of fish consumption. According to the Ministry of Maritime Affairs and Fisheries (KKP) through the Bandung Fish Quarantine and Quality Control Agency (BKIPM), in 2021 the level of fish consumption per capita in West Java will only be 32 kilograms to 34 kilograms. This figure is still very low and must be increased, it is still far from the national per capita target of 53 kilograms per year. The low level of per capita consumption in West Java is influenced by several factors, namely public awareness of the importance of fish as a food ingredient that contains high quality protein and the low purchasing power of fish. Currently, the government itself, especially in Bandung Regency, is actively carrying out movements to increase fish consumption in the community, such as promoting the Fish Eating Community Movement (Gemarikan), Fish Eating Safaris, and facilitating the Modern Fish Development Market (PIM). Even so, fish is the highest animal food consumption in Bandung Regency in 2020 at 38.14 grams/capita per day, but this amount is still far from the national target.

The low consumption of fish is closely related to the low purchasing power of fish, and the low purchasing power of fish cannot be separated from the facilities and infrastructure for selling fish, the difficulty of fish availability, the very expensive price of fish, and public awareness of fish. The importance of consuming fish which is full of nutritional needs for the body. One of the infrastructures for selling fish is a supermarket. According to the General of Domestic Trade, a supermarket is a modern market where retail goods are sold in large quantities and the service is supermarket (self-service). Currently, business competition is very tight, causing all parties who run a business to try and maintain optimal performance in order to survive, where more and more products are needed and desired by consumers so every company needs to place customer satisfaction orientation as a top priority. So that consumer assessment of performance is very important to increasing and improve performance. According to Schannaanrs, creating customer satisfaction can provide several benefits, including harmonious corporate and consumer relations, providing a good basis for repeat purchases and creating customer loyalty which forms word of mouth recommendations that are beneficial to the company [4]. From the producer's point of view, repurchasing is very profitable for the company because it can increase its profits. Word of mouth repurchasing can also increase the level

of food consumption, especially in the consumption of fishery products such as fresh fish. So in this research, research was carried out by identifying what factors influence consumer satisfaction with fresh fish at Supermarket X, Bandung Regency.

2. MATERIALS AND METHODS

This research uses a quantitative descriptive method that aims to analyze fresh fish consumer satisfaction with service quality using the Importance Performance Analysis (IPA) method. The measurement scale used in this study is the Likert Scale, according to Sugiono (2018) the Likert scale can be used to measure consumer opinions, attitudes, and perceptions of a problem phenomenon. The phenomena in this study have been specifically determined by the researcher, so that they are included in an ordinal scale using 5 points of assessment, with the hope of producing accurate measurements. According to Irawan (2002), there are 5 variables in satisfying consumers, namely product quality, price, service quality, emotions, as well as cost and ease of obtaining these products.

The sample is part of the object of the population studied. The sample in this research uses non-probability sampling where each member of the population does not have the same opportunity to be sampled [5]. Sampling uses Accidental Sampling, which means matching samples found by chance [6]. Determining the number of respondents in this study was based on the time of the research, namely 104 respondents which was carried out for one month starting from the second week of April to the second week of May. Sampling was carried out by distributing a Google form to fresh fish consumers at Supermarket X using a Likert scale with a checklist form.

Importance Performance Analysis or IPA was first introduced by Martial and James in 1997 [7]. This method is used to determine policies and strategies based on the level of importance and satisfaction of an attribute. IPA can also be used to identify what indicators are important and need to be owned by a business to achieve customer satisfaction Lubis et al. [8]. The IPA method is needed to identify services that need to be improved to maintain consumer satisfaction so that they are easy to understand Safira et al. [9]; Deharja et al. [10].

The assessment uses a Likert scale with a score of 1 to 5 which is used to measure the level of performance and expectations as shown in the Table. 1
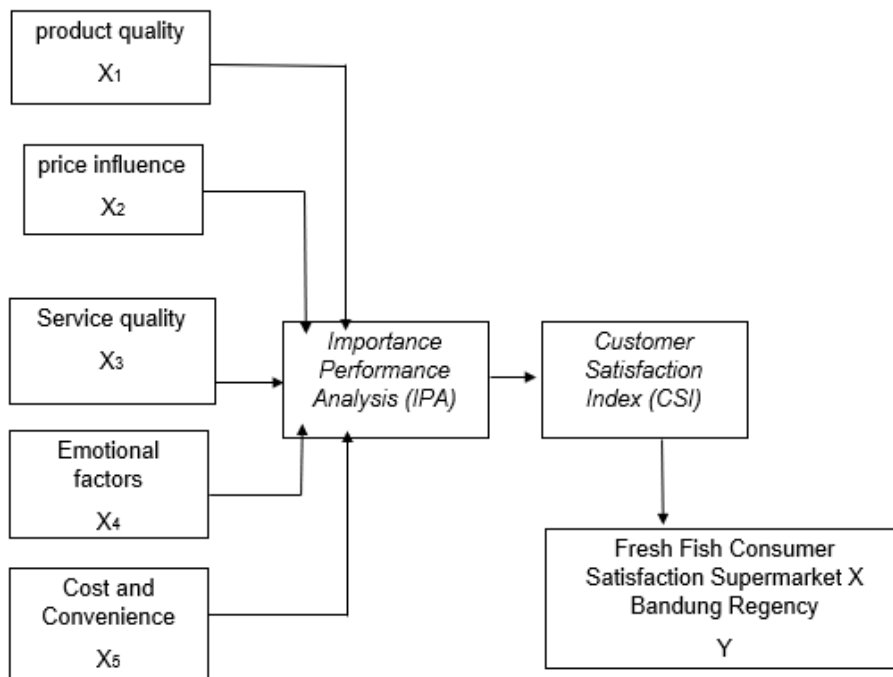

Fig. 1. Research thinking framework

Table 1. Performance level measurement scores and expectation levels

Score	Performance Level	Expectation Level
1	Very Not Good	Very unimportant
2	Not good	Not important
3	Pretty good	Quite important
4	Good	Important
5	Very good	Very important

From the score results, the scale range is calculated using the following formula:

$$\frac{Number\ of\ scales}{} = \frac{(Xib - Xix)}{number\ of\ measurement\ scales}$$

Where :

Xib = the largest possible score obtained by assuming that all respondents
answer is very important.
Xik = the largest possible score obtained by assuming that all respondents
give unimportant answers

Based on the score measuring the level of performance and expectations with a score of 1 to 5, to represent the overall assessment a scale range is needed with the following formula based on Simamora (2002):

$$Scala\ Range = \frac{m-n}{b} = \frac{5-1}{5} = 0,8$$

Where :

m = maximum number of scale points in the questionnaire
n = Minimum number of scale points in the questionnaire
b = Number of scale points in the questionnaire

After that it will produce a calculation regarding the level of conformity. Measurement of the level of conformity or TKI uses the following formula:

$$Tki = \frac{Xi}{Yi} x100\%$$

Where:

Tki = Levelrespondent suitability
Xi = Performance appraisal score
Yi = Interest/expectation assessment score

Furthermore, the total score of performance level assessment and expectations is calculated by the following formula:

$$Xi = \frac{\sum Xi}{n} \qquad Yi = \frac{\sum Xi}{n}$$

Where:

Xi = The average score of the performance level of each instrument i
Yi = The average score of the expectation level of each instrument i
n = respondents

The Natural Sciences method is usually presented in the form of a Cartesian quadrant with four categories or quadrants, while the description of the quadrants is as follows Siyamto [11]; Firdaus [12-17].

1. Top priority, has attributes that are considered important and expected by consumers, but its performance is considered not to meet consumer expectations so the company needs to improve to improve its performance
2. Maintain achievement, have attributes that are considered important and expected by consumers. This quadrant has high performance and expectations, so companies need to maintain the performance of these attributes.
3. Low priority, has attributes that are considered to have a low level of perception and are not too important or not highly anticipated by consumers, so that the company does not need to prioritize and pay more attention to these attributes.
4. Excessive, has attributes that are not too important and not really expected by the company. So that the company is better off paying attention to other attributes that have more priority.

3. RESULTS AND DISCUSSION

3.1 Characteristics of Respondents

Based on sex data tabulated in graphical form in Fig. 2. Respondents in this research were dominated by female respondents. There were

95 female respondents, while 9 male respondents. This means that from the following data female respondents amounted to 91% while the rest were male, female respondents dominated even almost all respondents were female.

Based on the age range tabulated in graphical form in Fig 3. This study divides the age range of respondents into four classes, namely 17-25 years, 26-30 years, 31-40 years, and > 40 years. The age range of 31-40 years was the majority in this study, namely 41 respondents, aged 26-30 years had the same number as those aged > 40 years, namely 26 respondents, and the least were at the age of 17-25 years, totaling 11 respondents.

Based on the job data tabulated in graphical form in Fig 4. Respondents' occupations were also recorded to see the diversity of characteristics of fresh fish consumers of Supermarket X. The occupations in this study were divided into seven categories, namely students, civil servants, private employees, labourers, self-employed, housewives and household assistants. The highest number of jobs in this study were private employees totaling 35 respondents, while the least were household assistants totaling 3 respondents.

Based on the total income data tabulated in graphical form in Fig 5. This study also took data on the monthly income of fresh fish consumers at Supermarket X. The monthly income in this study was divided into four categories, namely Rp. 0

(no income) – Rp. 1,000,000, Rp. 1,000,000 – Rp. 2,000,000, IDR 2,0000,000 – IDR 4,000,000, and > 4,000,000. Respondents who choose not to have an income are usually female students or housewives. The majority of respondents income > Rp. 4,000,000 totaling 74 respondents. Respondents with an income of Rp. 1,000,000 – Rp. 2,000,000 is simply not in this study.

After analyzing the characteristics of fresh fish consumers at Supermarket X, Bandung Regency, it can be seen that market segmentation based on demographics owned by Fresh Fish Supermarket X is consumers who are female, consumers aged 31-40 years, consumers who have jobs as private employees, and consumers with income > Rp. 4,000,000.

3.2 Level of Consumer Satisfaction

3.2.1 Validity and reliability test

Based on the calculation of the results of the two tests, namely the validity test and reliability test on fresh fish consumer satisfaction at Supermarket X Bandung Regency, it shows that all attributesused is valid and can be used to measure fresh fish consumer satisfaction at Supermarket X. The results of the validity test can be said to be valid because the results at the level of expectation and level of performance have a value above the value of r table (Product Moment Correlation) which is equal to 0.195 with a significance degree of 5%.
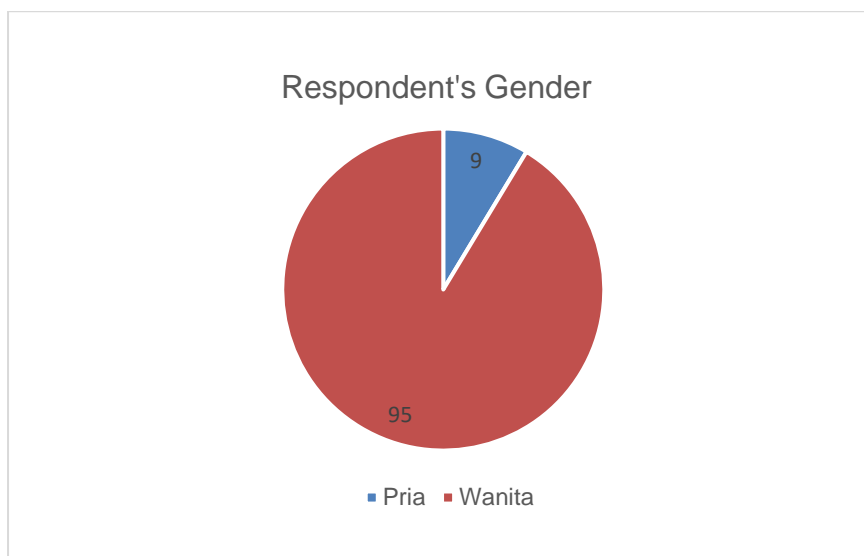

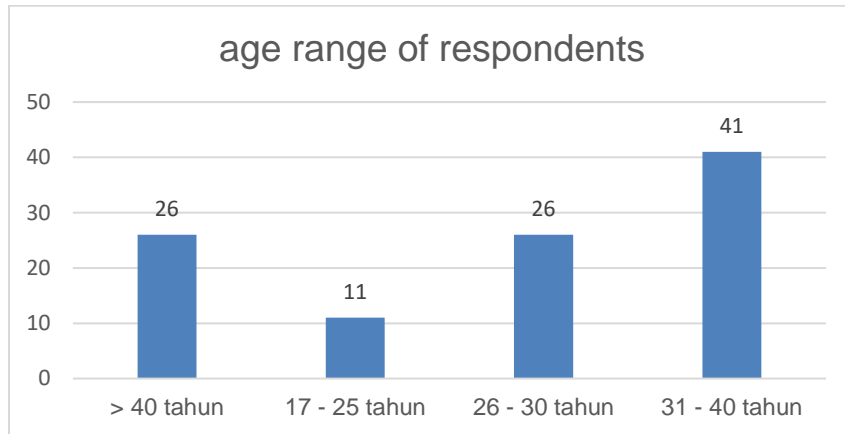**Fig. 2. Characteristics of consumers based on gender**

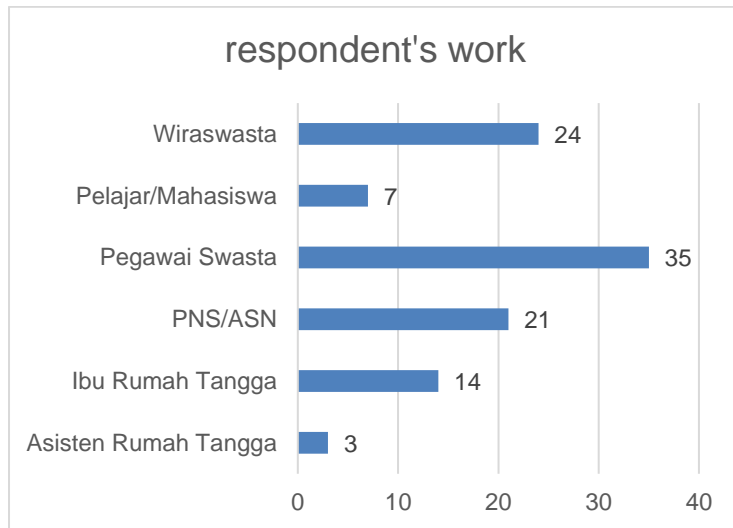**Fig. 3.Consumer characteristics based on age**

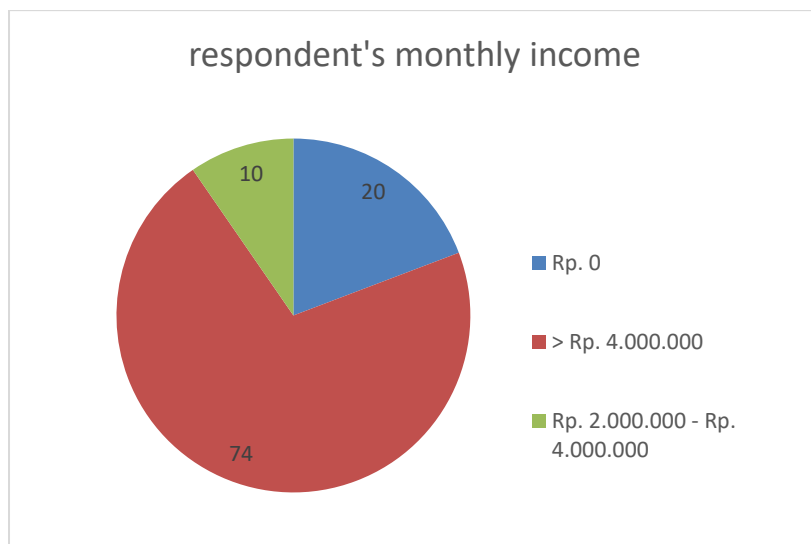**Fig. 4. Characteristics of consumers based on occupation**

Fig. 5. Characteristics of Consumers Based on Income

The value of the reliability test at the expectation level and performance level is reliable, in the reliability test the expectation level is 0.904 while the performance level reliability test is 0.913. What are the two reliability values in the range of 0.80 – 1.00 which shows that the two reliability test values are very reliable.

3.2.2 Importance performance analysis

To measure the level of performance and the level of expectations from the results of the questionnaire that is using the method *Importance Performance Analysis* (IPA) from data from filling out questionnaires by 104 respondents. The results are entered into the Cartesian diagram to determine where the question instruments in the questionnaire fall into quadrant I (top priority), quadrant II (maintain achievement), quadrant III (low priority), and quadrant IV (excessive).

From the results of processing the data from the questionnaire results in the Cartesian diagram above, it can be seen:

1. Quadrant I (Top Priority)

In quadrant I are the instruments that are considered important by fresh fish consumers, where the level of consumer expectations is high compared to the expectations of other instruments but the performance of employees or companies is considered by consumers to be lacking or not as desired compared to other performance instruments. Therefore, the attributes in quadrant 1 need to be improved and their performance improved. These attributes are:

Attribute 3 (Comparison of product advantages), Comparison of product advantages here compared to the advantages of supermarket products which are still in the vicinity of supermarket X. Consumers consider that fresh fish products at Supermarket X are included in the good category, but when compared to other supermarkets there are still superior to fresh fish products at Supermarket X.
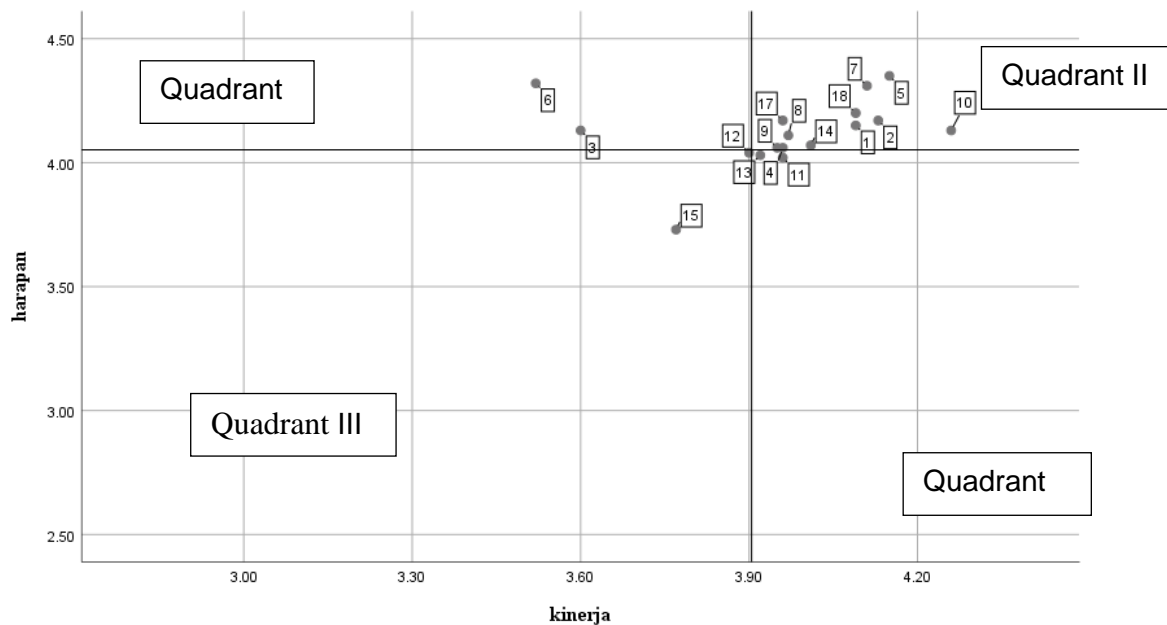

Fig 6. Cartesian Diagram of Performance Levels and Expectations of 5 Instruments

Remarks:

1 = Taste attribute	*10 = Service facility attribute*
2 = View attribute	*11 = Attribute of politeness*
3 = Attribute comparison of excellence	*12 = responsiveness attribute*
4 = Endurance attribute	*13 = guarantee attribute*
5 = Attribute according to SNI	*14 = Operational hours attribute (empathy)*
6 = Affordability attribute	*15 = Attributes of influence of large supermarkets*
7 = price comparison attribute	*16 = Pride attribute*
8 = price-quality attribute	*17 = additional cost attribute*
9 = Attribute of suitability of price with taste	*18 = Strategic location attribute*

Attribute 6 (Affordable Prices), consumers still disagree if the price of fresh fish provided by Supermarket X is affordable, the selling price of fresh fish is still considered expensive. The price of fish sold is proportional to the handling and treatment of these fish. Supermarket X treats fish as best as possible to maintain its quality, such as placing fish using ice and neatly arranged without the fish touching each other. So that this treatment provides an additional cost to the selling price of fresh fish.

2. Quadrant II (Maintain Performance)

Attribute 1 (Performance), performance here is related to the taste or aroma of fresh fish sold by Supermarket X. Consumers think the taste or aroma possessed by Supermarket X's fresh fish is good and like fish in general, there is no taste that makes fish strange or fishy smell which is not characteristic of fish in general.

Attribute 2 (Reliability), reliability here relates to the appearance of fresh fish at Supermarket X which is eye-catching, clean, and well-organized. Consumers assess that the arrangement and condition of fresh fish at Supermarket X is neat, clean, and the condition of the fish is good, by serving the fish stored on ice so that the fish does not spoil easily and stays fresh.

Attribute 5 (Durability), From the values obtained, the durability of fresh fish at Supermarket X is quite good according to respondents, if touched The fish is not mushy and damaged, this can be seen from the appearance of fish that is not pale and does not smell bad.

Attribute 6 (Conformance), Conformance here relates to the assumption that the fresh fish at Supermarket X conforms to the SNI (Indonesian National Standard) value for fresh fish in Indonesia. From the value given by the respondent, which is already good, the respondent suspects that the fresh fish sold by Supermarket X is in accordance with the applicable SNI in Indonesia.

Attribute 7 (price competitiveness), price competitiveness here is related to competition in the price of fresh fish at other supermarkets around Supermarket X. From the value obtained Supermarket X is superior with regard to price compared to supermarkets that are around it, although like the results of the respondents above on the attribute 6 if the price of fresh fish sold by Supermarket X is not yet affordable, but

when compared to other supermarkets the price of fresh fish at Supermarket X is cheaper.

Attribute 8 (Conformity with quality), Conformity with quality here, namely the price comparison with the quality of fresh fish sold. Fresh fish found in Supermarket X is considered appropriate for the price.

Attribute 9 (suitability of benefits), the suitability of benefits here is a comparison of the price of fresh fish with the benefits of fresh fish itself. Judging from the value obtained, the benefits of fresh fish at Supermarket X are in accordance with the price. The benefits here are related to the taste of fresh fish.

Attribute 10 (tangible), tangible here relates to the facilities provided which are used in the service of fresh fish. Consumers judge if the existing facilities are good beyond the expectations of the consumers themselves. The facilities provided here are free fish cleaning, fish wrapping neatly so that the fish doesn't smell fishy.

Attribute 14 (Empathy), empathy here is related to the appropriate supermarket operating hours. Supermarket operating hours are considered to be in accordance with what consumers want. Supermarket X itself opens the supermarket at 09.00 WIB - 21.00 WIB, which is an hour that suits the schedule of fresh fish consumers.

Attribute 17 (additional costs), additional costs here are costs incurred in addition to buying fresh fish, one of which is the cost incurred for public transportation or vehicle gasoline to buy fresh fish to Supermarket X. Consumers consider the costs incurred to be quite good because the location of Supermarket X is on the edge of a large highway so there is no need to use a lot of public transportation.

Attribute 18 (Strategic location), strategic location is one of the important reasons for shopping, most people choose something that is more practical, including looking for shopping places that have affordable locations. Supermarket X is located close to densely populated settlements, making it easier for local residents to find places to shop, especially for fresh fish.

3. Quadrant III (Low Priority),

Quadrant III shows if the attributes in this quadrant have a low level of importance followed

by a low level of performance, or have performance values and expectations/interests that are both below the average. These attributes are:

Attribute 12 (Responsiveness), Responsiveness here is the service of fresh fish done quickly and responsively. Although considered to have low performance and expectations/interests, respondents considered that the responsiveness of the services provided in buying fresh fish at Supermarket X was quite good. Consumers consider that the waiter does not let consumers wait long, from wrapping to cleaning the fish is done quickly, and even though there are many customers, they do it quickly enough.

Attribute 15 (Believe because it's a big company), in this attribute the score has a performance value that is greater than the value of interest/expectations, this proves that some respondents agree even though it is in quadrant III which is a lower priority than the other attributes.

Attribute 16 (proud to be admired), proud to be admired here means feeling proud to be admired by other people for buying fresh fish from a supermarket, namely Supermarket X. Consumers perceive this attribute as having low importance even far from the main interest in self-satisfaction.

4. Quadrant IV (Excessive)

Quadrant IV usually contains attributes that have a large performance value and the expected value is mediocre or in the sense that it is very good. So that this attribute is considered not too important by consumers compared to other attributes, but has a very good performance by supermarkets. These attributes are:

Attribute 11 (Reliability), Reliability here is assessing the friendliness of the waiters and does not discriminate between consumers. Consumers consider that the service at Supermarket X is quite friendly to fresh fish buyers, and does not discriminate against buyers.

Atrbut 13 (Guarantee and Assurance), Guarantee and certainty here, that is, the waiter provides comfortable communication, not angry or lying, thus giving a sense of security, trust to consumers. From the results obtained, the guarantees and certainty provided by the waiter to consumers are good enough. Consumers value the waiter as having a good way of communicating, not being wordy and clear, so as to make consumers comfortable asking questions about fresh fish.

4. CONCLUSION

From the results of the Impotance Performance Analysis measurement, it can be concluded that the attributes or indicators that influence fresh fish consumer satisfaction at Supermarket X are divided into two, namely attributes or indicators that make consumers satisfied and attributes or indicators that make consumers less satisfied. Attributes or indicators that make consumers satisfied are product quality variables, namely performance, reliability, durability, and conformance; price variables, namely price affordability, price suitability with quality and price suitability with benefits; service quality variables, namely tangible, reliability, responsiveness, assurance and certainty, and empathy; and the cost and convenience variables, namely the additional costs incurred and the strategic location.

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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