

Analysis of Consumer Satisfaction Level Towards Fresh Fish Marketing in Jakarta (Case Study at Muara Baru Modern Fish Market)

Analisis Tingkat Kepuasan Konsumen terhadap Pemasaran Ikan Segar di Jakarta (Studi Kasus di Pasar Ikan Modern Muara Baru)

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Abstract

Received
4 January 2025

Accepted
26 January 2025

As a country with a significant water area and abundant marine biodiversity, Indonesia has excellent potential in the fisheries industry, especially in providing fresh fish, a staple food for the community. The Muara Baru Modern Fish Market in North Jakarta is designed to meet this need by offering various types of fresh fish in a clean, hygienic, and modern environment. This study aims to analyze consumer satisfaction with the marketing of fresh fish in this market. Using 13 variables, including service reliability, responsiveness, assurance, empathy, tangibility, performance, features, durability, product reliability, aesthetics, perceived quality, price, and location, this study had 100 respondents selected by purposive sampling. Data analysis was carried out using the Customer Satisfaction Index (CSI), and the results showed a consumer satisfaction level of 78.75%, categorized as "satisfied." The main factor influencing satisfaction is the quality of fresh fish in this market, which is very good, while the cleanliness and appearance of the seller still need improvement.

Keywords: Fresh fish, Modern Fish Market, Customer Satisfaction Index

Abstrak

Indonesia sebagai negara dengan luas perairan yang signifikan dan keanekaragaman hayati laut yang melimpah, memiliki potensi besar dalam industri perikanan, khususnya dalam penyediaan ikan segar yang menjadi kebutuhan pokok masyarakat. Pasar Ikan Modern Muara Baru di Jakarta Utara adalah salah satu pasar yang dirancang untuk memenuhi kebutuhan ini dengan menawarkan berbagai jenis ikan segar dalam lingkungan yang bersih, higienis, dan modern. Penelitian ini bertujuan untuk menganalisis tingkat kepuasan konsumen terhadap pemasaran ikan segar di pasar tersebut. Dengan menggunakan 13 variabel, termasuk reliabilitas pelayanan, responsiveness, assurance, empathy, tangibility, performance, features, durability, reliabilitas produk, aesthetics, perceived quality, harga, dan lokasi, penelitian ini memiliki 100 responden yang dipilih secara purposive sampling. Analisis data dilakukan menggunakan Customer Satisfaction Index (CSI), dan hasilnya menunjukkan tingkat kepuasan konsumen sebesar 78,75%, yang dikategorikan sebagai "puas." Faktor utama yang mempengaruhi kepuasan adalah Kualitas ikan segar di pasar ini sangat baik, sementara aspek kebersihan dan penampilan penjual masih memerlukan peningkatan.

Kata kunci: Ikan Segar, Pasar Ikan Modern, Customer Satisfaction Index

1. Introduction

Indonesia is an archipelagic and maritime country that has 5 large islands and 17,000 other small islands with a water area of 70-75% and a coastline of approximately 81,000 km. Compared to other countries, the area of Indonesian waters is ranked second after America (Putra et al., 2022). According to Wahyuni et al. (2014), Indonesia is estimated to have 4,000-6,000 species of fish spread throughout Indonesia. This finding shows the high biodiversity in Indonesian waters. With such many fish species, Indonesia is one of the countries with the richest marine biodiversity in the world. The diversity of fish species also reflects the aquatic ecosystems in Indonesia, from the open sea to coastal waters and rivers rich in marine biota.

Fresh fish contains much protein and is easier to digest than other animals. The protein in fresh fish contains essential and non-essential amino acids. Essential amino acids are compounds that cannot be produced by the individual's body and must be obtained through food. In addition, fish is also a significant source of omega-3 fatty acids, a variety of fats that are good for health (Damongilala, 2021).

According to economics, a market is a group of buyers and sellers of a specific good or service. As a group, buyers play a role in influencing the demand for a product, while sellers determine the supply of the product. Economic activities in the market involve two main parties: producers and consumers, each having a significant role in the formation of prices for goods in the market. A market is a platform where sellers and buyers meet to conduct buying and selling transactions (Mukaromah & Wijaya, 2020).

The consumption of fresh fish by the people of DKI Jakarta continues to increase every year. The community fish consumption index¹ in 2022 has reached 48.61 kg per capita per year. This figure has increased compared to last year, when it was 47.98 kg per capita per year (KKP, 2022). Many modern markets have now developed to meet the need for fresh fish. In these markets, many fishery products are sold with many variations, such as the quality and quantity of products marketed and the types of fish at various prices. However, some consumers feel problems regarding product quality, service quality, and comfort and security when making transactions (Triana & Kartika, 2025).

People in North Jakarta, especially in Muara Baru, generally shop at traditional markets. Still, with a modern fish market built in Muara Baru, people are switching to modern fish markets. A modern fish market is a market concept that provides various types of fish and seafood in a clean environment. This market has features such as an efficient cooling system, a hygienic storage area, and modern fish processing facilities. The goal is to provide high-quality seafood to consumers in a comfortable and sanitary environment. In addition, the modern fish market also offers a fast-food restaurant service, which is one of its attractions. Consumers can buy fresh fish from the sellers and serve it at the restaurant. In addition to North Jakarta residents, many people from outside the area come to buy fresh fish at this Muara Baru modern fish market, and this is because the fresh fish and seafood products provided are quite complete, such as snapper, carp, mackerel, patin, grouper, various types of shrimp and shellfish (Wulandari et al., 2022).

Product quality is something complex that can be felt or not felt, which includes packaging, price, company prestige, and company service received by buyers to satisfy their desires and needs (Manggala & Adirinekso, 2022). Product image will increase if it has good product quality. Thus, product quality is an essential factor that must be considered in the production process (Mustikasari, 2020). According to Zeithaml et al. (2013), service quality is a dominant element in consumer evaluation, including determining consumer satisfaction. In addition, fresh fish market consumers will assess service from consumer perceptions of the types of fresh fish sold, and this perception is about whether there are variations in the types of fresh fish sold and how a seller interacts with consumers (interaction quality). Decoration and environment (quality of the physical environment) will affect consumer perceptions regarding service quality.

Consumer satisfaction results from various factors influencing consumers to buy the product (Manggala & Adirinekso, 2022). Satisfaction reflects a person's assessment of the product's perceived performance to expectations. The consumer is dissatisfied and disappointed if the product's performance does not meet expectations. The consumer is satisfied if the product's performance is in accordance with expectations. The consumer is happy if the product's performance exceeds expectations (Rini, 2017).

Based on the previously stated, the researcher wants to analyze and determine customer satisfaction with the marketing of fresh fish when purchasing fresh fish at the Muara Baru modern fish market.

2. Material and Method

2.1. Time and Place

This study was conducted at the modern fish market of Muara Baru, North Jakarta, with the research period spanning from December 2023 to June 2024, and a sample of 100 individuals was selected as respondents. The selection of the research location was purposively done. The location was chosen because it offers a variety of fresh fish and other marine products at the modern fish market of Muara Baru. Additionally, the modern fish market of Muara Baru is frequently visited by many consumers from various demographic groups, ranging from

teenagers to adults. This is because, besides selling fresh fish, the market is also a popular tourist spot with restaurants where visitors can cook the fresh fish they purchase directly.

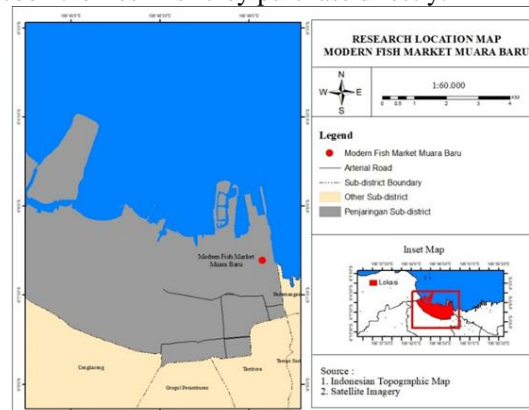


Figure 1. Research location

2.2. Methods

The sampling method used in this research is the purposive sampling technique. According to Sugiyono (2019), purposive sampling is a technique for taking samples from data sources with specific criteria. These criteria can also explain why a study uses a certain number of samples. The types of data used in this study include primary and secondary data. Primary data, as explained by Sugiyono (2019), is information obtained directly from the field through interviews with consumers who buy fresh fish using a questionnaire that has been prepared. Secondary data is obtained from various sources such as books, journals, scientific reports, and documents from related agencies (Moleong, 2018). Secondary data is obtained by conducting a literature study related to the research topic and various references from the Library, Central Statistics Agency, Ministry of Marine Affairs and Fisheries Literature, and Google Scholar.

The variables used to measure consumer satisfaction consist of thirteen variables which include service reliability (X1), responsiveness (X2), assurance (X3), empathy (X4), tangibility (X5), performance (X6), features (X7), durability (X8), product reliability (X9), aesthetics (X10), perceived quality (X11), price (X12) and location (X13). Satisfaction analysis is done by assessing an organization's level of importance and performance. The significance level and performance assessment are done using a Likert scale with a score interval of 1-5 with the criteria presented in Table 1.

Table 1. Importance and performance assessment scores

Likert scale score	Level of Interest	Performance Level
1	Very unimportant	Very Dissatisfied
2	Not important	Dissatisfied
3	Quite important	Quite Satisfied
4	Important	Satisfied
5	Very important	Very Satisfied

2.4. Data Analysis

The Customer Satisfaction Index, or CSI, is the data analysis used to measure consumer satisfaction. The purpose of using CSI is to determine the overall level of consumer satisfaction by weighting the level of satisfaction of the attributes used in the questionnaire. The advantages of the Customer Satisfaction Index method are efficiency, where not only satisfaction but also obtaining information related to dimensions or attributes that need to be improved, easy to use and simple, and uses a reasonably high-reliability scale (Amri et al., 2020). According to Umam & Hariastuti (2018), the steps for calculating CSI are: a) Determine the Mean Importance Score (MIS) and Mean Satisfaction Score (MSS). MIS is the average of the importance scores of an attribute, while MSS is the average score for the level of satisfaction derived from the performance perceived by consumers.

$$MIS = \frac{[\sum_{i=1}^n Y_i]}{n}$$

Description:

Y_i = Importance value of attribute Y to i

n = Number of respondents

b) Calculating the Weight Factor (WF) or weighing factor, namely the percentage of the MIS value per indicator to the total MIS value of all indicators.

$$WF = \frac{MIS}{\sum_{i=1}^p MIS}$$

Description:

MIS = Average value of interest

$$\sum_{i=1}^p Mis = \text{total average interest}$$

c) Calculating the Weight Score (WS) or weighted factor; this weight is the result of multiplying the WF by the average performance value.

$$WS = WF \times MSS$$

Description:

WS = Weighted factor

MSS = Average performance value

WF = Weighing factor

d) Determine the Customer Satisfaction Index (CSI) using the following formula:

$$CSI = \frac{WT}{HS} \times 100\%$$

Description:

WT = Sum of Weight Score

HS = Maximum scale used or highest scale

According to [Sari & Nurfadillah \(2022\)](#), the Customer Satisfaction Index (CSI) has the following scale:
Table 2. Customer Satisfaction Index (CSI) Scale:

Index Value	Indicator	Description
81% - 100%	Very satisfied	Performance exceeds expectations
61% - 80,99%	Satisfied	Performance meets expectations
41% - 60,99%	Quite satisfied	Performance nearly meets expectations
21% - 40,99%	Not satisfied	Performance does not meet expectations
0% - 20,99%	Very dissatisfied	Performance fails to meet expectations

3. Result and Discussion

3.1. Customer Satisfaction Index (CSI)

Based on Table 3, the results of the calculation of consumer satisfaction with fresh fish sellers at the Muara Baru Modern Fish Market with a CSI or Customer Satisfaction Index of 78.75%. According to [Jufriyanto \(2020\)](#), a value of 78.75%, 61- 80.99%, is included in the satisfied category with the statement "performance according to expectations." Based on the results of the CSI value, overall, the performance of the Muara Baru Modern Fish Market and the importance of the attributes of each variable are in the satisfied category because consumers feel that the market performance matches their expectations. Each attribute influences the CSI value in service quality, product quality, price, and location. The attribute that needs to be improved in performance at the Muara Baru Modern Fish Market is "The condition of the sales stalls is neat and clean," with a performance value of 3.60. This value indicates that the market is still dirty, with lots of stagnant and wet water, which needs further improvement to increase consumer satisfaction. Based on the results of the Customer Satisfaction Index (CSI) calculations, the following results were obtained:

Table 3. Customer Satisfaction Index (CSI) calculation

No		Attribute	CSI			
			MIS	MSS	WF	WS
Reliability X1						
1	Timeliness of opening and closing of the store	3,87	3,92	3,33	3,45	
2	Fresh fish traders can provide services according to consumer needs	3,99	3,93	3,52	3,56	
Responsiveness X2						
1.	Service when calculating purchases is considered fast	4,00	4,04	3,53	3,57	
2.	Fresh fish traders are responsive in answering consumer questions	4,04	3,94	3,57	3,60	
3.	Fresh fish traders provide information that is easy for consumers to understand	3,87	3,85	3,42	3,45	
Assurance X3						
1.	Feel safe and comfortable in making transactions	3,89	3,81	3,43	3,47	
2.	All the needs that consumers are looking for are always available	3,80	3,90	3,35	3,39	
Empathy X4						
1.	Fresh fish traders serve in a friendly manner	3,95	3,95	3,60	3,52	
2.	Fresh fish traders greet each other	3,61	3,90	3,30	3,22	
3.	Fresh fish traders pay attention to consumer complaints	3,42	3,98	3,47	3,05	
Tangibility X5						
1.	The condition of the sales stall is neat and clean	4,01	4,08	3,17	3,58	
2.	Neatness, cleanliness, and appearance of the seller	3,40	4,04	3,53	3,40	
3.	Product placement according to consumer needs	3,50	3,86	3,59	3,12	
Performance X6						
1.	Fresh fish-supporting products function well, such as cool boxes, product displays	4,01	3,75	3,47	3,58	

No	Attribute	CSI			
		MIS	MSS	WF	WS
2.	Stability of quality of fresh fish sold	4,05	3,89	3,69	3,63
Feature X7					
1.	There are many types of fresh fish for sale	4,12	3,75	3,11	3,67
2.	Clean and organized market	3,94	3,89	3,36	3,52
Durability X8					
1.	The fresh fish sold is good and not rotten	3,83	3,96	3,57	3,42
2.	The plastic packaging provided is not easily torn.	3,90	3,99	3,33	3,48
Reliability Product X9					
1.	The physical condition of the fish has no signs of physical damage, such as wounds, abrasions, or bruises.	3,93	4,14	3,62	3,51
2.	conformity of the quality of the fish to the description given.	3,79	4,09	3,57	3,38
3.	The quality of fresh fish in this market is excellent	4,20	4,05	3,71	3,65
Aesthetics X10					
1.	Fish arranged and displayed in a neat sales area	3,54	4,37	3,35	3,16
2.	The fish sold have various sizes	3,81	3,70	3,61	3,40
Perceived quality X11					
1.	Fresh fish sold at Muara Baru Modern Fish Market is better than other locations	4,11	4,09	3,62	3,66
2.	Want to make a repeat purchase because the product is of good quality	3,69	3,90	3,26	3,29
Price (X12)					
1.	The price of fresh fish sold is affordable for consumer purchasing power	4,19	4,28	3,69	3,74
2.	Prices are in line with the quality offered	4,09	4,53	3,60	3,64
Location (X13)					
1.	Ease of access to sales locations	3,86	4,18	3,40	3,44
2.	Parking space available	3,90	4,05	3,43	3,48
Total		393,75			
CSI VALUES		$WT/\max = \frac{393,75}{5} \times 100\% = 78,75\%$			

3.2. Mean Importance Score (MIS)

Based on CSI (Customer Satisfaction Index) analysis calculations, the main variables influencing consumer satisfaction are obtained by listing the five highest Mean Importance Score (MIS) values and the five lowest Mean Importance Score values on an attribute. The Mean Importance Score (MIS) value data is shown in Table 4.

Table 4. Highest and lowest attributes in the level of importance		
No	5 Attributes with the highest value	Value of MIS
1	The quality of fresh fish in this market is very good	4,20
2	There are many types of fresh fish for sale	4,12
3	The price of fresh fish sold is affordable for consumer purchasing power	4,11
4	Fresh fish sold at Muara Baru Modern Fish Market is better than other locations	4,09
5	Prices are in line with the quality offered	4,07
No	5 Attributes with the lowest values	Value of MIS
1	Neatness, cleanliness, and appearance of the seller	3,40
2	Fresh fish traders pay attention to consumer complaints	3,42
3	Product placement according to consumer needs	3,50
4	Fish arranged and displayed in a neat sales area	3,54
5	Fresh fish traders greet each other	3,61

The variables that affect the level of satisfaction in this study are sorted based on attributes with the five highest Mean Important Score (MIS) values and the five lowest MIS values. The MIS value is obtained from the average score of the important answers from the questionnaire using the Likert scale. Based on Table 4, the attribute with the highest level of importance is "The quality of fresh fish in this market is very good," with a MIS value of 4.20. This shows that product quality, especially fish freshness, is the main factor influencing consumer satisfaction at the Muara Baru Modern Fish Market. Consumers pay close attention to the quality of fresh fish because it is directly related to the safety and taste of the product, so market managers need to continue to maintain and improve the freshness of fish to meet consumer expectations and increase customer loyalty. The variable with the second highest importance value is "There are many types of fresh fish sold," with an MIS value of 4.12. Consumers want variety in product choices to meet their needs and preferences. Markets that offer a variety of fresh fish make it easy for consumers to find the products they want, thus increasing their satisfaction. This variety also allows consumers to explore and try different types of fish, which may not always be available elsewhere.

Meanwhile, the variable with the attribute that has the lowest MIS value is "neatness, cleanliness, and appearance of the seller," with a MIS value of 3.40. This factor is not considered as important as the variety of fish types and prices by consumers when purchasing fresh fish. Although the neatness and cleanliness of the seller can affect the overall perception of the shopping experience, consumers prioritize product quality and price. According to [Widodo & Sutopo \(2018\)](#), attributes with an average importance value above 3 are considered important based on a Likert scale measuring 1-5.

4. Conclusions

This study shows that the level of consumer satisfaction with fresh fish sellers at the Muara Baru Modern Fish Market is 78.75%, which is included in the "satisfied" category. Consumers highly prioritize the variety of types of fresh fish sold and affordable prices, while the neatness and cleanliness of the seller are considered less important. The attributes with the highest importance value are the quality of fresh fish in this market, which is very good at a value of 4.20. Many types of fresh fish are sold with a MIS value of 4.12. Conversely, the attributes with the lowest values are the seller's neatness, cleanliness, and appearance, which only reached 3.40. Although neatness and cleanliness have an effect, consumers prioritize product quality and price. Overall, the market performance meets consumer expectations, but there is still room for improvement in the aspects of cleanliness and appearance of the seller to further increase consumer satisfaction.

5. Suggestion

Based on the findings of this study, it is recommended that sellers at the Muara Baru Modern Fish Market focus on improving the aspects of neatness, cleanliness, and appearance to enhance consumer satisfaction further. While consumers currently prioritize the variety and quality of fresh fish and affordable prices, enhancing the visual appeal and hygiene of the selling environment could lead to an even higher level of consumer satisfaction. Sellers should consider adopting more stringent cleanliness practices and maintaining a tidy appearance, as these improvements could positively influence consumer perceptions and potentially attract a broader customer base. Additionally, ongoing training for sellers on the importance of maintaining a clean and professional environment could be beneficial in achieving these goals.

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