

Analysis of Consumer's Preference on Purchasing Fresh Fish (Case Study in Muara Baru Modern Fish Market, DKI Jakarta)

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ABSTRACT

The fisheries sector is one of the agricultural sub-sectors that has a role in providing food for the people of Indonesia. Consumers have behavior in purchasing fish in meeting their needs or desires to obtain a product. This study aims to analyze consumer preferences for the type of fish and the order of attributes. The method used in this research is a case study. The research location was carried out at the Muara Baru Modern Fish Market (PIM) DKI Jakarta. The data used are primary data and secondary data. The primary data collection technique used accidental sampling with a sample of 100 respondents while the secondary data were obtained from Perum Perikanan Indonesia as the manager of the Muara Baru Modern Fish Market, the Library, the Central Statistics Agency (BPS) DKI Jakarta, the National Statistics Agency (BPS). Consumer preference analysis used attitude measurement analysis measured by Chi-square and based on rank orders analysis to determine the order of attribute importance. Based on the study results, it was shown that all the attributes observed in this study were significantly different at the 95% confidence level. In contrast, the analysis of the level of importance of the attributes showed that the priority of consumers' interests in fish in the Muara Baru Modern Fish Market (PIM) was price, freshness, cleanliness, texture, and fish scent.

Keywords: preferences, consumers, fish.

1. INTRODUCTION

Fisheries have essential roles in economic development, especially on providing jobs, income sources for fishers, high-nutrient animal protein sources, and a high potential source of foreign exchange income. The Indonesian Government mainly utilizes marine fisheries commodities for domestic public consumption, notably increasing nutrients derived from animal proteins [1].

Central Statistical Agency of DKI Jakarta in 2021 informed that the fish consumption in Jakarta in the 2015 – 2020 period had a significant increase, from 36.75 kg/capita to 50.08 kg/capita [2]. Furthermore, aside from showing increased fish consumption on consumer level directly, it also signified that the Indonesian public has transformed toward healthier diets. As the increase continues, it is necessary to analyze supporting factors related to the increase of consumerism in public by identifying consumers' behaviors. The word *konsumen* (in Bahasa) is derived from the consumer (in English) or *consument/konsument* (in Dutch). It translates as a person or a company that purchases a particular object or uses a specific

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service; or a person which depletes supplies or objects [3-5]. The consumer is a dynamic term; it includes interactive relationships between affective and cognitive and behavior and environment. Whether individually or collectively, consumer behaviors acquire satisfaction or utility by consuming a certain amount of commodity in a certain period. The cost elasticity concept could also observe changes in consumers' outcomes when there is price fluctuation.

Consumers, in principle, only visit the particular market they want, and this research studied that market has become means between customers and sellers to establish transactions to fulfill desired objects. Producer held a role in product marketing in a market. Consumer behaviors are tightly related to how producers do their marketing in promoting their goods/services. The amount of goods affects consumer demand. Demand could also be assumed as the desire to acquire goods and services which followed by purchasing power. Consumer demand in consumption of fresh fish will be fulfilled as long as the product serving, and haul yield are according to marketing processing procedures, whether in the traditional or modern market [4].

The higher the quality of a product, the higher the tendency of a person to be attracted to the product. This correlates to one's behavior to find a high-quality product in consideration of the feasibility of the product [5]. The increase influences the increase rate of the amount of consumer needs in the population's standard of living and knowledge on the superiority of fish consumption compared to other food sources.

Marketing is also closely related to the consumer as a target market. Thus, researching consumer's behaviors became an essential subject to put a particular product that can compete with other products in the market. Therefore, producers/companies need to understand how consumers behave and apply different marketing strategies on higher and lower social class consumers. After that, a study is held titled, "Analysis of Consumers Preference on Fresh Fish Purchase (Case Study in Modern Fish Market in Muara Baru, DKI Jakarta)" to know the other general characteristic of consumers such as sex, age, education, income, and occupation.

2. METHODOLOGY

This research was held in Muara Baru Modern Fish Market, DKI Jakarta, to acquire data and information from customers who want to buy fresh fish products. This research was carried out from May of 2021 to December of 2021. The method used in this research is a case study. At the same time, the case unit is the customers who shop in the Muara Baru Modern Fish Market, DKI Jakarta. A case study is a form of research about a particular subject related to a specific phase of typical data from a whole personality. The goal of this study is oriented by a questionnaire and direct observation of a specific object in the questionnaire. Data types used in this study are primary and secondary data, primary data acquired directly from interviewees or informants. Secondary data was acquired from various related agencies such as Perum Perindo as the administrator on Muara Baru Modern Fish Market, libraries, Central Statistical Agency (BPS) of DKI Jakarta, National Central Statistical Agency of Indonesia, and other agencies related to this research.

Questionnaires and interviews (held in the afternoon) were used in this research to collect data. The questionnaire is a technique of data collection done by providing a particular set of oral or written questions that are needed to be answered by a series of respondents. Using a questionnaire as a data collection technique is considered an efficient method as long as the researcher can specify measurable variables and expect a specific subject from a respondent. The questionnaire could be either closed or opened questions and could be given to respondents directly or through postal services or the internet [6].

3. RESULTS AND DISCUSSIONS

3.1 General state of respondents

Consumers' characteristics can be explained with descriptive analysis and processed through groupings, tabulated with average frequency. A brief narrative explanation provides an empirical representation of the already collected primary data from respondents involved directly in the fish transaction. Respondents in this research are consumers in fish transactions in Muara Baru Modern Fish Market, divided accordingly by sex, age, education, occupation, and income rate. Sex was one of the most influential characteristics on consumer decision to buy a product. Of all the sex groups of respondents who shopped in Muara Baru Modern Fish Market, 54% were female consumers.

Meanwhile, 46% of others were males. Most of the consumers who purchase fish in the Muara Baru Modern Fish Market were those in the age range of 20-60 years old. This reflects in the percentage of dominating 41% in the fish purchase. Consumer's characteristic with highest fish purchase is the consumers with high-school as their highest and latest education with 42%. Meanwhile, the highest number of respondents of Muara Baru Modern Fish Market, in the characteristic of their occupation, are those who work as private-sector employees with the sum of 35 people or 35%. Therefore, it concluded that occupation and economic situation also affect consumption patterns. The better the job and position of the said consumer, the higher the income. Consumers who bought fish from Muara Baru Modern Fish Market have an income ranging from Rp1.000.000 to Rp15.000.000 per month. Based on their income rate, the highest respondent of Muara Baru Modern Fish Market was those in the range of Rp5.000.000-Rp10.000.000 per month with a percentage of 43%. Fish consumers are mostly from middle-high income groups.

Consumer characteristics are divided accordingly by sex, age, education, occupation, and income. Characteristics are consisted of 5 indicators which more detailly explained in Table 1.

Table 1. Consumer's Characteristics in Muara Baru Modern Fish Market

Characteristics	Total (person)	Percentage (%)
Sex		
a. Males	46	46,00
b. Females	54	54,00
Total	100	100,00
Age (years):		
a. 20-30	18	18,00
b. 31-40	29	29,00
c. 41-50	41	41,00
d. 51-60	12	12,00
Total	100	100,00
Education level:		
a. Elementary school (SD)	5	5,00
b. Middle-high school (SMP)	13	13,00
c. High-school (SMA)	42	42,00
d. College (PT)	40	40,00

Total	100	100,00
Occupation		
a. Civil Servants	20	20,00
b. Private Sector Employees	35	35,00
c. Entrepreneurs	24	24,00
d. Housewife	8	8,00
e. Students	7	7,00
f. Others	6	6,00
Total	100	100,00
Income:		
a. Rp.1.000.000 – Rp. 3.000.000	16	16,00
b. Rp.3.000.000 – Rp. 5.000.000	30	30,00
c. Rp. 5.000.000 – Rp. 10.000.000	43	43,00
d. Rp. 10.000.000 – Rp. 15.000.000	9	9,00
e. > Rp. 15.000.000	2	2,00
Total	100	100,00

3.2 Preference and Consumer's Decision Making in Purchasing Fresh Fish

Consumer preferences towards the type of fish were exclusively the respondents' choices on liking and disliking the type of fish consumed. Those choices are varied in each of every respondent. Other attributes are being considered in the decision-making process, including price, freshness, product's aroma, cleanliness, and fish's texture.

Table 2. Price Attribute for Consumer's Choices

No.	Product Price	Total (person)
1.	Cheap	47
2.	Moderate	53
3.	Expensive	0
	Total	100

According to Table 2., it is shown, in 100 people as respondents, a total of 47 respondents would choose cheaper fish, and 53 respondents (53%) instead chose moderate-priced fish, and fish with high price is not favorable by any.

According to the research results in table 3., 100 studied respondents resulted in 100 people (100%) in preference of fish freshness. Consumers would choose fresh fish; meanwhile, 0 people would prefer non-fresh fish. Fish freshness is one of the essential attributes of some other fish attributes.

Table 3. Fish's Freshness Attribute for Consumer's Choices

No.	Product Freshness	Total (person)
1.	Fresh	100
2.	Not Fresh	0
	Jumlah	100

Table 4. shows the results of 100 respondents who chose the attribute of fish's aroma, two persons (2%) would choose smelly/not fresh fish, while the rest 98 persons (98%) prefer to fish with fresher aroma. Concluded from an interview with those who prefer smelly fish prioritizes fishes that are kept frozen or in ice

Table 4. Fish's Freshness Attribute for Consumer's Choices

No.	Product Aroma	Total (person)
1.	Bad smelling/Not Fresh	2
2.	Not Smelly/Fresh	98
Total		100

Table 5. shows that the number of respondents who would prefer clean fish attributes was 100 individuals (100%) of respondents, and no respondent decided to choose the dirty fish attribute. Respondents judged the cleanliness criteria by how much dirt or mud on a fish and the cleanliness of the kiosk judged by the community as consumers. The cleanliness attribute of the Modern Fish Market received highly positive ratings from most consumers in the market. This can also be seen in how the market management arranged fresh fish neatly and cleanly, sufficiently iced to maintain hygiene.

Tabel 5. Fish's Cleanliness Attribute for Consumer's Choices

No.	Product Cleanliness	Total (person)
1.	Clean	100
2.	Dirty	0
Total		100

According to table 6., tenderer fish textures were chosen by 98 respondents (98%), while firmer textures were chosen by two respondents (2%). According to one of the consumers, the texture of fishes in Modern Fish Market is considered relatively fresh because the served fishes in the market are visually recognized that the texture of those fishes is relatively elastic, and the colorization signifies drastic changes happened.

Tabel 6. Fish's Texture Attribute for Consumer's Choice

No.	Product Texture	Total (person)
1	Tenderer	98
2.	Firmer	2
Total		100

Consumer preference towards the type of fish depended on whether that respondent liked or disliked the type of fish the respondent consumed. According to table 7., it is shown that all of the observed attributes in this study were significantly different on 95% rate of confidence level or α 0,05 which can be concluded that the H_0 hypothesis is rejected and the H_1 hypothesis is accepted, and because in each of observed five attributes X^2_{count} are higher than X^2_{table} . Therefore, consumer preferences towards fish in Muara Baru Modern Fish Market are not similar, or there are a few differences in consumers' preferences toward fish. It is comparable to another study conducted by [7]. It stated that price, aroma, freshness, taste, size, visualization, texture, and cleanliness attributes strongly influence consumers deciding to purchase products in Sidoarjo Academic of Fisheries [7-10].

Table 7. Chi-Square Analysis Results

Fish Attribute	X^2_{count}	Df	X^2_{table}	Description
Price	64,900	4	9,488	Significant difference
Freshness	32,300	4	9,488	Significant difference
Aroma	93,600	4	9,488	Significant difference
Cleanliness	24,800	4	9,488	Significant difference
Texture	54,300	4	9,488	Significant difference

Consumer preferences towards fish in Muara Baru Modern Fish Market could be discovered by identifying categories or attribute criteria highly chosen by consumers. Consumer preferences towards fish are described in table 8.

Tabel 8. Consumer preferences towards fish in Muara Baru Modern Fish Market

Fish Attributes	Consumer Preference
Price	Moderate
Freshness	Fresh
Aroma	Not Smelly/Fresh Aroma
Cleanliness	Clean
Texture	Tender

4. CONCLUSION

Characteristics of consumers in Modern Fish Market (PIM) in Muara Baru towards the type of fish with price attribute, freshness, aroma, cleanliness, and fish texture showed that all attributes observed in this study are significantly different in 95% confidence level. Thus, the H_0 hypothesis was rejected, and the H_1 hypothesis was accepted. Also, in all of five of the observed attributes, X^2_{count} is higher than X^2_{table} . Importance rate analysis of the attributes show that the consumers prioritized fish in Muara Baru Modern Fish Market (PIM): price, freshness, cleanliness, texture, and fish's aroma.

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