Factors Which Influence The Fish Purchasing Decision: A study on Traditional Market in Riau Mainland

Latifa Siswati¹ and Asgami Putri²

¹ Universitas Lancang Kuning, Pekanbaru, 28265, Indonesia
E-mail: latifasiswa@unilak.ac.id
² Universitas Lancang Kuning, Pekanbaru, 28265, Indonesia
E-mail: asgami@unilak.ac.id

Abstract: The purposes of the research are to analyze and assess the factors which influence fish purchasing by the community at Tenayan Raya district Pekanbaru. Research methodology which used is survey method, especially interview and observation technique or direct supervision on the market which located at Tenayan Raya district. Determination technique of sampling location/region is done by purposive sampling. The sampling method is done by accidental sampling. Technique analysis of factors which used using the data that derived from the respondent opinion to various fish variable. The result of this research are the factors which influence fish purchasing decision done in a traditional market which located at Tenayan Raya district are product factor, price factors, social factor and individual factor. Product factor which influences fish purchasing decision as follows: the eyelets condition, the nutrition of fresh fish, the diversity of sold fish. Price factors influence the fish purchasing decision, such as: the price of fresh fish, the convincing price and the suitability price and benefits of the fresh fish. Individual factors which influence a fish purchasing decision, such as education and income levels. Social factors which influence a fish purchasing decision, such as family, colleagues and feeding habits of fish.

Keywords: Analysis factors, fish consumption, fish purchasing decision

1. Introduction

Fish is one of food that contains varieties of nutrition. According to the water where it lives, fish consist of freshwater fish and sea fish. Both of it is the food which rich in protein that really important for body growth. As food, fish is sources of protein, fat, vitamin and mineral which really good and perspective. The main advantage of fish protein rather that another product is a complete composition of amino acid and the simplicity of digest (Astawan, 2004). The behavior of consumer decision making is greatly influence whether or not consumers buy the products offered by the manufacturer / dealer. People consumption of fish products until the present time is still far below the average national consumption, and when it compared with consumption in other countries of our national consumption is far below the average. The scope of this research include: the factors that influence fish purchasing decisions at Tenayan Raya district Pekanbaru.

2. Research Methodology

This research will be conducting at Tenayan Raya district Pekanbaru. The research was planned from October until December 2016. Research method which used is survey method. Determination technique of sampling location/region is done by purposive sampling. While the sample of respondents was deciding as many as 50 participants. Sampling is done by accidental sampling. The analysis techniques to find the factors which influence the purchase by using weighting and scoring techniques. The weighting of criteria which related to the commodity set based on the importance level of fish
purchasing activity. The analysis factor which used is using the data which come from the respondent opinion to various fish variable. Mathematically model of analysis factors is as follows:

\[ F_i = W_1X_1 + W_2X_2 + \ldots + W_nX_n \]

Where:

- \( F_i \) = 1st estimate factors,
- \( W_i \) = weight or coefficient score factor,
- \( X_n \) = mix variable marketing which observed

Mix variable marketing which observed were:

- \( X_1 \) = Fish smell
- \( X_2 \) = Fish nutrition
- \( X_3 \) = Fish eye condition
- \( X_4 \) = Various types of fish
- \( X_5 \) = Price
- \( X_6 \) = Price Suitability
- \( X_7 \) = Convincing price
- \( X_8 \) = Fish availability
- \( X_9 \) = Sales services
- \( X_{10} \) = Fish eating habit
- \( X_{11} \) = Income level
- \( X_{12} \) = Educational level
- \( X_{13} \) = Family
- \( X_{14} \) = Colleagues
- \( X_{15} \) = Friend

3. Result and Discussion

Testing variables which have been determining, incorporated into analysis factors to tested KMO value and Bartlett Test and MSA (measures of sampling adequacy). MSA value should be above 0.5. This is the table of KMO value and Bartlett Test.

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | .633 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 197.157 |
| | Df | 105 |
| | Sig. | .000 |

Based on the table above can be seen that the number KMO and Bartlett Test is 0.633 with significant level 0.000 therefore, the variable and the sample can be analysis further. The number of MSA in the table anti image matrix, which contained in anti image correlation, shows typical aroma values (X1) is 0.409, friend (X2) is 0.448, fish eye condition (X3) is 0.582, various types (X4) is 0.593, price as consideration in purchasing fresh fish product (X5) is 0.791, the suitability of price product with benefit product (X6) is 0.655, convincing price (X7) is 0.497, fish availability (X8) is 0.593, sales services (X9) is 0.771, fish eating habit (X10) is 0.759, income level (X11) is 0.597, educational level (X12) is 0.600, family (X13) is 0.658, colleagues (X14) is 0.651, nutrition content (X15) is 0.752. From 15 variables that exist, can be seen the value of MSA. If there are MSA value under 0.5, then that variable cannot analyze further. From 15 variables, the smallest MSA values are typically aroma (X1) with MSA value 0.409, friend (X2) with MSA value 0.488.

Therefore, typically aroma and friend are removed from the factors because it has the smallest values of MSA. After typically aroma and friend variables removed from the factors, then the next step is to retest the 13 variables which remain. It can be seen in KMO value and Bartlett Test and also MSA.
Table 2: The Result of KMO and Bartlett's Test continued

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .673 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 167.397 |
| | Df | 78 |
| | Sig. | .000 |

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From the table of output result above can be seen that KMO value and Bartlett test has increased from 0.633 become 0.673 with fixed significant level (0.000). KMO value and Bartlett test should be over 0.5, and the significant should be under 0.05. Based on KMO value and Bartlett test, then from 0.633, there are MSA values which less than 0.5, then those variables must be removed. Thus there is increasing become 0.673 KMO value and Bartlett Test. Therefore, with MSA value over 0.5, it can be analyzed further.

3.1 Conducting factor and rotation

In this extraction process, the method which used is Principal Component Analysis, after four-factor are formed to know the 13 variables will be included in which factor, then rotation process does by using varimax method (part of orthogonal). More details can be seen in table 3.

Table 3: Result of SPSS Communalities

| Eye condition | Initial | Extraction |
|---------------|---------|------------|
| Various types | 1.000   | .490       |
| Price         | 1.000   | .644       |
| Price suitability | 1.000     | .555       |
| Convincing price | 1.000     | .680       |
| Fish availability | 1.000     | .743       |
| Sales services | 1.000   | .584       |
| Fish-eating habit | 1.000     | .647       |
| Income level  | 1.000   | .691       |
| Educational level | 1.000     | .615       |
| Family        | 1.000   | .492       |
| Colleagues    | 1.000   | .739       |

Communalities table is variant number (can be in percentage), at first, a variable can be explained by the factors that already exist. According to the values which include in communities table, it can be concluded that the variables which exist can be explained in formed factor, the more communalities value, the more closely with the formed factor. Total Variance Explained table, describe the number of formed factor. In looking the formed factors, it must be seen in the Eigen value.
To determine the factors that formed it must be seen the Eigen value is more than one (1), if it is less than one then it is not appropriate. More details can be seen at table 4 below

**Table 4: Initial of Eigen value**

| Component | Total | % of Variance | Cumulative % |
|-----------|-------|---------------|--------------|
| 1         | 3.251 | 25.007        | 25.007       |
| 2         | 2.228 | 17.138        | 42.145       |
| 3         | 1.428 | 10.984        | 53.128       |
| 4         | 1.289 | 9.760         | 62.888       |
| 5         | 0.222 | 7.005         | 69.984       |
| 6         | 0.788 | 6.063         | 76.046       |
| 7         | 0.708 | 5.450         | 81.496       |
| 8         | 0.387 | 4.515         | 86.012       |
| 9         | 0.463 | 3.562         | 89.573       |
| 10        | 0.411 | 3.163         | 92.736       |
| 11        | 0.394 | 3.032         | 95.769       |
| 12        | 0.319 | 2.453         | 98.221       |
| 13        | 0.231 | 1.779         | 100.000      |

**Extraction Method: Principal Component Analysis.**

In the table above, can be seen that there are 13 variables (component) which include in analysis factors. In the table above, shows that only four factors are formed. After known that the factors are the most optimal amount, then, *component matrix* table shows that the distribution of those 13 variables in four factors which formed. Can be seen in table 5:

**Table 5: Output result SPSS Rotated Matrix Component**

| Component            | 1     | 2     | 3     | 4     |
|----------------------|-------|-------|-------|-------|
| Nutrition content    | .759  | .311  | .028  | -.187 |
| Eye condition        | .756  | .041  | -.261 | -.050 |
| Fish availability    | .748  | .020  | .370  | -.217 |
| Various types        | .471  | -.355 | -.404 | -.277 |
| Price                | -.140 | .789  | .303  | .077  |
| Price suitability    | .138  | .730  | .225  | .209  |
| Convincing price     | .322  | .670  | .350  | .067  |
| Fish eating habit    | .026  | -.101 | .692  | .256  |
| Income level         | .337  | .284  | .667  | .229  |
| Educational level    | .197  | -.031 | .663  | -.104 |
| Family               | .071  | .274  | -.003 | .642  |
| Colleagues           | -.140 | .077  | .303  | .789  |
| Sales services       | -.282 | .397  | .332  | .487  |
Table 6: The Result of SPSS Transformation Matrix Component

| Component | 1   | 2   | 3   | 4   |
|-----------|-----|-----|-----|-----|
| 1         | 0.566 | 0.653 | 0.479 | 0.157 |
| 2         | 0.751 | 0.692 | 0.632 | -0.021 |
| 3         | 0.222 | 0.186 | -0.289 | 0.912 |
| 4         | 0.259 | 0.709 | -0.536 | 0.677 |

Sources: Output result SPSS

From the table can be explained that in diagonal factor (component) 1, 2, 3, 4 (0.566; 0.692; -0.289; 0.677). The number with a minus (-) that indicates the correlation. While in others diagonal that shows the value under 0.5 it indicates there are others components of each factor which has the higher correlation. And only three which the value is over 0.5: factor 1 (component 1), factor 2 (component 2), and factor 4 (component 4), each values are: 0.566; 0.692; 0.677. Based on the formation, there are only three factors in the diagonal which the value is over 0.5 it is enough to represent the four factors that formed.

3.2 Interpretation of Formed Factors

After conducting factor and rotation, the next step is to interpret the factors which already formed. Giving name and concept for each factor is deciding based on the general meaning of variables which include. The result of the research can be seen that psychological factor, product, social, distribution, price, and individual are influence the consumers. Psychological factors become an important part of consumers purchasing process, to the research object that is fresh fish, it seen that they have different reasons in purchasing of fresh fish. Product factors are the part that dominant in a product. Product attribute of fresh fish is seen in nutrition content, fish eye condition, typical aroma. From these attributes can judge that fresh fish product is qualified or not. Social factors are the factors that important in consumers purchasing decision.

Considering the research object is the consumer fresh fish purchasing, it can explain that the reference group which consists of a group of people with direct influence can come from colleagues, the close friend, community friends, and family can influence them to buy a product. Based on the research result can be determine the factors which most dominant by seeing at the total value of variant on the Total Variance Explained table based on the result of the research and the result of the analysis as whole, evidently, the most dominant factors that lead decision of fresh fish purchasing, in sequence are: product factors, which is the most dominant factors with the variant values 25.007%, price factors with variant value is 17.138%, individual factors with variant value 10.984%, social factors with variant value 9.760%.
4. Conclusion

Based on the analysis and the discussion there are several conclusion that can be taken as follows: the factors which influence fresh fish purchasing decision which conducted in traditional market at Tenayan Raya district are the product factor (eye fish condition, nutrition content, the various types of sold fish) Price factors (the price of that fresh fish), Social factors (family, colleagues, fish-eating habit), and Individual factor (the level of educational and Income)

5. Suggestion

The suggestion than can be given in this research is pushing people to like to eat fish should start to observe what the factors that cause the people to buy the fresh fish and for academicians to continue the research about consumers behavior for a fresh fish product in particularly and agriculture product in generally.

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