

MARKET SEGMENTATION ANALYSIS IN FOOD SELECTION

Muhamad Stiadi

Fakultas Ilmu Sosial dan Ilmu Politik, Universitas Sembilanbelas November Kolaka

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E-mail:
muhamad.stiadi@gmail.com

ABSTRACT

This study aims to identify and analyze the market segment of food selection for students of the management study program at Universitas Sembilanbelas November Kolaka. The number of samples in this study were 75 student respondents. Some of the variables used in this study include health, sensory appeal, price, weight control, familiarity, food, convenience, natural content, food restriction. In this research, an analytical tool is used, namely the K-Mean Cluster. The results of this research show that there are three segments. the first segment is respondents who do not show dominant variables in certain variables, the second segment is respondents who attach importance to sensory appeal, price, weight control, familiarity, mood, convenience, natural content attributes, the third segment is respondents who attach importance to health attributes.

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1. INTRODUCTION

We know that food is a basic human need that absolutely must be met every day[1]. There is a theory put forward by Maslow that the main and most important physical needs are physiological needs, namely so that humans can survive. Eating quality food is a necessity for everyone to always be in good health and not get sick easily[2]. Students are one example of individuals who must be able to meet their daily consumption needs such as the need to eat and drink. Most students fulfill their food needs by choosing the closest food to their activities. Students usually spend more time in the campus environment with various activities, such as studying, then participating in student organization activities, hanging out with friends, studying groups on campus. So students look for food that is near around campus. Therefore, it is necessary for students to be able to choose food from the way food is obtained, choose the type of food, determine the amount of food and how often to eat in one day[3]. Food selection is influenced by several factors, namely health factors, sensory appeal, price, weight control, familiarity, food, convenience, natural content, food restriction[4].

Food is one of the needs among students who have a large share in student spending, so it has a fairly large and interesting market potential to be studied, it is very important to be able to understand the perceptions and reasons students in students choose food so that food producers can understand and know accurately regarding the characteristics of the segment, as a result food producers can use the right strategy in order to dominate or serve that market segment[5]. Based on this description, I would like to conduct research with the theme of market segment analysis in choosing food for students of the management study program at the Universitas Sembilanbelas November Kolaka.

2. METHOD

This research is a research that uses a survey method. Survey research is research that collects data directly on the population[6], namely all students of the management study program at the Universitas Sembilanbelas November Kolaka. The research tool used in collecting data is by

distributing a list of questions in the form of a questionnaire to students[7]. The population in this research are all students in the management study program in making food choices. The sample of this research is 75 student respondents who are randomly assigned from management study program students[8].

In this research, the measurement scale uses a Likert scale using 5 groups of answers, namely: Very Important which has a score of 5, Important which has a value of 4, Good which has a value of 3, Not Important which has a value of 2, and the statement Very Not Important which has a value of 1 [9].

3. RESULT AND DISCUSSION

Respondents in this research according to gender, namely 23 male and 52 female. Pocket money (excluding boarding fees) < IDR 1,000,000, which is 66 people, respondents with pocket money (excluding boarding fees) IDR 1,000,001 - IDR 2,000,000 with 5 respondents, while pocket money (excluding boarding fees) is greater than IDR 4,000,000 is 4 people. Then when viewed from the frequency of eating outside the home, 37 people answered once a week, 34 people 2-3 times a week, 1 person 4-5 times a week, 3 people more than 5 times a week. Respondents seen from eating with whom, as many as 11 respondents ate alone, 11 people ate with family, 45 people ate with friends, and 8 people answered others. Respondents seen from the place, namely respondents who ate food at fast food outlets as many as 9 people, at restaurants as many as 2 people and at depots/food stalls as many as 52 people and who answered others as many as 12 people.

In performing clustering, you must first start with a population sample test, this test uses the Kaiser Meyer Olkin (KMO) test. Samples can be used if the KMO value is greater than 0.5 [10]. KMO test results can be seen in table 1

Table 1 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.736
	Approx. Chi-Square	228.281
Bartlett's Test of Sphericity	df	36
	Sig.	.000

Based on the output results in Table 1, it can be seen that the KMO value is 0.736, the KMO value shows a value greater than 0.5, then the assumption is fulfilled and the sample can be used in this research. The next step is to test multicollinearity. Multicollinearity test is used to determine the presence of multicollinearity in each variable. This test can be known by looking at the value of the variance inflation factor (VIF). If the VIF value is < 10, then there is no multicollinearity[11]. The following can be seen the results of the VIF value output in table 2.

Table 2 Multicollinearity Test Results

Variabel	VIF
Health	1.475
Sensory Appeal	1.887
Price	2.290
Weight Control	1.676
Familiarity	1.687
Mood	1.967
Convenience	2.366
Natural Content	1.695
Food Restriction	1.692

In Table 2 it can be seen that the overall VIF value of the variables is less than 10, so the data concludes that there is no multicollinearity in all variables.

Cluster analysis is a statistical analysis that aims to group objects or individuals into smaller classifications that have their respective differences[12]. The basis for classifying is the similarity and

distance of differences. The purpose of this cluster analysis is to group objects according to the similarity of characters. The object can be in the form of objects, for example products or respondents.

The K-mean cluster is used to identify the food selection market segment for students. K-Means Cluster is a Non Hierarchical Cluster classification mechanism[13]. With the use of this method has the aim of classifying objects. The results of the analysis process will obtain several outputs, in this study there are a number of outputs that will be described, namely the outputs that are commonly used in drawing conclusions about group analysis are Anova, the final cluster center and the number in case in each cluster table.

The Anova table is used to analyze the variables used to determine the differences between segments, so the Anova table is used. The results in the Anova output can be seen by looking at the significance score, which includes: if the sig score > 0.05, it can be concluded that there is no significant difference between groups, so it cannot be used to determine differences between clusters. Meanwhile, if the sig score < 0.05[14], it can be concluded that there is a big difference between groups, so it can be used to distinguish between groups.

Table 3 ANOVA Test Results for Food Selection Variables

	Cluster		Error		F	Sig.
	Mean Square	df	Mean Square	df		
Health	14.301	2	.631	72	22.681	.000
Sensory Appeal	7.309	2	.825	72	8.862	.000
Price	16.762	2	.562	72	29.817	.000
Weight Control	7.834	2	.810	72	9.670	.000
Familiarity	10.752	2	.729	72	14.746	.000
Mood	18.178	2	.523	72	34.768	.000
Convenience	11.814	2	.700	72	16.886	.000
Natural Content	19.205	2	.494	72	38.853	.000
Food Restriction	18.991	2	.500	72	37.964	.000

According to the results from table 3, all food selection attributes have a significance of < 0.05 so it can be concluded that all food selection variables have large differences between groups. all variables can be used to distinguish between groups to be formed. Thus, the food selection segment for management study program students can be classified into three market segments. The final cluster centers table is used in determining the most dominant variables in each segment based on the final cluster centers table. If the variable has the largest score in a group, then the variable in that group is the dominating variable in that group and not in other groups.

Table 4 Final Cluster Centers

	Cluster		
	1	2	3
Health	-1.01449	.29447	.49917
Sensory Appeal	-.27669	.46142	-.53079
Price	-.83628	.69157	-.37397
Weight Control	-.60356	.46354	-.20764
Familiarity	-.68407	.55011	-.27862
Mood	-.45031	.72967	-.82661
Convenience	-.69517	.58226	-.32378
Natural Conten	-1.02907	.68885	-.17641
Food Restriction	-1.13705	.58164	.11918

Looking at the results of the final table, the cluster centers segment can be divided into three segments[15], namely:

- a. The first segment is student respondents who do not show the dominant variable in certain variables.
- b. Segment 2 is respondents who are more concerned with sensory appeal, price, weight control, familiarity, mood, convenience, natural content variables.
- c. Segment 3 is the respondent who is more dominant to the health variable.

The table number of cases in each cluster shows the number of respondents who are part of cluster 1, cluster 2 and cluster 3.

Table 5 Number of Cases in each Cluster

Segment	Number of Respondents
Segment 1	20
Segment 2	35
Segment 3	20

Judging from the results from table 5, the number in case in each cluster shows that the student respondents who have the largest number are segment two totaling 35 people, while in segments one and three each are the same as many as 20 respondents. Judging from these results, it can be said that student respondents generally have the perception that all attributes in food selection are important.

4. CONCLUSION

Based on the results of this study, food selection for management study program students at the Universitas Sembilanbelas November Kolaka can be classified into three segments, and all student respondents stated that all food selection variables are important, as seen from the final cluster center table which all have positive values (+). Based on this, restaurant or restaurant owners should always pay attention to food selection attributes such as health, sensory appeal, price, weight control, familiarity, mood, convenience, natural content, food restriction because some of these variables according to consumers are important. According to the results of the analysis, it can be concluded that the market segment for food selection for management study program students is as follows: segment one is respondents who do not show dominant variables in certain variables, the second segment is respondents who are concerned with sensory appeal, price, weight control, familiarity, mood, attributes. convenience, natural content, the third segment is respondents who attach importance to health attributes.

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