

MARKET SEGMENTATION ANALYSIS WITH *CLUSTER ANALYSIS* APPROACH OF CUCI HOUSE LAUNDRY

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ABSTRACT

Market segmentation is a process of simplification from heterogeneous group to homogeneous group. Setting the right market segment helps the company to understand its customers' needs. Since the laundry business in Bali has rapidly increased, companies need to know the market segment in order to position their product. With market segmentation, companies can open new branch that fits the needs of customers in that location and suits their characteristics. The purpose of this study was to classify customers on Cuci House Laundry in Denpasar based on demographic and behavior approaches. Samples from this study were customers of Cuci House Laundry age 16 to 49 years old who stayed in the South and East Denpasar, selected by applying purposive sampling technique. Data were collected by distributing questionnaires to 100 samples using cluster analysis approach with K-means method. The findings show three clusters formed, namely segment 1 Price Sensitivity Customer, segment 2 Customer Value, and segment 3 Quality Customer, where there are differences in variables of benefits and attitudes in each cluster.

Keywords: Market Segmentation, Cluster Analysis, Laundry

INTRODUCTION

The higher the increased number of service customers, the greater the market share of a service business. This also applies to laundry service business. In Denpasar, numerous laundry businesses are competing with each other to develop their business and provide the best service for their customers. Denpasar is a city with very high mobility rate, where its population consists of students and newcomers in big numbers, preoccupied with their works and daily activities, hence disallowing them to do their own chores. This situation is considered as opportunity for laundry service business to rapidly develop, and thus has made the entrepreneurs aware that laundry service is a very promising business to run.

Cuci House Laundry is one of the laundry companies determined to “Make Your Life Better” feels obligated to be more creative to compete in this tight business competition. Cuci House provides laundry service for both individuals and companies. Therefore, this company, founded by Kadek Ayu Windasari on July 10, 2013, has interesting offers in form of laundry and ironing services for two different segments, namely private laundry per kilo and premium laundry with competitive price and quality. Cuci House Laundry provides 2-hour laundry service and only uses one machine for each customer. Previously, the owner of Cuci House Laundry had yet conducted market segment analysis due to the lack of human resource responsible for measuring service quality. There was a specific hotline number for customer care, yet the customers had not used this facility properly and no critic or suggestion ever received through this hotline number. However, there were complaints on the service quality directly received by the

company from June to August 2016. On the premium service segment, eight customers complained about the service and five customers complained about the color after washing quality, while on the private service segment, seven customers complained about the increased price from Rp. 7.000 per kg to Rp. 8.000 per kg.

Recognizing the importance of knowing the customer satisfaction of service in the sustainability of this business, an interesting business plan must be made to make more customers choose and use the business, and therefore to increase customers' satisfaction. Customer satisfaction depends on the customer's assessment of the services provided, so it is necessary to have awareness on the quality of service that has been and will be given, and the customer expectations of the facilities provided. In today's fierce market competition, using a marketing strategy without differentiation from competitors blurs the company market segment. Jonathan (2007) supports this situation by saying that 95% of new launched products failed because their company could not read the market and thus had weak positioning. Failures in reading the market, such as mapping the segment and establishing the market target, can cause the implementation of marketing technique to fail. Based on the above explanation, the researcher conducted this research with the following title "**Market Segmentation Analysis with Cluster Analysis Approach of Cuci House Laundry**"

Review of Related Researches

Roy and Jushermi (2014) conduct a research entitled "Analysis on the Effect of Lifestyle Segmentation on the Customers' Use of Service and Satisfaction at the Simply Fresh Laundry Service in Pekanbaru" with aim to determine the effect of lifestyle dimensions, namely *activities, interest* and *opinions*, on customers' use of service and satisfaction at the Simply Fresh Laundry in Pekanbaru. The variables are lifestyle segmentation and decision to use service and satisfaction. Non-probability sampling is used to select 150 customers as samples, while the data are gathered through questionnaires and later be analyzed using AMOS 22 structural equation model. The findings show that two structural equations are generated, where variable of opinion has the most dominant influence on the customers' decision to use service from Simply Fresh Laundry, while activity has the most dominant influence on the customers' satisfaction for this business service. Thus, in general it is concluded that decision to use the service holds very important role in influencing customers' satisfaction when using the service from Simply Fresh Laundry, while opinion has dominant influence on the decision to use the laundry service.

Other research conducted by Noviani (2012) entitled "Analysis on the Effect of Price and Service Quality on the Costumers' Satisfaction at *Kita Jaya Laundry*". This research aims to determine the effect of price and service quality on the customer satisfaction at *Kita Jaya Laundry*. The variables studied are price, service quality and customer satisfaction. This research uses simple regression analysis and multiple regression with *random sampling* technique by distributing questionnaires to 100 samples. The findings show that price and service quality have effect on customer satisfaction. Employee's low performance can be improved by encouraging creative and innovative behavior variables. The research then concludes that price and service quality have simultaneous and significant effect on consumer satisfaction, thus price and service quality are both factors that have equal effect in increasing consumer satisfaction.

RESEARCH METHODS

The population in this research was the customers of Cuci House Laundry with the total number of 1.750 customers. The researcher then set the following criteria for determining sample: (1) had to be between 16 to 49 years old, and; (2) had to be a customer of Cuci House Laundry Bali, either the customer for per kilogram segment or premium segment.

This research is quantitative in nature, since the data used in this research were in form of quantitative data, or qualitative data which were later converted into numbers (Sugiyono, 2012:3). The primary data were taken from the respondents through questionnaires and interview with samples as respondents. The secondary data were taken from Cuci House Laundry's internal data, year 2016. Method used in this research was a prior segmentation, since the number of segments was already set before the data analysis was begun. In addition to that, the researcher already knows what target to be achieved through this research since this company has been into business for four years. The researcher measured the data by using Likert scale. The method of measurement was by asking the respondents to answer questions with "totally agree", "agree", "neutral", "disagree", and "totally disagree". All answers were then converted into 1 for "totally disagree" to 5 for "totally agree".

Demographic factor and usage rate variable on the behavior variable are categorical attributes in this research. The respondents were asked to give information related to their age, work, income, education, and usage rate. The data analysis process in this study used non-hierarchical method or k-means clustering method to group the research object based on the formed variables, and cross tab analysis or cross tabulation analysis to profile the object in each cluster.

Unlike the hierarchical approach that combines object-by-object which has similar characteristics that establish a hierarchy, k-means clustering method processes all the indicators used in segmenting or clustering all at once, where the process begins by determining the number of desired clusters (Rangkuti, 2011:113). This method was used due to its high efficiency level and its ability to describe the characteristics of each segment compared to hierarchical method. However, to be able to use non-hierarchical method, the researcher is expected to already know the number of desired cluster to form.

In this study, the researcher set three fixed clusters where the clusters were determined based on the researcher's need by referring to a priori segmentation method. The clusters would be formed by subjective considerations in accordance with the purposes of research, where these three-fixed clusters allowed the researcher to categorize all segments based on the quality level: high, medium, and low.

Results

The three fixed clusters were used to structure the analysis, where the crosstab analysis was conducted later (see Appendix 5) in order to profile the respondents based on the formed clusters. Table 1 shows the characteristics of each cluster based on categorical data.

Table 1. Characteristics of Cluster

Variable	Category	<i>cluster 1</i>	<i>cluster 2</i>	<i>cluster 3</i>
		N = 59	N = 10	N = 31
Age	16-25 Years	22.0%	20.0%	25.8%
	26-35 Years	45.8%	20.0%	32.3%
	36-45 Years	27.1%	50.0%	38.7%
	> 45 Years	5.1%	10.0%	3.2%
Work	Student	.0%	.0%	6.5%
	College student	5.1%	20.0%	.0%
	Government employees	23.7%	10.0%	9.7%
	Private employees	42.4%	30.0%	51.6%
	entrepreneur	27.1%	40.0%	29.0%
	<i>Etc.</i>	1.7%	.0%	3.2%
Education	SD	1.7%	.0%	3.2%
	SMP	.0%	10.0%	3.2%
	SMA	20.3%	60.0%	38.7%

	Diploma	28.8%	.0%	32.3%
	Bachelor	49.2%	30.0%	22.6%
Income	<Rp. 500	1.7%	.0%	6.5%
	Rp.500.001- Rp.1.000.000	8.5%	20.0%	16.1%
	Rp.1.000.000- Rp.2.000.000	18.6%	50.0%	22.6%
	> Rp.2.000.000	71.2%	30.0%	54.8%
Intensity of laundry per week	1-2 times a week	39.0%	40.0%	45.2%
	3-4 times a week	27.1%	40.0%	38.7%
	> 5 times a week	33.9%	20.0%	16.1%
Intensity of replacing vendor	1-2 times a year	78.0%	70.0%	87.1%
	3-4 times a year	18.6%	30.0%	12.9%
	> 5 times a year	3.4%	.0%	.0%

The results of demographic and behavioral analysis reveal the form of three fixed clusters. The researcher then consulted the results with experts to discuss the suitable and representative names for each formed cluster:

Cluster 1: Value Customer

Of all three fixed clusters, Cluster 1 has the highest number of respondents which is 59% of the samples (59 respondents). This cluster dominates all the variables, *i.e.* benefit sought variable and consumer attitude variable. This indicates that all respondents in this *cluster* were perfectionist and had high expectations of the laundry services they used, including the economical, ergonomic and aesthetic aspects. They expected laundry service they chose provides satisfactory service such as perfumed and spotless laundry, perfect pressing and neat fold, attractive and practical packaging, provides pick and delivery service, washing repeated warranty for laundry with unsatisfactory results, and competitive price.

Characteristics of respondents in *cluster 1* were respondents with age between 26 to 35 years old and most of them had bachelor degree. They worked as civil servant with monthly income above Rp. 2.000.000. All respondents were active laundry service customers with laundry frequency five times a week. Most respondents also changed their laundry vendor five times in a year. They chose laundry service to do their laundry since they were busy with their activities and had children who needed fresh clothes almost all the time.

Cluster 2: Price Sensitive Customer

Cluster 2 consists of 10% of the samples (10 respondents); hence, the smallest cluster of all. This cluster supports past research (Luthfianto, 2014; Rizani & Satria, 2013) on the price factor as one of the important factors considered by the customers when deciding to use laundry service. The cluster analysis result showed this cluster had low economic and ergonomic values. This suggests that this cluster has a high sensitivity to service price, or in other words, price can have larger portion than other factors in influencing the customers to choose and use laundry service. Respondents in this cluster were those between 36 to 45 years old with high school diploma. Most of them worked as small medium enterprise entrepreneurs with income ranged between Rp 1,000,000 to Rp 2,000,000. Most of them were average users with intensity of laundry service around three to four times a week and changed vendor three to four times a year. They desired quality service with affordable service. However, they were unlikely to have an attachment to a particular vendor, so it would be difficult for them to recommend a laundry service to their colleagues or relatives.

Cluster 3: Quality Customer

Cluster 3 is the second highest *cluster* with 31% of the samples (31 respondents). This cluster shares almost similar characteristics with cluster 1. However, the respondents in cluster 3 were not too perfectionist and did not have too high expectations of the laundry services, as shown by the score of mean benefit sought and their responses which were neutral to positive. Still it does not mean that they did not pay attention at all to the laundry service quality. The customers in this cluster were college students and young executives between 16 to 25 years old with diploma degree. They cared for their physical appearance and preferred suitable laundry service for their shoes, dress and suits. Most of them worked as employees of private companies with income above Rp. 2.000.000. Compared to the respondents in cluster 1, they seldom used laundry service with intensity of laundry once or twice a week, and changed laundry vendor once or twice a year. They also would not mind to pay more for their laundry, as long as its service meets aesthetic criteria such as perfumed laundry, clean, and neat. All respondents in cluster 3 were the laundry service users with medium to high intensity, thus having medium possibility in doing laundry service compared to the respondents in cluster 2.

Conclusion

By referring to the discussions, it is concluded that clustering the market segment can be done through K-Means method. In this research, the clustering was done based on demographic data and attitude variables, resulting three fixed clusters namely cluster 1 Value Customer as the highest number of respondents (59 respondents), cluster 3 Quality Customer as the second highest or middle cluster with 31 respondents, and cluster 3 Price Sensitive Customer as the smallest cluster with 10 respondents.

At glance, there was no difference of characteristics between cluster 1 and 3, yet the researcher found out that the customers in cluster 1 tended to care about their laundry vendor. For example, when they felt dissatisfied with the service provided, they complained about it to their vendor and did not change the vendor, since this cluster still needed quality service with affordable price. While for the customers in cluster 3, they did not hesitate to change their vendor since they were willing to pay for perfect service. Thus, it is very possible for the laundry services to set high price if they are able to provide excellent service (premium service for premium segment).

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