CHAPTER I
INTRODUCTION

1.1 Description of Problems

Gift is the most awaited by family, friends, relatives or friends if we go somewhere, especially when we visit an area that has its own peculiarities in the form of food or objects. And it seems a pity if we were traveling to an unusual place to visit without bringing or tasting something that is typical of the area. Yogyakarta is one of the tourist destinations certainly have something that can be used by the by. Anything that can be used as souvenirs or by the family, a friend or relative you when you visit in Yogyakarta.

In Yogyakarta, there are so many goods store, tourist that visit Yogyakarta ussualy will buy some goods in Yogayakrat as gift for 000 in their origin region. Goods store in Yogyakarta ussualy sell souvenirs, foods and drinks. Some of goods store in yogyakarta ussualy have own history, famous and also established for a long time, thats why tourist often buy some goods in place that have known by many people, such as Chocolate Monggo company, this company also have own histroy, famous and established on 2001. Chocolate Monggo start from first belgian chocolatier which make a chocolate in yogyakarta, his name is Thierry, he try to make delicious chocolate from belgium chocoa, finally he can make chocolate with a variant taste and can accepted by Yogyakarta society and become one of characteristic foods in Yogyakarta. After chocolate monggo success in yogyakarta, that company expand their market to another city in Indonesia, now chocolate monggo have branch store in Bandung, South Jakarta, Surabaya and Bali. With chocolate monggo expand their market, it can be make easier consumer to buy this product and feel the taste, now chocolate monggo become a famous product that be sought by people in indonesia and people from another country also.

In this report, the researcher wants to analyze about consumer loyalty of chocolate monggo that located in Dalem street KG III / 978A RT 043 RW 10 Purbayan, Kotagede 55173 Yogyakarta, we do this research using cluster analisys method. Cluster analisys method is organizing a collection of patterns into groups (clusters) based on their similarity. Patterns in a cluster will have the same characteristics / properties than patterns in other clusters. Why the researcher use chocolate monggo? As like most people know chocolate monggo is one of goods store in Yogyakarta, the researcher

wants to analyze chocolate monggo because the researcher know about the history of this company, then the researcher think that chocolate monggo is one of yogyakarta asset which should be improve and interesting to discuss. First we do observation first in chocolate monggo as the one of goods store in Yogyakarta, after the researcher do observation with chocolate monggo company, then the researcher arrange the questionnaire to start research, object this questionnaire is consumer in chocolate monggo, this questionnaire contain of two aspect, first is consumer profile and the second is variable of consumer loyalty to chocolate monggo, in consumer profile questionnaire explain about the intensity consumer buy goods or gift in Yogyakarta, and in variable of consumer loyalty questionnaire explain about assesment statement of consumer loyalty in chocolate monggo. researcher spread forty questionnaire to consumer. After forty questionnaire fill by consumer, then researcher put the recapitulation of questionnaire into SPSS software to analyze the data from questionnaire. SPSS is a statistical computer program that serves to assist in processing statistical data accurately and quickly, and produce a variety of output desired by decision makers. After all of the data put in SPSS software, we can get dendogram in this software, Dendogram useful to show the members of an existing cluster if it will be determined how many clusters are supposed to be formed. From dendogram, we can know how many cluster that needed for consumer loyalty in chocolate monggo.

1.2 Problem Formulation

Problem formulation in this module must consists of :

1. What are the indicators that significantly affect the observed variables of customer loyalty in this study?

2. How many and how the characteristics of each cluster formed?

1.3 Research Objectives

The research objective of this research is:

1. To know the indicators that significantly affect the observed variables customer loyalty.

2. To determine the number and shape of the characteristics of each cluster is formed.

CHAPTER II
LITERATURE REVIEW

2.1 Study Deductive

2.1.1 Cluster Analysis

Firstly in general, data mining or sometimes called data or knowledge discovery is the process of analyzing data from different perspectives and summarizing it into useful information that can be used to increase revenue, costs, or both of them. Data mining software is one of a number of analytical tools for analyzing data. It allows users to analyze data from many different dimensions or angles, categorize it, and summarize the relationships identified. Technically, data mining is the process of finding correlations or patterns among dozens of fields in large relational databases. Cluster analysis is one multivariate techniques used in data mining that aims to identify a group of objects that have a certain similarity of characteristics that can be separated by other groups, so that objects that are in the same group are relatively more homogeneous (equal) than the object that is on the different.

Number of groups can be identified depending on the lot and the variation of data objects. The purpose of this cluster formation is to further analysis and interpretation in accordance with the purpose of the research conducted. Cluster solution as a whole depends on variables that are used as a basis for assessing similarity. Addition or subtraction of the relevant variables can affect the substance of the results of cluster analysis.

Broadly speaking there are three things that must be answered in the cluster analysis of work processes, namely:

A. How to measure the similarity?

In cluster analysis, measurement of similarity using the concept of distance measurement (distance). Distance is a measure of the separation distance between objects, which in turn will indicate where a homogeneous group.

B. How to form a cluster?

Procedures should be applied to group objects with similar (homogeneity) high into a same cluster, and separate groups with different inter-cluster dissimilarity (heterogeneity) is high.

C. How many clusters / groups to be formed?

   In principle, if the number of clusters is reduced, the homogeneity of the cluster will automatically be declined.

In cluster analysis there are two methods used are: hierarchical methods and non-hierarchical method.

   a. Hierarchy of methods

   Engineering hierarchy (hierarchical methods) is the construction to form a hierarchical clustering technique based on the extent or tree-like structure (the structure of the game). Thus the classification process is done or a gradual rise. The results of this grouping can be presented in the form of dendogram. The methods used in the engineering hierarchy:

   1. Agglomerative Methods

   Agglomerative hierarchical method is a method used to classify objects based on similarity of characteristics. In the agglomerative method, there are 4 techniques, namely: single linkage methods, complete linkage methods, average linkage methods, and the ward's error sum of squares methods.

   2. Divisive Methods

   Divisive methods as opposed to agglomerative methods. This method is used to group objects based on the dissimilarity of their characteristics. Techniques used in divisive methods are splinter average distance methods.

   b. Non-Hierarchical Methods

   In contrast to hierarchical methods, procedures, non-hierarchical (K-means Clustering) begins by choosing a value for the initial cluster in accordance with the desired amount and then the object is incorporated into these clusters. The methods used in non-hierarchical techniques are:

   1. Threshold Sequential Procedure

   This method of grouping by first selecting a base object that will be used as the initial value of the cluster, then all objects that exist within the shortest distance to the cluster is then selected to join the second cluster, and all objects that have similarities included in this cluster. So forth and to form a cluster with the whole object in it.

   2. Parallel Threshold Procedure

In principle the same as the sequential threshold procedure, only made the selection of multiple objects at once the initial cluster and then merge the object into it simultaneously.

3. Optimizing

The second is the development of the above methods to perform optimization on the placement of objects in exchange for other clusters with a consideration of the optimization criterion.

So based on the description above about clustering, for this our clustering research, we use the hierarchical of method with agglomerative method. From agglomerative method, we use single linkage method to make a agglomeration schedule and dendogram. And the last, to calculate the distance and to make sure the cluster characteristics for customers, we use squared Euclidean distance.

2.1.2 Loyalty

Based on Anung Pramudyo research in August 2012 recently, he state that loyalty is defined as an attitude shown by the consumer to the product or service provider. An attitude of loyal consumers will show if a company is able to provide satisfaction to its customers. Loyal customer is a customer who always buy back from the provider or the provider of the same services and maintain a positive attitude towards the service providers in the future.

Loyalty arise because of a sense of trust from consumers because of satisfaction after using a product, customer satisfaction occurs when customer expectations in accordance with what is experienced and felt even exceeded his expectations. Customer satisfaction will also be met if the service provider is able to examine the specific criteria of each service to be provided to the consumer.

2.2 The Inductive Study

Based on Anil Kapil et al. research at year 2008, they have solve the data using clustering analysis. They also spread the questionnaire, a structured questionnaire was administered on 487 respondents of the study. Only adult respondents were included. The "mall-intercept" non-probability sampling was used for data gathering. The shopping attitude scale was included to segment shoppers on the "Hedonism vs. Utilitarianism" behavior

The data obtained is classified using data mining technique, *K-means Cluster Analysis* due to large sample size. input parameter, *k,* and partitions a set of *n* objects into *k* clusters so that the intracluster similarity is high but the intercluster similarity is low. Cluster similarity is measured in regard to the *mean* value of the objects in a cluster, which can be viewed as the cluster's centroid.

To find the association between shopping attitude and store loyalty proneness, the statistical technique of Pearson Coefficient of Correlation has been applied. It measures the degree of linear association between two variables. It varies between +1 to -1, with 0 representing absolutely no association (Anil Kapil et.al, 2008).

According to Qiani et al. (2012), good customer segmentation will end with high customer loyalty. In the research the segmentation was done in Mondrian store by clustering based on several variables.

Clustering was done based on two algorithms. The first algorithm is k-means while the second algorithm is two-step. Later on the results are compared and it shows the segmentation is mainly based on transactional behaviours with customer relationship and demographic as the main considerations (Qiani et al., 2012)

Miguéis et al. (n.d.) written a research about customer loyalty clustering on an European retailing company based customer segmentation. In the research, the clusters are based on transactional records of loyal customers.

There are five variables to consider. The first one, is frequency of purchase made in a month. The second one, is monetary value of money spent per purchase. The last consideration is that the only customer data to input is those who made their customer loyalty card in the last trisemester of 2009.

Based on all of the research in this section, we can infer that there are many approaches that can be used in clustering and the variables for customer loyalty varies.

CHAPTER III
RESEARCH METHOD

3.1 Object Research

Chocolate Monggo is established on 2001, Chocolate Monggo is the first chocolate in Yogyakarta which made by belgian chocolatier, that belgian man try to improve chocolate quality and variant until now. Chocolate Monggo is also one goods store in Yogayakarta, when tourist come to yogyakarta, they ussualy will visit Chocolate Monggo store and by the product.

Company Profile:

Name   : Chocolate Monggo

Address   : Jalan Dalem KG III / 978A RT 043 RW 10 Kel. Purbayan Kotagede 55173

                Yogyakarta Indonesia

Phone   : +62 274 7102202

Figure 3.1. Chocolate Monggo Product

3.2 Data Collection Methods

In this research, the collecting data method used is:

a. Literature Review

   The researcher use literature review of customer loyalty to arrange questionnaire to be filled by customers of Chocolate Monggo

b. Observation

   Researcher do observation first in Chocolate Monggo store as one of goods store in Yogyakarta.

c. Questionnaires

   After the researcher do observation, then the researcher arrange questonnaire based on journal about customer loyalty and the spread the questionnaire to consumer, so we get the data to be processed from questionnaire.

3.3 Types of Data

a. Primary

Collecting data method can get directly with interviewing and spreading the questionnaire to retail customers. Method that used by researcher is Cluster. We also use pairwise comparison and consistency testing so we would know is the company consistency enough or not. From observation we set the Chocolate Monggo as the observation place and directly research at there. From observation, we get the profile of the retail from the owner. And from the questionnaire, we get the result of customers profile and the loyalty of customers.

b. Secondary

This secondary collecting data method is using literature from the books and journal about data mining regarding to clustering method. Then we took a reason of choosing attributes of loyalty dimension based on the other research. Selnes (1993) describes customer loyalty shows the intended behavior relating to products or services. This includes the possibility of future purchase or renewal of contract of service or otherwise, how likely consumers will switch to another service provider or brand.

There are two dimensions in customer loyalty: behavioral dimensions and dimensions of attitudes (Julander et al, 1997) in (Kandampully and Suhartanto 2000) . Dimensions of behavior (behavioral dimension) means that the behavior of the customer to re- purchase, indicate preferences over time for a brand or service. On the other hand,

the dimensions of attitudes (attitudinal dimension) means the willingness (intention) customers to re- purchase and recommend, is a good indicator of a loyal customer (loyal). In addition, customers who intend to re- purchase and recommend likely will last at previous companies. According to Bagram & Khan (2012), there are several factors that influence customer loyalty which includes customer satisfaction, customer retention, customer relationship, product attributes, perceived quality, and perceived value.
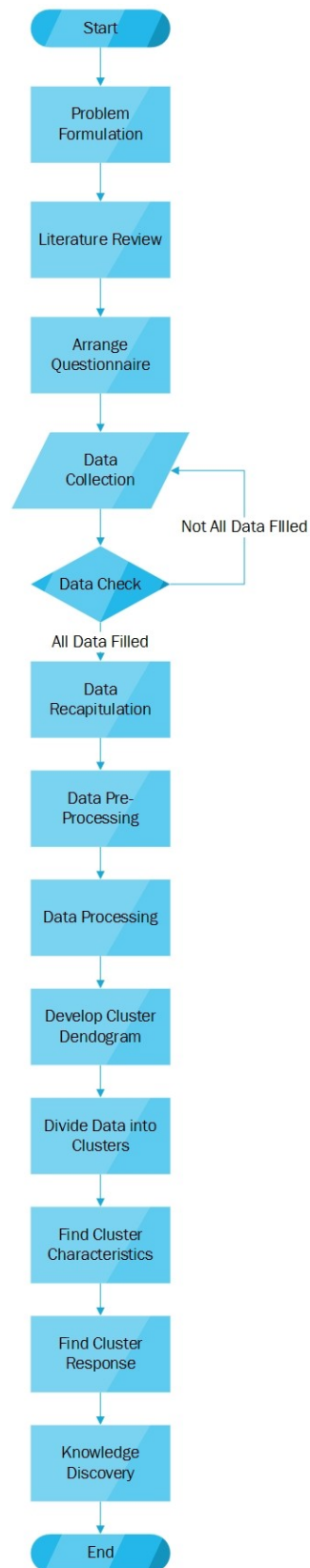
3.4 Flow Research

Figure 3.1. Research Flowchart

The figure above shows the flowchart of this research. The steps done in this research are as follows:

a. Problem Formulation

The first step in this research is develop the problem formulation based on case study given which is about customer loyalty in goods gift shop

b. Literature Review

In order to find solutions in problem formulation a literature review is needed. In this case the literature review will be used to find indicators of customer loyalty which will be included in the questionnaire

c. Arrange Questionnaire

Next, arrange questionnaire based on indicators from the literature review. This questionnaire will be filled by 40 respondents

d. Data Collection

This is the phase where the questionnaire is filled by 40 respondents

e. Data Check

After the questionnaire is filled, the data filled in must be checked. If the data isn't fully filled the data must be retaken and if it is fully filled it can be recapitulated

f. Data Recapitulation

In this phase the data is recapitulated until 40 data is obtained

g. Data Pre-processing

In this phase convert the data from qualitative into quantitative because the software used cannot process qualitative data

h. Data Processing

The data is inputted in *SPSS* software to be processed

i. Develop Cluster Dendogram

The first process of the data is by developing the cluster dendogram

j. Divide Data into Clusters

Divide the data into clusters based on the previous dendogram

k. Find Cluster Characteristics

Find the cluster characteristics of each cluster by using crosstab in each *SPSS* software

l. Find Cluster Response

Find the cluster response of each cluster by using crosstab in each SPSS software

m. Knowledge Discovery

Based on the cluster characteristics and response develop the new knowledge that will help the company to maintain customer loyalty

CHAPTER IV
RESULT AND DISCUSSION

4.1 Variable Selection Indicators of Customer Loyalty

There are several indicators for customer to be loyal to a certain shop. The indicators are as follows:

a. Service Quality

    Service quality is part of customer relationship needed in order to increase customer loyalty (Bargam & Khan, 2012). The logic is with better service quality, hospitality for example, the higher probability that a particular buyer will visit the shop again and vice versa.

b. Price

    Price is a component of product attribute (Bargam & Khan, 2012). According to Bargam & Khan (2012) customer loyalty is built based on the price and product quality elements. If the consumer thinks that the price is affordable there is better probability that he/she will visit the same particular shop in the future.

c. Follow-up

    According to Shahram, Hasanali, and Seyyed (2011), in order to maintain customer satisfaction, there are several ways to achieve this goal. One example is by giving a customer a customer card which will build trust between customer and seller.

d. Product Quality

    Another product attribute. Product quality and price are key elements in building customer loyalty (Bargam & Khan, 2012). Because product quality is what builds the brand image, if the brand image is good the customer will be loyal

e. Trustworthiness

    Trustworthiness is regarding to the expectation of customer from the sellers (Bargam & Khan, 2012). For example, the tester of a product must be the same with the product offered.

4.2 Summary of Results of Questionnaire

The tables below show questionnaire recapitulation of profile questionnaire and variable questionnaire respectively.

Table 4.1. Profile Questionnaire Recapitulation

No	Name	Gender	Age	Occupation	Yogyakarta Visit Frequency	Allocated Money
1	Woods	Others	25-29 year old	Entrepreneur	at least once every year or more	>= IDR 200,001
2	Ari	Female	20-24 year old	Student	Yogyakarta Citizen	=<IDR 50,000
3	Arka	Male	20-24 year old	Student	Yogyakarta Citizen	=<IDR 50,000
4	Ani	Female	>= 30 year old	Entrepreneur	Yogyakarta Citizen	IDR 100,001-IDR 200,000
5	Nikica	Female	15-19 year old	Student	at least once every year or more	>= IDR 200,001
6	Dika	Male	20-24 year old	Student	Yogyakarta Citizen	IDR 50,001 - IDR 100,000
7	Luis	Male	25-29 year old	Entrepreneur	at least once every year or more	>= IDR 200,001
8	Scoot	Male	25-29 year old	Entrepreneur	at least once every 6 months	>= IDR 200,001
9	Alex	Male	15-19 year old	Student	Yogyakarta Citizen	IDR 50,001 - IDR 100,000
10	Gorge	Male	20-24 year old	Student	At least once every 1 month	IDR 50,001 - IDR 100,000
11	Bads	Male	25-29 year old	Entrepreneur	at least once every year or more	>= IDR 200,001
12	Roy	Male	25-29 year old	Entrepreneur	Yogyakarta Citizen	>= IDR 200,001
13	Tarmin	Male	>= 30 year old	Civil Servant	at least once every year or more	=<IDR 50,000
14	Yuki	Female	25-29 year old	Student	at least once every 6 months	IDR 100,001-IDR 200,000
15	Shodiq	Male	20-24 year old	Student	at least once every year or more	IDR 100,001-IDR 200,000
16	Bambang	Male	20-24 year old	Student	Yogyakarta Citizen	>= IDR 200,001
17	Sudaryon	Male	15-19 year old	Others	Yogyakarta Citizen	=<IDR 50,000
18	Jenna	Female	>= 30 year old	Entrepreneur	at least once every year or more	>= IDR 200,001
19	Khairesa	Male	15-19 year old	Student	Yogyakarta Citizen	>= IDR 200,001
20	Paringga	Female	20-24 year old	Student	Yogyakarta Citizen	IDR 50,001 - IDR 100,000

No	Name	Gender	Age	Occupation	Yogyakarta Visit Frequency	Allocated Money
21	Soleh	Male	25-29 year old	Civil Servant	at least once every 6 months	IDR 100,001-IDR 200,000
22	Yanti	Female	25-29 year old	Civil Servant	Yogyakarta Citizen	IDR 50,001 - IDR 100,000
23	Ami	Female	20-24 year old	Entrepreneur	at least once every 6 months	>= IDR 200,001
24	Wildan	Male	20-24 year old	Student	Yogyakarta Citizen	IDR 50,001 - IDR 100,000
25	Edi	Male	15-19 year old	Student	Yogyakarta Citizen	>= IDR 200,001
26	Adinda	Female	25-29 year old	Civil Servant	At least once every 1 month	IDR 50,001 - IDR 100,000
27	Tim	Male	>= 30 year old	Entrepreneur	at least once every 6 months	>= IDR 200,001
28	Giri	Male	25-29 year old	Entrepreneur	Yogyakarta Citizen	>= IDR 200,001
29	Kelly	Female	25-29 year old	Entrepreneur	at least once every year or more	>= IDR 200,001
30	Zahra	Female	20-24 year old	Student	Yogyakarta Citizen	IDR 100,001-IDR 200,000
31	Hal	Male	>= 30 year old	Entrepreneur	at least once every year or more	>= IDR 200,001
32	Ayu	Female	25-29 year old	Entrepreneur	At least once every 1 month	IDR 100,001-IDR 200,000
33	Adnan	Male	20-24 year old	Student	Yogyakarta Citizen	>= IDR 200,001
34	Andy	Male	25-29 year old	Student	Yogyakarta Citizen	=<IDR 50,000
35	Irfan	Male	20-24 year old	Entrepreneur	At least once every 1 month	IDR 100,001-IDR 200,000
36	Yudhi	Male	15-19 year old	Entrepreneur	at least once every 6 months	IDR 100,001-IDR 200,000
37	Lilis	Female	15-19 year old	Student	Yogyakarta Citizen	=<IDR 50,000
38	Sani	Female	20-24 year old	Student	Yogyakarta Citizen	=<IDR 50,000
39	Carmin	Male	>= 30 year old	Entrepreneur	at least once every year or more	>= IDR 200,001
40	Hakim	Male	20-24 year old	Student	Yogyakarta Citizen	=<IDR 50,000

Table 4.2. Variable Questionnaire Recapitulation

No	Name	Service Quality	Price	Follow-up	Product Quality	Trustworthiness
1	Woods	Satisfying	Unsatisfying	Satisfying	Very Unsatisfying	Very Unsatisfying

No	Name	Service Quality	Price	Follow-up	Product Quality	Trustworthiness
2	Ari	Satisfying	Satisfying	Very Unsatisfying	Very Unsatisfying	Very Unsatisfying
3	Arka	Very Unsatisfying	Satisfying	Very Unsatisfying	Very Satisfying	Very Unsatisfying
4	Ani	Satisfying	Very Unsatisfying	Satisfying	Very Unsatisfying	Very Satisfying
5	Nikica	Satisfying	Very Unsatisfying	Very Unsatisfying	Very Unsatisfying	Very Unsatisfying
6	Dika	Very Unsatisfying	Satisfying	Very Unsatisfying	Very Unsatisfying	Satisfying
7	Luis	Very Unsatisfying	Unsatisfying	Satisfying	Very Satisfying	Very Unsatisfying
8	Scoot	Very Unsatisfying	Unsatisfying	Satisfying	Unsatisfying	Very Unsatisfying
9	Alex	Very Unsatisfying	Very Satisfying	Very Unsatisfying	Very Unsatisfying	Very Satisfying
10	Gorge	Very Unsatisfying	Satisfying	Very Unsatisfying	Satisfying	Satisfying
11	Bads	Very Unsatisfying	Unsatisfying	Satisfying	Very Satisfying	Very Unsatisfying
12	Roy	Very Unsatisfying	Very Satisfying	Satisfying	Very Unsatisfying	Very Satisfying
13	Tarmin	Very Unsatisfying	Very Unsatisfying	Unsatisfying	Very Unsatisfying	Very Unsatisfying
14	Yuki	Very Satisfying	Unsatisfying	Very Satisfying	Unsatisfying	Unsatisfying
15	Shodiq	Very Satisfying	Satisfying	Very Unsatisfying	Very Unsatisfying	Very Satisfying
16	Bambang	Very Unsatisfying	Satisfying	Very Unsatisfying	Very Unsatisfying	Very Unsatisfying
17	Sudaryon	Very Unsatisfying	Very Unsatisfying	Very Unsatisfying	Very Unsatisfying	Very Unsatisfying
18	Jenna	Satisfying	Very Satisfying	Satisfying	Very Unsatisfying	Very Satisfying
19	Khairesa	Very Unsatisfying	Very Unsatisfying	Very Unsatisfying	Very Unsatisfying	Very Satisfying
20	Paringga	Satisfying	Satisfying	Very Unsatisfying	Very Unsatisfying	Satisfying
21	Soleh	Very Unsatisfying	Unsatisfying	Very Satisfying	Unsatisfying	Unsatisfying
22	Yanti	Satisfying	Unsatisfying	Unsatisfying	Very Unsatisfying	Satisfying
23	Ami	Satisfying	Satisfying	Satisfying	Unsatisfying	Very Unsatisfying
24	Wildan	Very Unsatisfying	Satisfying	Very Unsatisfying	Very Unsatisfying	Very Satisfying

No	Name	Service Quality	Price	Follow-up	Product Quality	Trustworthiness
25	Edi	Very Unsatisfying	Very Unsatisfying	Very Unsatisfying	Very Unsatisfying	Very Unsatisfying
26	Adinda	Very Satisfying	Unsatisfying	Unsatisfying	Satisfying	Very Satisfying
27	Tim	Very Satisfying	Very Satisfying	Satisfying	Very Satisfying	Very Satisfying
28	Giri	Very Unsatisfying	Unsatisfying	Very Satisfying	Very Satisfying	Very Unsatisfying
29	Kelly	Satisfying	Unsatisfying	Very Satisfying	Very Satisfying	Very Satisfying
30	Zahra	Satisfying	Satisfying	Very Unsatisfying	Very Unsatisfying	Unsatisfying
31	Hal	Very Unsatisfying	Very Unsatisfying	Satisfying	Very Unsatisfying	Very Unsatisfying
32	Ayu	Very Satisfying	Unsatisfying	Satisfying	Very Satisfying	Very Satisfying
33	Adnan	Very Satisfying	Satisfying	Very Unsatisfying	Very Unsatisfying	Very Satisfying
34	Andy	Very Satisfying	Very Satisfying	Very Unsatisfying	Very Satisfying	Very Unsatisfying
35	Irfan	Very Unsatisfying	Satisfying	Satisfying	Satisfying	Very Satisfying
36	Yudhi	Very Unsatisfying	Very Satisfying	Satisfying	Unsatisfying	Unsatisfying
37	Lilis	Very Satisfying	Very Satisfying	Very Satisfying	Very Satisfying	Very Satisfying
38	Sani	Satisfying	Satisfying	Very Satisfying	Very Unsatisfying	Very Satisfying
39	Carmin	Very Unsatisfying	Very Unsatisfying	Satisfying	Very Unsatisfying	Very Unsatisfying
40	Hakim	Very Unsatisfying	Satisfying	Very Unsatisfying	Very Unsatisfying	Very Satisfying

4.3 Output and Analysis Dendogram

After inputting data in SPSS, the data is then analysed in order to develop a dendogram which shows who belongs to which cluster. The dendogram is shown in the figure below while the clustering result is shown in the table after it.
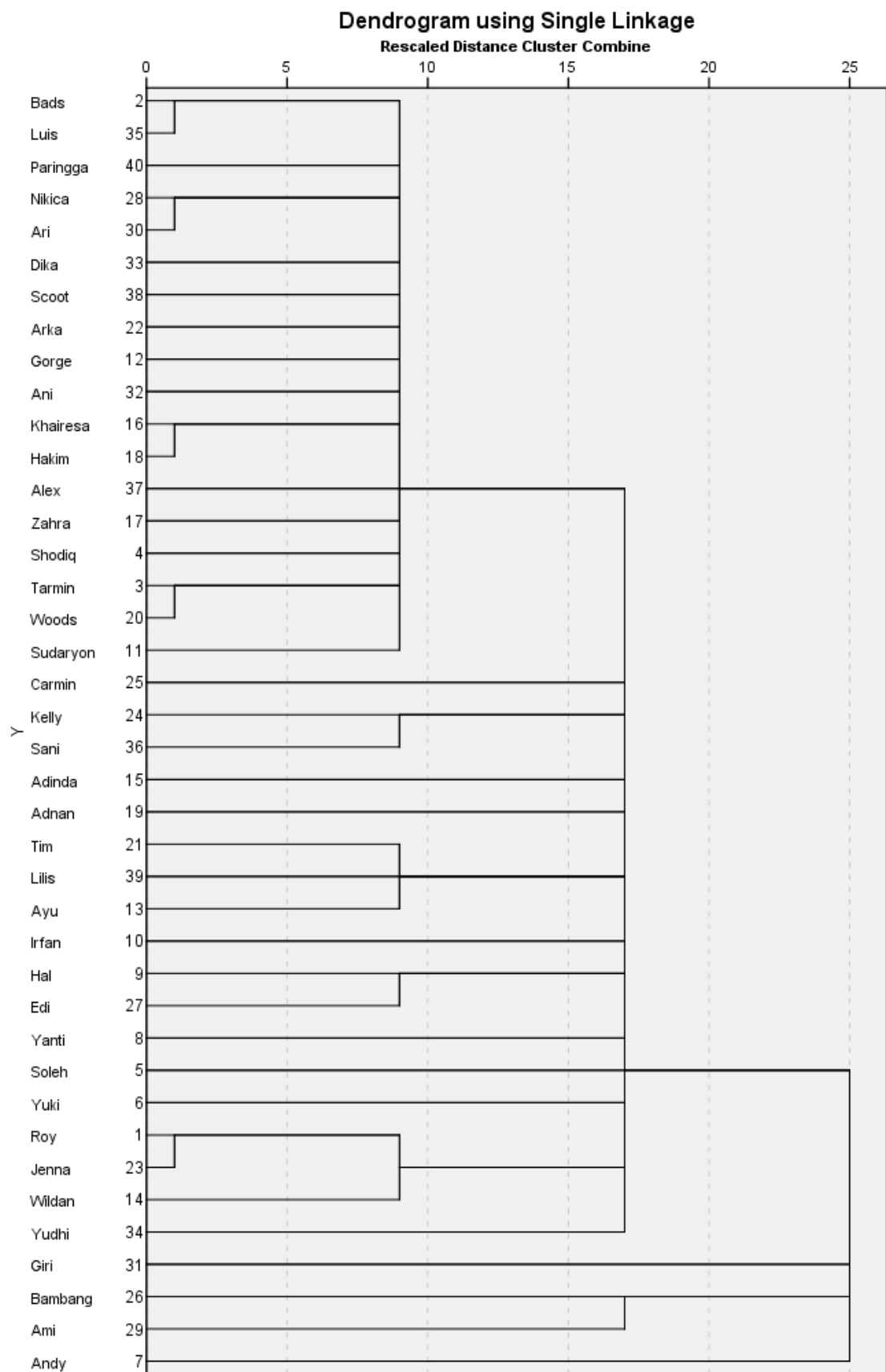
Figure 4.2. Clustering Dendogram

Cluster 1	Cluster 2	Cluster 3
Bads	Roy	Andy
Tarmin	Soleh	Bambang
Shodiq	Yuki	Ami
Sudaryon	Yanti	Giri
Gorge	Hal	
Khairesa	Irfan	
Zahra	Ayu	
Hakim	Wildan	
Woods	Adinda	
Arka	Adnan	
Nikica	Tim	
Ari	Jenna	
Ani	Kelly	
Dika	Carmin	
Luis	Edi	
Alex	Yudhi	
Scoot	Sani	
Paringga	Lilis	

4.4 Variable Crosstab Results for Customer Loyalty

After dividing the buyers into several clusters, more information about the characteristics and response of each cluster is needed. In order to find this information a crosstab can be done in SPSS. The crosstab result is as follows:

Table 4.3. Loyalty-Cluster Crosstab Result

			Cluster			Total
			1.00	2.00	3.00	
Service	Very Satisfying	Count	1_a	6_b	$1_{a, b}$	8
		% of Total	2.5%	15.0%	2.5%	20.0%
	Satisfying	Count	14_a	8_b	0_b	22
		% of Total	35.0%	20.0%	0.0%	55.0%
	Unsatisfying	Count	3_a	4_a	3_b	10
		% of Total	7.5%	10.0%	7.5%	25.0%
Total		Count	18	18	4	40
		% of Total	45.0%	45.0%	10.0%	100.0%

Table 4.4. Price-Cluster Crosstab Result

| | | | Cluster | | | |
			1.00	2.00	3.00	Total
Price	Very Satisfying	Count	1[a]	5[a]	1[a]	7
		% of Total	2.5%	12.5%	2.5%	17.5%
	Satisfying	Count	12[a]	10[a]	1[a]	23
		% of Total	30.0%	25.0%	2.5%	57.5%
	Unsatisfying	Count	5[a, b]	1[b]	2[a]	8
		% of Total	12.5%	2.5%	5.0%	20.0%
	Very Unsatisfying	Count	0[a]	2[a]	0[a]	2
		% of Total	0.0%	5.0%	0.0%	5.0%
Total		Count	18	18	4	40
		% of Total	45.0%	45.0%	10.0%	100.0%

Table 4.5.Follow up-Cluster Crosstab Result

| | | | Cluster | | | |
			1.00	2.00	3.00	Total
Follow_Up	Very Satisfying	Count	0[a]	5[b]	1[b]	6
		% of Total	0.0%	12.5%	2.5%	15.0%
	Satisfying	Count	9[a]	8[a]	1[a]	18
		% of Total	22.5%	20.0%	2.5%	45.0%
	Unsatisfying	Count	9[a]	3[b]	1[a, b]	13
		% of Total	22.5%	7.5%	2.5%	32.5%
	Very Unsatisfying	Count	0[a]	2[a, b]	1[b]	3
		% of Total	0.0%	5.0%	2.5%	7.5%
Total		Count	18	18	4	40
		% of Total	45.0%	45.0%	10.0%	100.0%

Table 4.6. Trustworthiness-Cluster Crosstab Result

| | | | Cluster | | | |
			1.00	2.00	3.00	Total
Trustworthiness	Very Satisfying	Count	5[a]	11[b]	0[a]	16
		% of Total	12.5%	27.5%	0.0%	40.0%
	Satisfying	Count	7[a]	3[a]	0[a]	10
		% of Total	17.5%	7.5%	0.0%	25.0%
	Unsatisfying	Count	6[a]	1[b]	4[c]	11
		% of Total	15.0%	2.5%	10.0%	27.5%

			Cluster			Total
			1.00	2.00	3.00	
Very Unsatisfying		Count	0a	3a	0a	3
		% of Total	0.0%	7.5%	0.0%	7.5%
Total		Count	18	18	4	40
		% of Total	45.0%	45.0%	10.0%	100.0%

4.5 Profile Crosstab Result

The previous crosstab was about the response of cluster. The crosstab results below are about cluster characteristics, which are as follows:

Table 4.7. Gender-Cluster Crosstab Result

			Cluster			Total
			1.00	2.00	3.00	
Gender	Male	Count	12a	10a	3a	25
		% of Total	30.0%	25.0%	7.5%	62.5%
	Female	Count	6a	8a	1a	15
		% of Total	15.0%	20.0%	2.5%	37.5%
Total		Count	18	18	4	40
		% of Total	45.0%	45.0%	10.0%	100.0%

Table 4.8. Age-Cluster Crosstab Result

			Cluster			Total
			1.00	2.00	3.00	
Age	15-19	Count	4a	3a	0a	7
		% of Total	10.0%	7.5%	0.0%	17.5%
	20-24	Count	8a	4a	2a	14
		% of Total	20.0%	10.0%	5.0%	35.0%
	25-29	Count	4a	7a	2a	13
		% of Total	10.0%	17.5%	5.0%	32.5%
	>=30	Count	2a	4a	0a	6
		% of Total	5.0%	10.0%	0.0%	15.0%
Total		Count	18	18	4	40
		% of Total	45.0%	45.0%	10.0%	100.0%

Table 4.9. Occupation-Cluster Crosstab Result

			Cluster			
			1.00	2.00	3.00	Total
Occupation	Student	Count	11_a	6_a	2_a	19
		% of Total	27.5%	15.0%	5.0%	47.5%
	Entrepreneur	Count	5_a	9_a	2_a	16
		% of Total	12.5%	22.5%	5.0%	40.0%
	Civil Servant	Count	1_a	3_a	0_a	4
		% of Total	2.5%	7.5%	0.0%	10.0%
	Others	Count	1_a	0_a	0_a	1
		% of Total	2.5%	0.0%	0.0%	2.5%
Total		Count	18	18	4	40
		% of Total	45.0%	45.0%	10.0%	100.0%

Table 4.10. Visiting City Ratio-Cluster Crosstab Result

			Cluster			
			1.00	2.00	3.00	Total
Visiting_City_Ratio	Yogyakarta Citizen	Count	10_a	7_a	3_a	20
		% of Total	25.0%	17.5%	7.5%	50.0%
	At least once every month	Count	1_a	3_a	0_a	4
		% of Total	2.5%	7.5%	0.0%	10.0%
	At least once every 6 month	Count	1_a	4_a	1_a	6
		% of Total	2.5%	10.0%	2.5%	15.0%
	At least once every year or more	Count	6_a	4_a	0_a	10
		% of Total	15.0%	10.0%	0.0%	25.0%
Total		Count	18	18	4	40
		% of Total	45.0%	45.0%	10.0%	100.0%

Table 4.11. Allocated Money-Crosstab Result

			Cluster			
			1.00	2.00	3.00	Total
Allocated_Money	<= 50,000	Count	5_a	2_a	1_a	8
		% of Total	12.5%	5.0%	2.5%	20.0%
	50,001-100,000	Count	4_a	3_a	0_a	7
		% of Total	10.0%	7.5%	0.0%	17.5%
	100,001-200,000	Count	3_a	5_a	0_a	8
		% of Total	7.5%	12.5%	0.0%	20.0%

		Cluster			
		1.00	2.00	3.00	Total
>=200,001	Count	6a	8a	3a	17
	% of Total	15.0%	20.0%	7.5%	42.5%
Total	Count	18	18	4	40
	% of Total	45.0%	45.0%	10.0%	100.0%

4.6 Characteristics of Each Cluster

Based on the profile crosstab result, the information obtained are as follows.

a. Cluster 1 is dominated by male aged 20-24 year old who are still studying, has been living as a citizen of Yogyakarta with allocated money more than IDR 200,001

b. Cluster 2 consist of male tourist who visits Yogyakarta at least once every 6 months or even more. They are aged between 25 and 29 and works as an entrepreneur who allocated the money for goods and souvenir at least IDR 200,001

c. Cluster 3 male, 20-29 student and entrepreneur, citizen is nearly alike with cluster 2 the difference they are aged 20 up to 29 and they are entrepreneur or students

4.7 Consumer response to the variable of customer loyalty

Based on the profile crosstab result, the information obtained are as follows:

a. Cluster 1 consist of people who are satisfied with the service quality, satisfied with the price, satisfied and dissatisfied with the follow-up, satisfied with the product quality, and satisfied with the trustworthiness.

b. Cluster 2 consist of people who are satisfied with the service quality, satisfied with the price, satisfied with the follow-up, dissatisfied with product quality, and very satisfied with the trustworthiness.

c. Cluster 3 consist of people who are dissatisfied with the service quality, dissatisfied with the price, 4 different response out of 4 response about follow-up, very satisfied with the product quality, and dissatisfied with the trustworthiness.

4.8 Benefit from the Knowledge Cluster formed for customer loyalty

The benefit that can be obtained from the information founded is that all of the cluster is ready to spend more than IDR 200,001 which means that money is not an issue for them. However, in order to keep these customer loyal the price and product quality must be proportional because it is an issue for cluster 2 (product quality) and cluster 3 (price)

while cluster 1 is dissatisfied with the follow-up and follow-up sometimes would be the product discount trigger which will change price.

Finally for Chocolate Monggo, in order to maintain their customer's loyalty there are several recommendation to follow. The first recommendation is ensuring that the shop keeper has high hospitality and give special offers to students who are citizen of Yogyakarta. The second recommendation is urging the workers to keep producing products with high quality in order to maintain tourist who visit the shop to come again. Last but not least, is ensuring that the price is proportional, probably by producing a product with more affordable price for students and entrepreneurs who are around 20-29 years old.

CHAPTER V
CONCLUSION AND RECOMMENDATION

5.1 Conclusion

Therefore, the conclusion of this research are as follows:

1. The indicator that significantly affect the observed variables of customer loyalty in this study is customer satisfaction, because customer loyalty will appear if consumer feel satisfaction with chocolate monggo service, then from customer satisfaction, it can be new oppotunity for chocolate monggo to develop their product, service, and market.

2. from the study, the researcher got 3 cluster after got dendogram result from spss software. First cluster is about people who are satisfied with the service quality, satisfied with the price, satisfied and dissatisfied with the follow-up, satisfied with the product quality, and satisfied with the trustworthiness. Then second cluster is consist of people who are satisfied with the service quality, satisfied with the price, satisfied with the follow-up, dissatisfied with product quality, and very satisfied with the trustworthiness. And the last cluster is about people who are dissatisfied with the service quality, dissatisfied with the price, 4 different response out of 4 response about follow-up, very satisfied with the product quality, and dissatisfied with the trustworthiness.

5.2 Recommendations

In the future research, may the requirement of this study can reach more aspect such as beverage or other kind of goods that include in typical goods from Yogyakarta, becasue in this city have so many typical goods which can be potential goods that customer shought.

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