

CHAPTER III

RESEARCH METHODOLOGY

Research methodology comes from the word of “method” which means the right way to do things and is logical” which means science or knowledge. So, methodology means how to do something by using the mind carefully to achieve a goal. In this study the authors used a quantitative research approach. The quantitative method is a research method that can be interpreted as a research method based on positivism philosophy, used to examine a particular population or sample, data collection using research instruments, quantitative/statistical data analysis, and to test a predetermined hypothesis.

Survey method is a method used in this study. research survey according to Kerlinger (Sugiyono, 2014) is: "Research conducted on large and small populations, but the data studied are data from samples taken from these populations, so it is found relative events of distribution and relationships between Sociological and psychological variables ". This study aims to determine the relationship between the halal label, price, and ingredients that influence the consumer purchase decision of cosmetics products.

A. OPERATIONAL DEFINITION

The definition of cosmetics according to the regulation of the Minister of Health of the Republic of Indonesia No. 445 of 1998 is, cosmetics are materials or mixtures of materials to be rubbed, glued, poured, sprayed or sprayed on, put in, used on the body or parts of the human body with a view to cleaning, maintaining,

adding attraction or changing the appearance, protecting so as to remain in good condition improve body odor but is not intended to treat or cure an illness (Depkes RI, 1976).

Based on how it is made, cosmetics are divided into two types namely traditional cosmetics and modern cosmetics. Modern cosmetics are; cosmetics produced by factories (laboratories) where the ingredients are mixed with chemicals to preserve the cosmetics. This is more durable and not easily damaged (Rostamailis, 2008: 85).

Muliyawan and Suriana (2013: 215) explain the main purpose of using cosmetic treatments is to get healthy skin. The beginning of skin health is cleanliness. Cosmetic cleansers are made from ingredients that work to remove impurities from the skin. Cosmetics are included from cosmetic cleaners, namely; 1) Soap, 2) Cleansing cream, 3) Freshener (Tranggono, 2007: 8)

Moisturizer is not included as a cosmetic cleaner but included in the cosmetics treatment series. Moisturizers function as a skin moisturizing agent to normalize water levels in the skin and to protect the skin against other cosmetics that will be harmful. Moisturizers are composed of oil-in-water emulsions (Kusantati, 2008: 120).

The powder is one type of decorative cosmetics that serves to cover up deficiencies on the face such as covering shiny facial skin or uneven skin tone. The basic ingredients of powder are talc and materials which have closing

properties, namely; zinc oxide and titanium dioxide (Muliawan and Suriana, 2013: 50).

The main purpose of using cosmetics in modern society is for personal hygiene, increasing attractiveness through make-up, increasing self-confidence and feeling of calm, protecting skin and hair from UV damage, pollution, and other environmental factors, preventing aging, and effectively general helps someone to enjoy and appreciate life (Tranggono, 2007: 7). Ingredients are the content of substances and the amount that must be contained in a product (MUI, 2001). The purpose of knowing the composition of the ingredients of cosmetics and to look at the formulation of ingredients is nothing but to avoid the negative reaction of cosmetics which are harmful to the body.

From Law No. 8 of 1999 concerning consumer protection, Pasal 4 point (c) states that consumers are also entitled to true, clear and honest information about the conditions and guarantees of goods and/or services making it the function of displaying the cosmetic composition contained in Article 3 of the Government Regulation on Labels and advertisements. The basic cosmetics content consists of various basic ingredients, active ingredients, and supplementary ingredients. These materials have various functions, namely as, solvents, mixers, preservatives, adhesives, fasteners, absorbents, and disinfectants (Kusantati, 2008: 106).

B. RESEARCH OBJECT

The object of this research is student who studies in Universitas Muhammdiyah Yogyakarta (UMY), Universitas Islam Negeri (UIN) Sunan Kalijaga, and Universitas Islam Yogyakarta (UII). These three locations were chosen due to its conditions that may reflect the lifestyle of cosmetics consumers in Yogyakarta.

C. TYPE OF DATA

The types of data that used in this research is primary data, which is an original data or the new data that obtained or collected directly by the author. While the approach used in this research is quantitative research. Technique of data collecting in this research is survey. The way to obtain primary data in this research is to use questionnaires distributed to students of Universitas Muhammadiyah Yogyakarta, UIN Sunan Kalijaga, and Universitas Islam Indonesia with Google Form.

D. TECHNIQUE OF SAMPLING

The sampling technique that used in this research is random sampling method. Random sampling method is a sampling technique that provide equal opportunities for each member of the population to be a research sample. The advantage of this method is that it can reduce bias and can know the standard error of research. While the disadvantages are that there is no guarantee that the selected sample can actually represent the intended population.

Then, the population in this study were students of Universitas Muhammadiyah Yogyakarta, UIN Sunan Kalijaga Yogyakarta, and Universitas Islam Indonesia. Where the number of students from this three universities during the year of research (using adaptive) in 2019/ 2020 respectively are 29,427, 20,571 and 27,023 students. The total population for this study was found to be 77,021 students. To find the total of sample that we need, we used Slovin's formula as follows;

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = number of samples to be studied

N = number of students

e = percent leeway carefully situations due to lack of sampling error that is still tolerated (refer to 5%).

The number of samples in those three University based on Slovin formula is:

$$n = = \frac{77.021}{1 + 77.021 (5\%)^2}$$

$$n == 397,9334 ,$$

$$n = 397 \approx 400 \text{ samples}$$

The number of respondents is obtained from Slovin formula, which the number will be rounded to 400 samples. Afterwards, the number of respondents of each university are set according to the calculation of the percentage of the total population, those are 152, 108, and 140 respectively for UMY, UIN Sunan Kalijaga, and UII.

UII	27,023	0.351	35%	140
UMY	29,427	0.377	38%	152
UIN	20,571	0.273	27%	108
Tot. population	77,021			

Source: Primary data 2019

*Explanation:

Green = total population of each University

Grey = total population o three University

Yellow = the total population of each Unversity / the total population of three University

Pink = the nominal of yellow make it in to %

Bule = the nominal of pink * 400

400 = total sample that we got from the slovin's

E. DATA COLLECTION TECHNIQUE

1. Questionnaire

Questionnaire is a data collection technique that is done by giving a set of written questions to respondents to answer (Sugiyono,

2016). In addition, the questionnaire is also suitable for use if the number of respondents is quite large and spread over a large area. Based on the form of questions or statements contained in the questionnaire, the questionnaire can be divided into 3 groups, namely open questionnaire, closed questionnaire, and semi-open questionnaire.

The questionnaire will be disseminated in the sample through purposive sampling method. This sampling technique is a method of applying respondents to be sampled based on certain criteria. Criteria of respondents in this study are students of the Universitas Muhammadiyah Yogyakarta, UIN Sunan Kalijaga, and Universitas Islam Indonesia. The questionnaire used in this study is a closed questionnaire type, so that the respondents can only choose the answers that have been provided.

While a questionnaire is a technique of data collecting conducted by giving a set of questions or a written statement for respondent to answer. Then, Likert scale is used to measure the attitudes, opinions, and perceptions of a person or group of people about social phenomena. This social research has been specifically determined by researchers, hereinafter referred to as research variables (Sugiyono, 2016). With a Likert scale, the variables to be measured are translated into indicator variables. Then the indicator is used as a starting point for compiling instrument items in the form of questions or statements. The answer for each instrument of the tem using a Likert scale has a graduation

from very positive to negative. For quantitative analysis, the answers can be given the following score;

- a. Strongly Agree given a score (4)
- b. Agree given a score (3)
- c. Disagree given a score (2)
- d. Strongly Disagree given a score (1)

2. Documentation

The documentation method is a way of gathering information obtained from documents (Arikunto, 2010). Documentation means searching the finding and collecting the data needed, whether in books, magazines and newspapers, BPS or data available on the internet and other sources that related to this research.

3. Literature study

The other way to get the information or data by reading some literature or journal that related with the problem in this research.

F. RESEARCH OPERATIONAL VARIABLES DEFINITION

This research uses two kind of variables: the dependent variable and independent variables. The dependent variable in this research is purchase decision, while the independent variables in this research are halal label, price, and ingredients.

1. Dependent Variable

The dependent variable, is a variable that is influenced or which becomes a result, because of the independent variables (Sugiyono, 2014). The dependent variable in this study is the purchase decision, which is a decision process to buy cosmetics products not just to know various factors that will affect the consumer but based on the role in purchasing and the decision to buy cosmetic products. The stages in buying decisions are problem recognition, information search, evaluation alternatives, buyer decisions and behavior after purchase.

2. Independent Variable

The independent variable is the variable that influences or becomes the cause of change or the incidence of the dependent variable (Sugiyono, 2014). The independent variables in this study are grouped into 3 variables as follows

a. Halal label

The halal label is a label that contains information about halal with halal standard according to Islam. Based on Indonesian government regulation No. 69 of 1999 concerning food labels and advertisements, “the label is any information regarding a product in the form of a picture, writing, a combination of both, or other forms that are included in the product, inserted into, affixed to, or is part of the packaging product. Halal label is measured with the

following indicators”. The halal label is measured with the following indicators:

- 1) Drawings are the result of imitations in the form of shapes or patterns (animals, people, plants, etc.) made with writing scribbles.
- 2) The script is the result of writing that is expected to be read.
- 3) The combination of images and writing is a combination of the results of the image and the results of writing which are made into one part.
- 4) Stick to the package, can be interpreted as something that is attached (intentionally or unintentionally) to the package (protective of a product).

b. Price

Stanton in (Putri, 2018) states that the price is the amount of money (possibly added by some goods) needed to obtain some combination of products and services that accompany it. Price is the amount of money that consumers must pay to use it obtain the desired cosmetic products.

c. Ingredients

In this case, the intended ingredients is the composition/ingredients contained in a cosmetic product.

G. DATA QUALITY AND INSTRUMENT TEST

Before being used in actual research the research questionnaire will be tested first. The instrument trials were conducted to find out whether the instruments that were compiled were really good results because the merits of the instruments would affect whether or not the data were correct and really determined the quality of the research results. The instrument trials were conducted to find out whether the instruments that were compiled were really good results because the merits of the instruments would affect whether or not the data were correct and really determined the quality of the research results. Good or bad the instrument is shown by the level of validity (validity) and reliability (reliability). So that later it can be known whether or not it is appropriate to be used for research on students of Universitas Muhammadiyah Yogyakarta, UIN Sunan Kalijaga Yogyakarta and Universitas Islam Indonesia. The trial of this instrument was conducted on 30 respondents outside the population sampled in actual research.

1. Validity Test

Validity test is used to determine the accuracy of a measuring instrument in carrying out its measurement function. A validity test is used to select among relevant statement items for analysis by testing the correlation between statement item scores and the total score of the statement. Validity is a measure that shows the level of validity or validity of an instrument. A valid or valid instrument has high validity. Conversely, an instrument that is less valid means it has low validity. The

validity test in this study uses the Product Moment formula from Pearson in (Arikunto, 2010).

2. Reliability Test

Reliability tests are used to determine the extent to which measurement results can be trusted. The reliability test is also a way to see whether the alternative measurement questionnaire used is consistent or not. (Arikunto, 2010) stated that: "Reliability refers to an understanding that an instrument can be trusted enough to be used as a data collection tool because the instrument is already good". After testing the validity of the instrument and obtaining valid items, then the reliability of the valid items is tested using the Cronbach alpha formula. The calculation is done with the help of SPSS 25.0 computer.

H. TECHNIQUE ANALYSIS DATA

1. Requirements Analysis Testing

a. Normality Test

Normality testing is performed to determine whether or not a residual value distribution is normal. According (Ghozali, 2016) normality test serves to test the regression model used in the study, nuisance variable has a normal data distribution. This test is used to measure data on ordinal scale, interval, or ratio. If analysing using parametrical method, then normality requirement must be fulfilled that data come from normal distribution. If the data is not normally distributed or the number of samples is too small then it

will be used non parametric statistic. This research will use One Sample Kolmogorov-Smirnov test using significance level of 0.05. Normal data when the significance is greater than 0.05.

- a. If the value is significant > 0.05 , then the data distribution is normal.
- b. If the value is significant < 0.05 , then the data is not normally distributed.

2. Heteroscedasticity Test

Heteroscedasticity test was performed to test the regression model occurring residual variance similarity from observation to other observations. If the residual variance of one observation with another observation remains, it is called homoscedasticity, but if the variance is changed it is called heteroscedasticity (Ghozali, 2016). Measurement of heteroscedasticity test using Glejser test with the help of SPSS.

The basis of taking the Glejser test is if the T_{count} value is smaller than T_{table} and the significance value is greater than 0.05 then no Heteroscedasticity occurs, if the T_{count} value is greater than T_{table} and the significance value is less than 0.05 then Heteroscedasticity occurs. This test can also be seen through the plot graph, if all the points are debated wavy above the value 0 or below it happens heteroscedasticities, if the points spread evenly under the value of 0 and above the value 0 it does not happen heteroscedasticity.

3. Multicollinearity Test

Multicollinearity test is used to determine whether there is multicollinearities between free variable or not. The requirement of multicollinearity is if the price of intercorrelation between independent variables or equal to 0.800. If the price of intercorrelation between the independent variables is less than 0.800 means there is no multicollinearity, meaning the data analysis can be continued.

According to (Priyatno, 2012), a good regression model should not have perfect or near perfect correlation between independent variables. Therefore, this test method can also be done by looking at the Tolerance and Variance Inflation Factor (VIF) values commonly used to indicate the presence of multicollinearity in the regression model. If the VIF value is less than 10 and has a Tolerance number greater than 0.1 then the regression model is free of multicollinearity. In other words according to (Ghozali, 2016) the existence of multicollinearity is a tolerance value of ≤ 0.10 or equal to VIF value ≥ 10 . How to detect whether or not there is multicollinearity in the regression model is:

- a. R^2 quite high (0.7-0.1), but the t-test for each regression coefficient is not significant.
- b. R^2 is a sufficient condition but is not needed for multicollinearity. Because at low $R^2 < 0.5$ can also occur multicollinearity.
- c. Regression of the independent variable X with other independent variables, then R^2 is calculated using the F test;

If $F_{\text{calculated}} > F_{\text{table}}$ means that H_0 is rejected, and there is multicollinearity.

If $F_{\text{calculated}} < F_{\text{table}}$ means that H_0 is accepted, and there is no multicollinearity.

The problem of multicollinearity can also be seen in the tolerance value and inflation variance factor (VIF) in the regression analysis in SPSS. If the tolerance value is greater than 0.1 and less than 10 VIF, there is no problem with multicollinearity.

I. DATA ANALYSIS METHOD

Data analysis according to (Sugiyono, 2014) is an activity after the data from all respondents were collected. Activities in data analysis are grouping data based on variables from all respondents, presenting data for each variable studied, doing calculations to answer the problem formulation and doing calculations to test hypotheses that have been carried out.

1. Multiple Linear Regression Analysis

Multiple regression analysis is used to analyse the relationship of the influence of one numerical independent variable (X) to the dependent variable (Y) Algifari in (Ikhwati, 2007). Multiple regression analysis is used to see whether or not there is influence between halal label, price, and ingredients on purchasing decisions of cosmetics product. In this study, hypothesis testing using SPSS for Windows software with

multiple regression equations. The steps used in multiple linear regression analysis are as follows:

Make a line equation with predictor level, by formula

$$Y = a + b_1X_1 + b_2X_2$$

Information:

Y: Dependent variable or investment interest

X: Independent variable or investment motivation and investment knowledge

a: The value of Y if X = 0

b: Multiple linear coefficients

J. HYPOTHESIS TEST

A statistical calculation is called statistically significant if the T-statistic value is in a critical area (the area where Ho is rejected). Conversely, it is called insignificant if the statistical test value is in the area where Ho is received. There are two types of accuracy criteria that must be done in a regression analysis, namely:

1. Parameter Individual Test (t-test statistic)

To test how the influence of each independent variable individually to the dependent variable, a t-test was performed. So, it can be known whether or not the hypothesis is accepted. T test aims to test the hypothesis about the effect of independent variables on the dependent variable. In this study the partial t test was used to test the three

independent variables, namely; Halal label, price and ingredients of the dependent variable, namely; buying decision. (Ghozali, 2016) explains that the magnitude of the significance level of each variable can be known by looking at the p value in the t test.

The testing criteria are as follows;

- a. Significant if $p\text{-value} \leq \alpha$ (0.05), it means that there is a partial effect between the independent variables on the dependent variable.
- b. Significant if $p\text{-value} \geq \alpha$ (0.05), it means that there is no partial effect between the independent variables on the dependent variable.

2. Significance Simultaneous Test (F test)

This test is carried out to determine whether all independent variables (simultaneously) can affect the dependent variable, Algifari in (Ikhwati, 2007). In this study, the F test was used to test simultaneously the four independent variables, namely; brand awareness, perceived quality, brand associations, and brand loyalty to the dependent variable, namely; buying decision. F test is done by looking at the probability. If the probability value is smaller than 0.05 then the independent variable simultaneously does not affect the dependent variable (Ghozali, 2016).

The testing criteria are as follows;

The H_0 hypothesis to be tested is whether all parameters in the model are zero, or:

$$H_0: b_1 = b_2 = \dots = b_k = 0$$

That is, are all independent variables not significant to the explanation of the dependent variable. The alternative is the hypothesis (H_a), not all parameters are simultaneously equal to zero, or:

$$H_0: b_1 \neq b_2 \neq \dots \neq b_k \neq 0$$

That is, all explanatory simultaneous variables are significantly independent of the dependent variable. To test the hypothesis using F statistics with criteria decisions are follows:

- a. Quick view: when the value of F is greater than 4, H_0 can be rejected at a confidence level of 5%. In other words, we accept the alternative hypothesis, which states that all independent variables simultaneously and significantly affect the dependent variable.
- b. Comparing the results of the value F with F table, when the value of F is more than F table, it means that H_0 is rejected and H_a is accepted.

3. Coefficient Determination (R^2)

The coefficient of determination (R^2) is used to measure how much the model's ability to explain variations of the dependent variable. The small value of R^2 indicates that the ability of independent variables in explaining the dependent variable is very limited. R^2 values start from 0 to 1. A value approaching one means that the independent variables provide almost all the information needed to predict the independent variable. The

coefficient of determination is to find out how big the dependent variable is in the form of a percentage.

R^2 has a fundamental disadvantage that the results are biased towards independents incorporated into the model. As every additional one independent variable will cause the value of R^2 to increase whether the variable has a significant effect or not on the independent variable. To overcome this, the value of Adjusted R^2 (Munandar, 2016: 36) is used.