

## **Chapter III**

### **Research Method**

#### **III.1 Research Design**

As stated in the chapter 2.2 there are two hypotheses that need to be proven, H1: There is a **positive** relationship between income level on the changed consumers' purchasing behaviour of loungewear and H2: There is a **positive** relationship between price sensitivity on the changed consumers' purchasing behaviour of loungewear. To prove the hypotheses between the variables a research is conducted towards the population using a descriptive research method. This research method studies the characteristics of the population or phenomenon study by collecting quantifiable information from the population sample to be statistically analyze. This method focuses more on the "What" aspect rather than the "Why" of the research subject, which corresponds with the research objectives to find out about what are the impacts of income and price sensitivity to the changed consumers' purchasing behavior on loungewear during Covid-19 crisis. The results of the findings using the quantitative method can give a generalize understanding towards the finding since it is based on a larger population (Bell et al, 2018).

### III.2 Data Collection Method

This research uses the survey research method by using the Likert scale format questionnaire as the data collection method. The questionnaire consists of 21 questions in total and five-point indicators to show how strong the correlation between the dependent and independent variables in each question. The five-point scale indicates how strongly the relationship is between variables as the following:

Scale 1: Strongly disagree

Scale 2: Disagree

Scale 3: Neutral

Scale 4: Agree

Scale 5: Strongly agree

The five scale of Likert is being used because Likert scale is a common method used for data collection, it is easy to understand, and it takes less time to complete compare to higher-point scales. This method has a lower margin of error compare to any scale without neutral option where the results validity can be question since people are not able to express what they are thinking and feeling.

The overall view of the questionnaire can be seen below, and the questionnaire will be shown in the Appendix 1

Variable type		Variable	Retrieved from
Dependent (Y)		Changed in consumers' purchasing behavior of loungewear	Questionnaire
Independent (X)	Main Variables	Income (X1) Price sensitivity (X2)	Questionnaire
	Controlling variables	Age (X3) Gender (X4)	Questionnaire

*Table 1 Overview variables*

This creates an equation model of

$$y = \alpha_0 + \alpha_1 \text{Income} + \alpha_2 \text{Price sensitivity} + \alpha_3 \text{Age} + \alpha_4 \text{Gender}$$

Indication:

$\alpha_0$  = Constant

$\alpha_{...}$  = *Exp(b)* or odds ratio of variable

The respondents are qualified to answer the questionnaire if they are from DKI Jakarta and at the age of 20-34 years old. The age group used in this research is

based on the news report by Kompas.com where it is said that 80 percent of e-commerce consumers are at the age of 15-34 (Tashandra, 2018). According to Statista, the average working age in Indonesia in 2020 is estimated to be around 29.7 years old (Statista, 2021). Therefore, the age group selected for this study is around 20-34 years old. As the number of the total respondent needed is 100 respondents. The sample size is calculated by using Lemeshow formula since the number of the total population is unknown.

Lemeshow sample size formula:

$$\frac{Z^2 \times P(1-P)}{d^2}$$

Z (confidence level) = 95% or Sig = 1.96

P (maximum estimation) = 0.5

D (alpha or sampling error) = 0.1

Calculation for this research sample size is as follow:

$$\frac{1.96^2 \times 0.5(1 - 0.5)}{0.1^2} = 96.04 \approx \textit{rounded up to 100}$$

Therefore, the number of respondents needed for this research is at least 100 people to represents the whole population. To test the reliability of the questionnaire, pilot test is conducted with 30 people therefore, the total respondents gathered from the population is 130 respondents. The sampling method used is the non-probability sampling method where the population do not have equal opportunity to be part of the research sample. The sample is collected by using volunteer sampling method where the invitation to the questionnaire is posted on the social media where respondents participated in the research strongly rely on the participants (Vehovar et al., 2021)

### III.3 Reliability and Validity Test

Reliability test is conducted to find out the possibility of the same result obtained if it is conducted again by other researcher using the same research method. Reliability test are often used with quantitative research to see the consistency of the findings and it can be established using a pilot test by collecting data from 30 subjects. Data collected from the pilot test is analyzed using SPSS (Statistical Package for Social Sciences, by IBM incorporated) reliability analysis. The Cronbach's Alpha will be shown, and it is used to test the internal reliability. The computed coefficient alpha can range from 0 to 1, with 0 representing a questionnaire that is not reliable and 1 representing a reliable questionnaire. The rule of this test is when the reliability coefficient (alpha) is 0.70 or higher it is considered reliable. On the other hand, when the coefficient (alpha) is below 0.70 it means that there is no internal reliability (Bell et al, 2018).

Validation is the most important criteria in a research aside from reliability. Having a data that is reliable doesn't mean that it is valid thus the data cannot be used to provide an accurate finding for the research. Therefore, it is important for the data to be both reliable and valid which mean that the indicators use to measure the concept can be trusted. The research is valid if the internal validity that questioned all the factors influence the relationship between the independent and dependent variables can be captured. In this research, there area two types of validity test conducted. The first method used is the face validity measure where the questionnaire is reviewed by more than two people to make sure that the questions are easy to understand and constructed in a way to provide the researcher the relevant or accurate findings. Other than face validity, Pearson Correlation validity test is used to find the internal validation between the factors. The data are valid if the significant (two-tailed)  $< 0.05$  and the obtained value of Pearson Correlation  $>$  critical value in the Pearson Correlation table.

Formula to find Critical Value:

$N$  = sample size

Degree of freedom =  $N - 2$

Therefore,

$N = 30$        $DF = 30 - 2$        $DF = 28$

According to the Pearson Correlation table the critical value of Pearson Correlation with the confidence level of 95% (0.05) is 0.361. Therefore, for the data to be valid the obtained Pearson Correlation value needs to be higher than 0.361.

Variables	N	Cronbach's Alpha	Significant (Two-tailed)	Pearson Correlation
Correlation between income and changed of purchasing behavior	130	0.826	0.000	0.968
Correlation between price sensitivity and changed of purchasing behavior	130	0.803	0.000	0.921

Note:

Cronbach's Alpha > 0.70 means the data are reliable

Significant < 0.05 and Pearson Correlation > 0.05 (0.361) means the data are valid

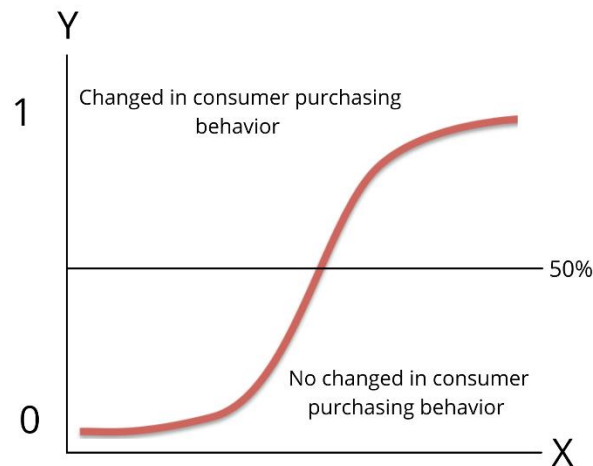
***Table 2 Cronbach's Alpha and Pearson Correlation***

As shown above, the Cronbach's Alpha for Correlation between income and changed of purchasing behavior is 0.826 and 0.803 for Correlation between price sensitivity and changed of purchasing behavior. Both coefficient (alpha) is above 0.70 which indicates that there is a strong internal reliability in the questionnaire thus it is safe to conclude that the data collected from this questionnaire is reliable. As for the validity of the data, it showed that the significant value for the Correlation between income and changed of purchasing behavior is  $0.000 < 0.05$  and the Pearson Correlation obtained value is  $0.968 > 0.361$ . The significant value for Correlation between price sensitivity and changed of purchasing behavior is  $0.000 < 0.05$  and Pearson Correlation obtained value is 0.921. Both Variables has significant values smaller than 0.05 and obtained value greater than 0.361, this indicates that the data collected for both variables are valid. The validity test above is shown in a form consolidation of the total data of 21 questions. The breakdown validity test of each questions will be show in Appendix 2.

#### **III.4 Binomial Logistic Regression**

Binomial Logistic Regression is used to analyze the data collected from the survey with the total respondents of 130 people living in DKI Jakarta. Binomial Logistic regression is a specific type of Generalized Linear Model (BLM) that gives a predictive analysis and is used to explain and describe the relationship between one dependent binary variable (Y) and other one or more independent variables (X). Binary variables are variable that can only have two values such as Yes or No, Male or Female, and True or False (Hoffman, 2019). That indicates Logistic Regression can only predicts True or False data instead of continuous data. Logistic Regression has an "S" shaped logistic function that goes from 0 to 1 that shows the probability of the expected result. The probability of the results is classified in two categories "Success or Fail". Therefore, there are rules to classified which category a data

belongs to. The probability of a success is always above 50 % and the probability of a fail is below 50%.



**Figure 14 Binomial Logistic Regression Function**

*Source: Author*

This study used Binomial Logistic Regression is used to analyze the changed in consumers' purchasing behavior of loungewear because it is easy to use, fast, provides measure of how appropriate a predictor, it also shows the direction of the association (positive or negative), and it provides the study with a good accuracy for a simple data set. Therefore, it is appropriate to use Binomial Logistic Regression to be used in this study.



### **III.5 Ethical Consideration**

It is very important to consider the ethical issue during the questionnaire making process since it will directly affect the respondents who are taking part in the research. There are things that needs to be considered such as, participants ‘ privacy, confidentiality, consent, and withdrawal right (Regmi et al., 2016). When the participants answering the questionnaire, the researchers need to make sure they understand that the data will only be used for research purposes and it is very confidential and will not be shared nor used for other purposes, which assured their privacy (Bell et al, 2018). It is also very important to get the participants’ consent before they start answering the questions. Therefore, researchers need to make sure that they agree and understand completely about the type of data they need to give and the usage of the data. The participants also need to have the rights to withdraw from their previous answer if they feel like changing their answer. Therefore, the option to refer to the previous questions is provided to maintain ethically sound research conduct (Regmi et al., 2016).