CHAPTER III

RESEARCH METHODOLOGY

3.1. Research Approach

According to (Dr. Heri Erlangga, 2021), the pandemic has resulted in a significant increase in survey-based research. Survey research is a subset of descriptive research, which is a formal method for gathering the same or similar information from different groups or people, primarily through the distribution of questionnaires or the conduct of personal interviews. This research includes a sample survey (because it is conducted on a subset of the population) and is a type of cross sectional because it is conducted on the population at a specific time / time interval.

This study employs a quantitative approach, with SPSS as the analysis method. According to (Abdulrauf Animashaun, 2019) A quantitative study is defined as a systematic investigation of phenomena through the collection of numerical data and the application of statistical, mathematical, or computational techniques. The positivism paradigm is the foundation of quantitative research, which advocates for approaches based on statistical breakdown and include strategies such as inferential statistics, hypothesis testing, mathematical exposition, experimental and quasi-experimental design randomization, blinding, structured protocols, and questionnaires with a limited number of predetermined answers. Variables and hypotheses are inseparable from quantitative research objectives; variables are ideas with variations that can take many different values, whereas hypotheses are unproven assertions or propositions about the relationship between variables. Survey, case study, and experimental research are the most common quantitative research strategies. In research, such a group is known as a population. Before starting research, the researcher must decide on and precisely define the population. A well-defined population makes it easier for the researcher to select a sample large enough to represent the entire population. The most important factor in determining the success of a study and the dependability of its findings is the sample.

3.2. Location and Time of Research

This study was conducted on Shopee consumers aged 17 to 45 years old who live in Surabaya and purchased their needs through Shopee. Field research, specifically questionnaire distribution, is scheduled to take place between February and June of 2022. The time frame for this research as a whole, from writing proposals to preparing thesis reports, is from February to June 2022. The table below explains the specifics of the overall research strategy:

Table 3 Location and time of research

Agenda	February				March				April				May				June			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Submission of Title and Advisory Lecturer																				
Research Object Observation																				
Observation of Business / Management Phenomena																				
Determining the research problem																				
Theoretical & empirical studies																				
Synthesis and Rationalization of Theory																				
Research methods																				
Questionnaire Preparation																				
Proposal Seminar Exam																				
Data collection																				
Tabulation and Data Processing																				

Description of Research Results																			
Interpretation of Research Results																			
Data completeness (Chapters 1-5, final appendix)																			

3.3. Population and Sample

The research process consists primarily of the formulation of research problems and their resolution. The following are the population and samples, as well as the sampling technique, used in this study:

A. Population

Population is a broad category that includes objects/subjects with specific qualities and characteristics that have been determined by research to be studied and from which conclusions can be drawn. According to the population definition, the population in this study is people who live in the city of Surabaya and use Shopee.

B. Sample

The sample is a subset of the population in terms of size and characteristics. To calculate the number of population members taken according to certain procedures in this study so that they can represent the population". Implementing a sample of river water to represent the entire population of river water in a specific area, or taking a sample of some employees to represent the population of all employees in a company, are two examples of samples.

Non-probability sampling via a purposive sampling technique was implemented. According to (Fitria Maesaroh, Analysis Of Perceived Value And Trust Of Satisfaction And Its Impact On The Loyalty Of Online Shopping, 2021), purposive sampling is "data collection according to predetermined criteria (objectives)"

According to (Ejub Kajan, 2019), the sampling technique is defined as "a method for determining the number of samples in accordance with the sample size that will be used as the actual data source, while taking into account the characteristics and distribution of the population in order to obtain a representative sample."

The Cohran formula was used to determine the number of samples in this study because the population of this study, namely Shopee customers aged 17 to 45 who had previously purchased goods from Shopee, was large, unlimited, and unknown. The Cochran method is used in this study. (Chunting Liu, 2020)

Cochran's formula:

n0: sample size

Z2: The level of confidence, in this study is 95%

p: the proportion of an attribute in a population, in this study it is assumed p = 0.5

q: 1-p

e: the desired level of confidence, in this study the degree of confidence is 90%, which means the margin of error is 10% or 0.1

The Z value is obtained from the statistical table which contains the area under the normal curve.

n0 = (1,96)2 (0,5) (0,5)
(0,1)2

n0 = 96, 04

As a result of the above calculation, the sample size is n = 96.04 = 97 people. A total of 100 people were counted. Furthermore, the study included a variety of demographic respondents, as shown in the table below:

Table 4 Sample

No.	Categorical	Frequency	Percentage
	Age		
	17-20 years	14	14,0

	21-30 years	46	46,0
	31-40 years	31	31,0
	>40 years	9	9,0
	Total	100	100,0
	Gender		
	Male	38	38,0
	Female	62	62,0

Shopee users who have made transactions on the Shopee app can be sampled. In this study, the sample was determined using the non-probability sampling method, which is a sampling technique that does not provide equal opportunities for each element or member of the population to be selected as the sample. Due to the large number of Shopee users and time constraints, sampling was done using the convenience method, which means that someone was chosen as a sample because that person happened to be there or he knew the person.

3.4. Research Type

This study employs an associative/correlational research design with a quantitative approach. A study that aims to determine the effect or relationship between two or more variables is known as associative/correlational research. While the method used is a quantitative method. This approach is used to examine the population or specific samples, data collection using research instruments, quantitative/statistical data analysis, with the goal of testing the hypothesis that has been established.

3.5. Types and Sources of Data

This study makes use of both primary and secondary data. Primary data is data that is collected and processed directly from an object by an organization or individual. Secondary data, on the other hand, is data that has been obtained in a ready-made form, has been collected and processed by other parties, usually already in the form of publications, so that the data can be directly used by researchers without having to process it again, as opposed to primary data, which requires processing before use.

3.6. Operational Definition of Variables

Table 5. Operational definition of variables

Variable	Indicators	Questionnaire Items	Scale
CRM (X1) Customer Relationship Management (CRM) can be defined as a web-based application or an industry in information technology for methodologies, strategies, software, or software used to assist a company in managing its customer relationships. (Basworo Dibyo, Effectiveness of Customer Relationship Management (CRM) and Customer Satisfaction on	**1. Perceived Reward**	1. Shopee site offer extra benefits specifically in the form of rewards to customers (including discount or bonus)	Likert
	2. Preferential Treatment	1. Shopee site provides a variety of superior treatment to customer	
	3. Interpersonal Communication	1. Shopee allows customers to participate actively in a two-way online communication (for complaint or information)	
	4. Direct Mail	1. Shopee provides product offering (advertising) or latest product information via direct mail	

Shopee Customer Loyalty, 2021) **2. Customer Value (X2)** Customer-perceived value is an important concept in marketing. It is a key feature used to define the appeal of goods or services to customers, and it is the primary reason why customers are interested in certain products. (Gang Zhang, 2020) **3. Perceived Online Convenience**	**1. Performance Value** **2. Price Value**	1. Shopee has a good and reliable service and product quality. 1. Shopee has competitive product price 2. Shopee products have an appropriate comparison between price and quality 1. Shopee service and shopping experience provides emotional satisfaction and bond to the costumer 2. Shopee service and shopping experience are boosting customer's trust. 1. Shopee has all the products that customer's need	

(X3) Customer convenience is any element of customer experience that saves the customer time and effort. It is common for products, services, environments and processes to be designed to offer customer convenience. Customers are often strongly motivated to save time and effort (Gautam, 2019)		2. Customers can decide to shop in Shopee quickly 3. Customers can get information about the products needed from Shopee easily.	
	3.Emotional Value	1. Shopee has an easy platform to be accessed by costumers. 2. Shopee services provides convenience for customers to shop online swiftly and safely.	
		1. Shopee provides various means of transaction payments that can be accessed easily by customers. 2. Shopee transaction procedure is not complicated and fast	
	1.Decision making convenience	1. Customers can search for the products needed in Shopee quickly. 2. Customers receive	

		recommendations about their preferred products from Shopee regularly. 3. Customers obtain information about discounts and promotions from Shopee regularly.	
	2. Access Convenience	1. Shopee provides a clear and easy procedure of returning products and refund for the customer. 2. When a customer has a problem in shopping, Shopee always provide a win-win solution 3. Shopee provides a quick response by the customer service for any problems faced by customers.	
4. Customer Satisfaction (X4) Customer satisfaction is a customer's feeling of pleasure or disappointment	**3. Transaction Convenience**	1. Shopee provides a better shopping experience that exceeds customer expectations. 1.Customers are satisfied with	

with a product that arises due to the comparison, performance and expectations received (Hashem Aghazade, 2019)		shopping experience in Shopee	
		1. Customers are not interested to shop in other e commerce platforms besides Shopee.	
	4. Benefit Convenience		
5. Customer Loyalty (Y) Customer loyalty is a positive feeling that a customer has for the service he or she gets when making a transaction at a company so that the customer will get used to making further transactions on the product or service to get		1. Customers have a strong commitment to repurchase on Shopee	
		1. Customer is willing to subscribe to Shopee services like discount coupons etc.	
		1. Customer makes a regular purchase on Shopee.	
	5. Post benefit Convenience		

good service on an ongoing basis (Miftahul Husna Hutapea, 2021)		1. Customers of Shopee is not easily attracted by promotion from other e commerce platforms	
	1. Shopping experience	1. Shopee customers do not easily replace Shopee platform as their main shopping destination, although there are promotions from other e commerce.	
	2 Satisfying shopping experience		

	3. Lack of interest for alternatives **1. Repurchase commitment** **2. Product or service subscription**		

	3. Consistency of Purchase **4. The difficulty of being influenced by situational factors**		

	5. The difficulty of being Swayed by potential marketing efforts		

3.7. Data Collection Method

A questionnaire (Question list), books, and journals were used to collect data for this study. A questionnaire is a data collection technique in which a set of written questions is given to the respondent to be answered. Questionnaires can be in the form of closed or open questions/statements, and they can be given directly to respondents or sent via post or the internet. The Likert scale in assessment is used in this instrument as a measurement scale, namely:

1. Strongly Agree, score :5
2. Agree, score: 4
3. Neutral 3
4. Disagree, score :2
5. Strongly Disagree, score:1

The book is one of the literature reviews that provides a thorough explanation of a topic. While the journal provides in-depth explanations and usually focuses on one specific topic or topic special.

Instrument Validity and Reliability Test:

1. Validity test

A validity test is used to assess the reliability and validity of a questionnaire. A questionnaire is said to be valid if the questions on it can reveal something that the questionnaire can measure. The significant test is performed by comparing the calculated r value to the r table for the degree of freedom (df) = n-2, where n is the number of samples.

Validity test with a 5% significance level. If r count > r table and is positive, the variable is valid; if r count < r table, then the variable is invalid.

2. Reliability test

Reliability is a tool used to assess the validity of questionnaires that are indicators of variables or constructs. A questionnaire is said to be reliable if a person's response to a statement is consistent or stable over time. The program SPSS can be used to perform the Reliability Test, which will provide facilities for measuring reliability by testing Cronbach Alpha statistics. A construct or variable is stated to be reliable if gives Cronbach Alpha value > 0.70

3.8. Data Analysis Techniques

The analysis technique is a step in the procedure investigation. The study's data analysis was carried out to answer the formulation problems and hypotheses that were proposed. The outcome of additional data analysis is interpreted and made in the conclusion. The data management technique used is statistical analysis using SPSS 21 software. In the study, the following data analysis techniques were used:

1. Descriptive Statistical Analysis Test

Descriptive statistics is a method for providing an overview or description of data based on the values of the Average (mean), Standard Deviation, Variance, Maximum, Minimum, Sum, Range, Kurtosis, and Skewness distributions. Descriptive data is used to provide an overview of a description of the research respondents as well as a description of each participant. in the questionnaire.

2. Classical Assumptions

The Classical Assumption Test is a test used to determine whether or not a regression model has classical assumption problems. The assumption check consists of four tests that must be passed, which are as follows:

a. Normality test

A normality test is a test that determines whether or not a regression model is normal. The distribution of confounding variables or residuals is normal. The normality test is based

on the assumption that the residual value follows a normal distribution. If this assumption is violated, the statistical test for a small sample size will be invalid. There are two methods for determining whether the residuals are normally distributed or not: graphical analysis and statistical tests. Looking at the histogram graph, which compares the data with observations with a distribution close to the normal distribution, is one way to see the normality of the residuals. If the residual data distribution is normal, the line that describes the actual data will follow the diagonal line. While statistical tests were performed by looking at the values of Kurtosis and Skewness, the results of the Kolmogorov Smirnov test can be seen to test whether the residuals are normally distributed. If the result of the One Sample Kolmogorov Smirnov test is less than 5% or 0.05, the regression model does not meet the assumption of normality, and vice versa.

b. Autocorrelation Test

The autocorrelation test determines whether there is a deviation from the classical assumption of autocorrelation in the regression model. The Durbin-Watson test was used in this study for method testing (DW test). The DW test is only applicable to first-order autocorrelation and necessitates the inclusion of constants in the regression model. As for how to decide whether there is autocorrelation, if the Durbin Watson test conditions (DW Test) provide that if DW is greater than du and (4-du), then the null hypothesis is accepted and autocorrelation does not occur.

c. Multicollinearity Test

The multicollinearity test determines whether the regression model discovered a correlation between the independent variables (independent). There should be no correlation between the independent variables in a good regression. This variable is not orthogonal if the independent variables are correlated. Variable orthogonal is an independent variable with a correlation value of zero among independent variables. The VIF (Variance Inflation Factor) and tolerance values can be used to detect the presence or absence of Multicollinearity in a regression model. If the value of the VIF with the provisions of the value >0.10 and VIF 10 is obtained, it can be concluded that there is no multicollinearity in the model of research regression.

d. Heteroscedasticity Test

In the regression model, the heteroscedasticity test determines whether there is a variance inequality between the residuals of one observation and the residuals of another observation. If the variance between the residuals of one observation and the residuals of another observation is constant, it is called homoscedasticity; if it is different, it is called heteroscedasticity. A good regression model if homoscedasticity or heteroscedasticity occurs. The way to test heteroscedasticity is by using a plot chart between the predicted value of the dependent variable, ZPRED, and the residual SRESID.

3. Hypothesis Test

The goal of hypothesis testing is to determine whether or not there is an influence between variables and to prove the hypothesis. This research was put to the test using multiple regression analysis and path analysis. The statistic is measured in this test by looking at the coefficient of determination (t), Simultaneous test (f), and Partial Test (p).

A. Coefficient of Determination Test (t)

The coefficient of determination is a test that determines how well a model can explain variations in the dependent variable. Make a note of the coefficient of determination, which is between zero and one.

B. Simultaneous test (f)

A simultaneous test is used to determine whether all independent variables have a combined influence on the dependent variable. How to interpret the Simultaneous test: If the F-count value is greater than the F-table and has a significance value less than 0.05, the independent variable affects the dependent variable simultaneously, and if the F-count value is smaller than the F-table and has a significance value greater than 0.05, the independent variable has no influence on the dependent variable.

C. Partial test (p)

The partial test is used to determine how much influence one independent variable has on the variation of the dependent variable. If the t-count value is less than the t-table and has a significance greater than 0.05, H0 is accepted and H1 is rejected; if the t-count value is greater than the t-table and has a significance less than 0.05, H0 is rejected and H1 is accepted.

4. Path analysis

Path analysis is an analytical technique used to analyze the inherent cause-and-effect relationship between variables compiled in temporary order by using the path coefficient as the quantity value in determining the magnitude of exogenous variables' influence on endogenous variables. Path analysis is used to determine the magnitude of the effect of one or more exogenous variables on endogenous variables. Cause-and-effect relationships is unable to be determined solely through path analysis. Furthermore, it should not be used as a replacement for researchers to see the relationship causality between variables. The model has established a causal relationship between variables based on theoretical foundation.