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## CHAPTER 3 – RESEARCH METHODS

### 3.1 Research Design

This study uses a quantitative research design to look at the relationships between Peer Groups, Electronic Word of Mouth, Fear of Missing Out, and Purchase Decision. A quantitative approach was chosen because the study aims to test specific hypotheses and measure the relationships between variables using numerical data, which allows for a more objective and systematic way of analyzing the results.

This study also follows a deductive approach, meaning the hypotheses were developed based on existing theories and past literature, particularly the Stimulus-Organism-Response framework originally proposed by Mehrabian and Russell (1974). Within this framework, Peer Groups and eWOM represent the stimulus, FOMO represents the organism, and Purchase Decision represents the response.

Data was collected through a structured questionnaire distributed to respondents using a survey method. The quantitative research design is fitting for this study because it allows the researcher to test the proposed hypotheses and examine the relationships between variables using Partial Least Squares Structural Equation Modeling (PLS-SEM). According to Hair et al. (2019), PLS-SEM is well suited for studies that aim to predict relationships between variables and handle complex models that involve mediation effects.

Overall, the quantitative research design gives this study a clear and structured way to analyze how Peer Groups and eWOM influence consumer behavior and to answer the research questions laid out in this study.

### 3.2 Sampling Size

According to Hair et al. (2019), the sample size in PLS-SEM can also be estimated by multiplying the number of indicators by 5 to 10. Since the study consists of 19 indicators, the minimum sample size recommended is 95 respondents, while the maximum recommended sample size is 190 respondents. Therefore, the study should collect between 95 and 190 valid responses to make sure that the data will be sufficient for analysis and will be able to represent the research model properly.

Sample Size: 95 - 190

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### 3.3 Data Collection Methods

In this study, the survey method will be used to collect primary data from respondents. The survey will be conducted using a properly structured questionnaire designed to measure the variables in this study, namely Peer Groups, eWOM, FOMO, and Purchase Decision.

The questionnaire will be using a five-point Likert scale ranging from 1 (STD) to 5 (SA). The Likert scale is appropriate because it allows respondents to express their level of agreement consistently and simplifies the measurement of perceptions and attitudes. The questionnaire items will be developed based on indicators identified from previous literature to ensure content validity and accurate measurement of the constructs.

Data collection will be conducted using Google Forms. This method is efficient, cost-effective, and capable of reaching a larger number of respondents within a limited period of time. The questionnaire link will be distributed through social media platforms and messaging applications.

Before the actual data collection process, the questionnaire will be reviewed to ensure that the questions were clear, understandable, and relevant to the research objectives.

Overall, the survey method is appropriate for this study because it enables efficient collection of quantitative data and supports statistical analysis of the relationships between variables.

### 3.4 Data Analysis Techniques

This study will be using quantitative data analysis techniques to examine the relationships between variables and test the proposed hypotheses. The collected data will be analyzed with the SmartPLS software through the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach.

First, descriptive statistics will be used to summarize the general responses to the questionnaire items. Descriptive statistics provide an overview of the collected data and help describe the respondents' perceptions toward the variables studied.

Next, the measurement model assessment will be conducted to evaluate the reliability and validity of the constructs. Reliability will be assessed using Cronbach's Alpha and Composite Reliability, where values above 0.70 indicate acceptable reliability (Hair et al., 2019). Convergent validity will be evaluated using outer loadings and Average

Variance Extracted (AVE), while discriminant validity will be assessed using the Heterotrait-Monotrait Ratio (HTMT).

After the measurement model assessment, the structural model assessment will be conducted to test the relationships between variables and the proposed hypotheses. This analysis will include path coefficients, t-statistics, p-values, coefficient of determination ( $R^2$ ), effect size ( $f^2$ ), and collinearity assessment using Variance Inflation Factor (VIF). Bootstrapping procedures will also be performed to determine the significance of the relationships between constructs.

In addition, mediation analysis will be conducted to examine the mediating role of FOMO in the relationship between Peer Groups, eWOM, and Purchase Decision using the specific indirect effects obtained through bootstrapping.

According to Hair et al. (2019), PLS-SEM is appropriate for exploratory and predictive research because it allows researchers to analyze complex relationships among multiple constructs simultaneously. Therefore, the use of SmartPLS and PLS-SEM is considered suitable for achieving the objectives of this study.

### **3.5 Required Materials and Equipment**

This study requires several materials and tools to support the data collection and analysis process. Since this research uses a quantitative survey method, the main tools needed are related to questionnaire distribution and data analysis.

First, Google Forms is going to be used for creating and distributing the questionnaire. This platform allows efficient response collection and automatic data organization.

Then, statistical software such as SmartPLS is going to be used for analyzing the data. These tools are necessary to perform the statistical analysis, including measurement model assessment, structural model assessment, and hypothesis testing.