CHAPTER 3: ANALYTICAL METHODOLOGY

3.1 TYPE OF ANALYSIS

This analysis is a quantitative analysis that aims to test hypotheses based on positive or negative traits. This can be statistically seen from the direction of the variable relationship in sigma two tailed - Sig (2-tailed). This analysis uses samples taken with purposive sampling techniques. The sample number (n) is taken assuming 5-10 × observation variables (indicators), so it is obtained.

n = 8 × 14 indicators

n = 112 respondents

The data on this analysis was obtained through surveys with questionnaires distributed to respondents. The data is given a measurement scale using the Likert scale which has the following values.

Strongly Disagree	= 1
Disagree	= 2
Simply Agree	= 3
Agree	= 4
Strongly Agree	= 5

The data is then analyzed using multiple linear regression analysis methods. The analysis was conducted using IBM SPSS Statistics 26 software program.

3.2 TESTING TECHNIQUES

3.2.1 Descriptive Statistics

Descriptive statistical analysis is a statistical method that serves to describe the data that has been collected. The data can be described by sum, mean, variant, standard deviation, minimum, maximum, skewness, kurtosis, and range. This analysis uses descriptive statistics including mean, standard deviation, maximum, and minimum.

3.2.2 Instrument Test

A. Validity Test

Validity is the degree of accuracy between the actual data on the object/variable and the data/indicator collected to find the validity of an item and correlate the item score with the total of those items. The test was conducted using a corrected item-total correlation comparison with a correlation coefficient of r = 0.50. The questionnaire is declared valid if the corrected item-total correlation value is greater than 0.50.

B. Reliability Test

Reliability tests are the result of measuring objects/variables from each other, to see the extent to which they produce the same data. This analysis uses Cronbach Alpha. The provision if the coefficient obtained > 0.6 then the variable can be trusted or reliabled.

3.2.3 Classic Assumption Test

Classical assumption tests are used to find out if an acquired regression model can produce a good linear. The following assumptions are needed.

A. Normality Test

A normality test is a test that is done to find out whether the data is distributed normally or not. If the distributed residual value is normal or close to normal, then the regression model is rated good. There are two ways to know the normal distributed residual value, namely by graphical analysis and statistics.

Analyze the graph by looking at the Normal Probability Plot (P-Pplot) graph. If the data spreads around the diagonal line and follows the direction of the diagonal line, then the regression model is considered normal and meets normality.

Statistical analysis is conducted with a non-parametric statistics test of Kolgomorov-Smirnov (K-S) with a significance level (α) of 0.05. If the significance value is obtained more than 0.05 then it is considered normal distributed residual data.

B. Multicollinearity Test

Multicollinearity tests are performed to find out the correlation between independent variables in regression models. This can be known through Variance Inflation Factor (VIF) and Tolerance. If the tolerance value is more than 0.100 and the VIF value is less than 10.00 then the result indicates the absence of multicollinearity.

C. Heteroscedasticity Test

The heteroscedasticity test is used to determine the variance inequality of the regression model residue. If the variance from one observation to the observation is the same, then the regression model includes homoscedastisity. Regression model with good value when homoscedastic regression model. How to know the presence of heteroscedasticity can be seen with the presence or absence of certain patterns on the scatterplot graph between residual (SRESID) and bound variables (ZPRED). Heteroscedasticity testing can also be seen from the value of the significance of independent variables to absolute residual data.

3.2.4 Multiple Linear Regression Test

Multiple linear regression analysis is one of the statistical techniques used to analyze the relationship between a single dependent variable with more than one independent variable. The multiple linear regression formula is as follows.

$$Y = \alpha + \beta X_1 + \beta X_2 + \beta X_3 + e$$

Information:

Y = Dependent variable (User intention)

β = Constant coefficient (User)

α = Regression coefficient

X_1 = First independent variable (Interest)

X_2 = Second independent variable (Usability Perception)

X_3 = Third independent variable (Ease Perception)

e = Error or outside influence

3.2.5 Correlation Coefficient (R) Test

The correlation coefficient (R) test is used to determine the relationship between independent variables and dependent variables. This is done to find out from the beginning about the relationship of independent variables with dependent variables that are analyzed strong or low and unidirectional or not. The value of R varies between -1 to 1 ($-1 \leq R \leq 1$) that is, if R = -1 or close to -1 indicates the relationship of the independent variable (X) with the dependent variable (Y) showing a perfect negative or opposite direction. If R = 0 or close to 0 indicates no relationship between the independent variable (X) and the dependent variable (Y). If R = 1 or close to 1, it shows the relationship between the independent variable (X) and the dependent variable (Y) is perfect or positively direct.

3.2.6 Coefficient of Determination Test (R^2)

The coefficient of determination (R^2) test is used to predict the magnitude of the influence of independent variable contributions on dependent variables. The coefficient of determination is zero (0) to one (1). If the resulting value is close to one (1), the independent variable provides all the information to predict the variation of the dependent variable. Whereas if the resulting value is close to zero (0), then independent variables have limitations to predict the variation of dependent variables.

3.2.7 Hypothesis Test

A. F Test (Model Fit)

The F test is used to determine the simultaneous influence of independent variables on dependent variables as well as whether the model analyzed is fited or not. The F test is conducted by ANOVA testing and determines a significant level of (α) of 5% which is 0.05. If the significant value $F < 0.05$, it can be concluded that independent variables have simultaneous influences on dependent variables and models are fited.

B. t Test

The t test is used to show the influence of one individually independent variable in describing a dependent variable. The t test is performed by testing coefficients and determining a significant level (α) of 0.05. If a significant value is < 0.05, then the individually independent variable and significantly affects the dependent variable.