

CHAPTER 3

METHODOLOGY

3.1 Introduction

The methodology is utilized to answer the research topic, and the research will elaborate on its objectives. The research method is a scientific approach used to collect data for a certain purpose and usefulness based on the researcher's integrity. According to Polit and Beck (2004), methodology relates to methods of collecting, organizing, and analyzing data. Creswell (2009) defines methodology as a cohesive set of approaches that complement one another and have the ability to generate data and findings that represent the research question and serve the researcher's aim. This chapter defines the methodologies and steps used to achieve the research objective. This comprises aspects such as the study plan, research instruments, data collection information, and data quality. This study used dependability and analytical methods.

The research methodology applied in this chapter is based on a mixed-method approach, incorporating both qualitative and quantitative analyses (Creswell & Clark, 2017). The qualitative aspect involves the Appreciative Inquiry framework, which facilitates the collection of expert insights through structured interviews (Cooperrider & Srivastva, 1987). Meanwhile, the quantitative dimension is grounded in capital budgeting techniques, following the principles of financial analysis and investment evaluation (Ross, Westerfield, & Jaffe, 2019). The integration of these methodologies ensures a comprehensive assessment, allowing for a holistic view of the investment decision. Additionally, the descriptive analysis method (Miles, Huberman, & Saldaña, 2014) is employed to systematically interpret the collected data, providing a structured and evidence-based conclusion.

3.2 Research Design

According to Sekaran and Bougie (2017), research design is a strategy for gathering, analyzing, and interpreting data based on the research goal. The research process for writing this thesis consists of the following steps:

1. Stage 1 : Analyze and evaluate the most suitable operational strategy by the interview with Project Leader of the Company.
2. Stage 2 : Measure and evaluate the feasibility
3. Stage 3 : Non-Monetary Analysis.

3.2.1 Stage 1 – Analyze And Evaluate The Most Suitable Operational Strategy By The Interview With Project Leader of The Company

A strategic analysis entails reviewing the organization's internal and external landscape, evaluating existing strategies, and developing and assessing the most viable strategic alternatives. A strong grasp of the company's identity and values is critical for developing effective business strategies. To develop a strong strategy, a company must have a thorough understanding of its identity and the values that it represents. From the start, a corporation should do an environmental review of its present strategies.

The internal environment's issues to be evaluated include operational inefficiencies, personnel morale, and financial constraints. In contrast, the external environment includes political changes, economic volatility, and shifts in client preferences. The primary goal of strategic analysis is to assess the effectiveness of the current strategy in light of the current business environment.

The effectiveness of the data collection procedure has an impact on the quality of study. The first step of data gathering is designed to acquire insights from managerial viewpoints. An interview was done with the project lead by signing a consent form in order to gain a better understanding of decision-maker's aims and analyses.

Furthermore, quantitative data gathering methods will be performed, which include project cost, existing capacity, assumptions, and other technical data.

3.2.2 Stage 2: Measure and Evaluate the Feasibility

In this study, the author used data and information from PT. Wijaya Karya (Persero), Tbk to calculate Weighted Average Cost of Capital (WACC), Payback Period, Return on Investment (ROI), Net Present Value (NPV), Profitability Indeks or NPV Index, Discounted Payback Period, and Internal Rate of Return (IRR).

3.2.3 Stage 3: Non-Monetary Analysis

This study includes non-monetary analysis for management to evaluate whether to continue or discontinue the project, examining from the standpoint of the Sustainable Development Goals. Figure 3.1 depicts the flow of methods for conducting research in order to answer research questions and objectives.



Figure 3.1 Research Methodology (Source : Researcher, 2025)

1. Interview with project lead of PT. Wijaya Karya (Persero) Tbk
 - Background & analysis of PT. Wijaya Karya (Persero), Tbk. (SWOT)
 - Project assumptions scenario and variables
2. Capital budgeting analysis
 - WACC
 - Payback Period
 - ROI
 - NPV
 - PI or NPV Indeks
 - Discounted Payback Period
 - IRR
3. Non-monetary analysis by using SDGs
Defined from 17 SDGs.
4. Final project assesment

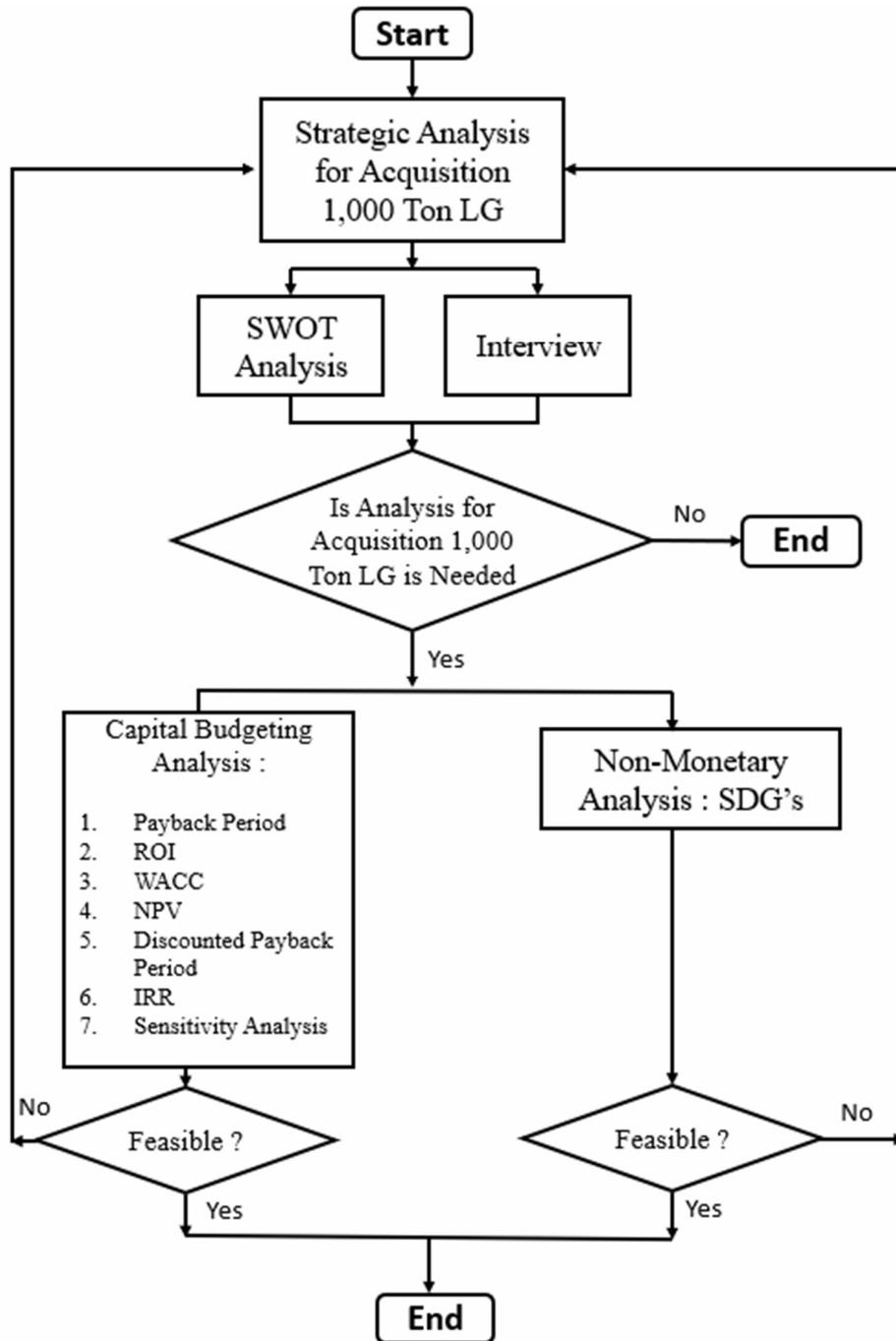


Figure 3.2 Flowchart Workflow for Feasibility Study (Source : Researcher, 2025)