ABSTRACT

Indonesia's natural resources are very abundant and can be used to drive the national economy, one of which is sand mining. Sand is needed especially for construction using concrete or cement. CV. Lingga Jaya Abadi is a business entity that carries out sand excavation and mining activities. The excavation site is located in Sumedang Regency, West Java Province. Owner of CV. Lingga Jaya Abadi wants to open a new sand mine and move to the new location. However, the costs incurred are not small. Therefore, a feasibility analysis is needed from opening and transferring to a new mine to find out whether this plan is feasible or not. There are three aspects studied, namely market aspects, technical aspects and financial aspects. In the market aspect, forecasting is carried out using the linear regression method. Forecasting is divided into three scenarios, namely low to high demand scenario, high to low demand scenario, and constant demand scenario. The total demand forecast from 2024 to 2028 is 303,420 consumer trucks. In the technical aspect, the machine requirements and heavy equipment used are calculated. Based on these calculations, the crusher machines needed are 5 units. Meanwhile, for heavy equipment such as loaders, 1 unit is needed. Furthermore, for heavy equipment such as bucket excavators, 1 unit is needed. Furthermore, the need for heavy equipment such as breaker excavators, requires 1 unit. Furthermore, for heavy equipment such as dumptrucks, 2 units are needed. In the financial aspect, the NPV value is Rp198,991,056,195 then the IRR value is 176.5% then the PBP obtained is 1.29 years. Based on these financial aspects, the plan to open and move to a new mine can be said to be feasible.

Keywords: Feasibility Analysis, Linear Regression, NPV, IRR, PBP, Sensitivity Analysis, Risk Analysis.