

ABSTRACT

Tofu is a popular processed soy food in Indonesia, loved for its deliciousness and high vegetable protein content, making it an affordable protein alternative. Based on company data, it is known that factories are experiencing an increase in demand which is causing the frequency of overtime to increase. Therefore, the Cicalengka Tofu Factory plans to expand its production area by utilizing the empty land next to it. This research examines two design alternatives for the Cicalengka Tofu Factory: alternative 1 without increasing production capacity, adding equipment or expanding the factory, and alternative 2 which involves all of these improvements. Analysis is carried out through market, technical and financial aspects to determine optimal alternative scenarios. In the market aspect, the time-series forecasting method using the Single Moving Average technique is used to project tofu demand until 2026, because it has the smallest error rate. Technically, for alternative 2, it is planned to increase production capacity to 396 planks of tofu per day from the current capacity of only 264 planks of tofu, with a total investment cost of IDR 1,549,595,178. Financial analysis shows that alternative 1 has a Net Present Value (NPV) of IDR 825,211,554 and an Internal Rate of Return (IRR) of 121%. Alternative 2, has an NPV of IDR 972,087,040 and an IRR of 43%. To compare the two alternatives, an Incremental IRR analysis was carried out, which produced a Δ IRR value of 22%, which is higher than the Minimum Acceptable Rate of Return (MARR) of 16.36%. Therefore, alternative 2 was chosen as the best option for the development of the Cicalengka Tofu Factory.

Keyword: Feasibility Analysis, Expansion, Cicalengka Tofu Factory, Incremental Analysis.