ABSTRACT

XYZ Convection is one of the businesses engaged in the textile and apparel industry in West Jakarta City which was established in 2022. XYZ Convection is a business that produces various kinds of clothing, such as shirts and t-shirt, both for general consumer needs and the needs of certain industries or agencies. The problem XYZ convection is that there is market demand that continues to increase in 2023, but XYZ convection has limited available engine facilities which have limited production machine capacity and limited convection areas that do not allow to add new engines to the convection which results in a piling up production process and inefficient convection operational activities.

Before establishing a new branch business at XYZ Convection, it is necessary to have a feasibility analysis that states whether or not the establishment of a new branch at XYZ Convection in Bandung City is feasible to run. The purpose of this study is to consider market aspects, technical aspects, and financial aspects. By conducting this feasibility analysis, convection can find out what must be prepared and know what risks will occur in order to avoid or minimize existing risks in the longer term. This approach from the financial aspect uses the calculation of Internal Rate of Return (IRR), *Net Present Value* (NPV), *Payback Period* (PBP), and Profitability Index.

The solution to Konveksi XYZ's problem is to open a new branch in Bandung City by having 9 workers consisting of 6 direct workers and 3 indirect workers. Determination of the location of the new branch of Konveksi XYZ through the factor rating method or weighting by considering 4 factors, namely the factors of building rental prices, building area, distance to suppliers, and distance to shipping places by comparing 3 locations, namely the first location on Jl. Soekarno Hatta, the second location on Jl. Ibrahim adjie, and the third location on Jl. Kiaracondong. The selected location is on Jl. Soekarno Hatta, Bandung with a weighting value of 86.90. Machines and tools needed at XYZ Convection are fabric cutting machines, sewing machines, obras machines, embroidery machines, heat press machines, heat gun machines, button punching tools, and steam irons with the number of each need.

The benefits of the proposed design results are that it can estimate the amount of market demand for the opening of a new branch of XYZ Convection in Bandung City, which is 8,513 pcs in 2025, can design the technical and operational opening of a new branch of XYZ Convection in Bandung City by determining an investment of Rp235.229.399,76, can measure the financial feasibility of opening a new branch of XYZ Convection in Bandung City with the results of Net Present Value of Rp310.268.247, Internal Rate of Return of 54,38%, Payback Period of 2,84 years, and Profitability Index of 2,20, can measure the sensitivity level of four variables, including sensitivity to a decrease in demand, a decrease in product selling prices, a decrease, an increase in raw material costs, and an increase in direct labor costs and indirect labor. Can identify the risks of opening a new branch of XYZ Convection in Bandung City with a percentage of 4.9%, and for entrepreneurs, it can be used as a consideration in making decisions in the business of establishing a new branch of XYZ Convection in Bandung City and avoiding or minimizing the occurrence of risks that may occur. Based on the results of the feasibility study conducted by considering market, technical, and financial aspects, opening a new branch at Konveksi XYZ in Bandung is feasible.

Keywords – Feasibility Analysis, IRR, NPV, PBP, PI