PROFIT OPTIMISATION USING PRODUCT MIX METHOD AT PT.XX

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ABSTRACT

PT. XX is a subsidiary company of X company group from France. This company produces 45 types of flour but only 21 types dominate annual sales. The flour produced by this company could not fulfill the market demand. The company could only take around 60% to 80% of the total profit potential. To optimize profit, this company needs to find out the exact quantity to produce the 21 types of flour.

To solve the problem, the company should develop the right product mixture to obtain maximum profit. The first step is to forecast the demand by using the ARIMA. The second step is to optimize the profit by using the Linear Programming Method. As a decision variable is the quantity of 21 types of flour that must be produced. The constraints are fund availability to provide main raw materials, fund availability to provide supporting materials, main raw material availability, supporting raw materials availability, production capacity, and forecasted demand.

The optimisation result showed that this company needs to focus on producing five types of flour, which are BBA 500 g, SCR, MGMRD 10 kg, PDB, and MGMSF. Those five flour types contribute 80.97% of total annual sales. By using the result of profit optimisation, the company profit in 2012 would be Rp. 2,849,882,000,-. The profit increase 39.21% from the profit of the same period in 2011.

Keywords: flour types forecasting, linear programming method, profit, quantity produced of flour types