

ABSTRACT

PD. Mujur Jaya is an industrial company that manufactures vermicelli. Problems that occur in PD. Mujur Jaya is the absence of production planning so that they often experience obstacles in the process of production activities which result in company losses. This study aims to determine the appropriate forecasting method, the appropriate aggregate planning strategy to be used by the company in the manufacture of vermicelli products that have fluctuating, create a master production schedule and plan raw materials. The method used to forecast the vermicelli is Single Moving Average and Single Exponential Smoothing, for planning the aggregate strategy used is Chase Strategy and Level Strategy, while for planning raw materials using four methods, including Lot for Lot, Fixed Period Requirement (FPR), Fixed Order Quantity (FOQ) and Economic Order Quantity (EOQ) which then selected the best strategy based on the minimum production cost. The results of the research that has been done can be concluded that the best forecasting is to use the Single Exponential Smoothing using alpha 0.6 with a total MAPE value of 7.319% and the selected aggregate strategy is Level Strategy with the minimum total production cost of Rp 7,540,532,199 and the planning of the selected raw materials is Fixed Period Requirement (FPR) with the minimum total cost of Rp. 100,074,221.-

Keywords: Forecasting, Aggregate Planning, MRP