

## ABSTRACT

UD. Jongbiru Kediri is a semi-finished rice processing business unit located in Kediri, East Java. UD Jongbiru Kediri officially operates by using retailed sectors since 1992. Having 4 coverage area with up to 50 ton/ working day quota production makes the inventory problem in UD. Jongbiru Kediri has a significant impact in business continuity. UD. Jongbiru undertakes the activities of purchasing raw materials in large quantities but the management is still in the daily period. Based on the interview that already did, UD. Jongbiru makes a order based on the estimated quota of machine capacity.

This research uses good inventory management using lot sizing (EOQ & POQ) method in UD. Jongbiru to be able to compete and face the challenges of future operations management by being able to determine the number of requests required for the next period, the amount of safe inventory in the warehouse, and determine the size of order also re-order time so it can be known by UD. Jongbiru the most appropriate method for rice supply.

For the data that has been obtained in the interview, forecasting result for EOQ and QOD using Linear Regression method because it produces the smallest difference with actual demand compared by Moving Average and Exponential method. Test of error results Linear Regression be used as the calculation basis because it produces the smallest deviation besides all three methods of forecasting using MAD (Mean Absolute Deviation), MSE (Mean Square Error), and SEE (Standard Error of the Estimate).

UD. Jongbiru Kediri is a semi-finished rice processing business unit located in Kediri, East Java. Having 4 coverage area with up to 50 ton/ working day quota production makes the inventory problem in UD. Jongbiru Kediri has a significant impact in business continuity. For the data that has been obtained in the interview, this paper using EOQ and POQ method. Safety stock calculation yields a total 351.187,21kg for UD. Jongbiru EOQ method from the calculation of the average number of requests per year to produce the optimum quantity in a single order results 413.418,3 kg with frequency of ordering 16times in a year and generate a total cost Rp 53.744.381,70 meanwhile POQ method generated from the optimum amount of production spacing of 7 times ordering in a month generates Rp 83.776.525,5 for total cost. Reorder point for UD. Jongbiru is at 400.562,57 kg.

EOQ and POQ method known UD. Jongbiru should apply the EOQ method within the company to reduce production costs and maximize order quantity. The EOQ method produces a minimum annual total cost rather than the POQ method.

Keywords : EOQ, POQ, Forecasting, Safety Stock, Reorder Point