

ABSTRACT

PT NYZ is a lubricant division of PT ABC national oil company. PT NYZ provides lubricants for some agents that located in Bandung region. In last two years, there was a significant gap between stock and demand in PT NYZ and it caused overstock that resulted heaping of the products in the warehouse. Therefore, it needs to do the forecast to know the amount of demand of customers in the further so the company can make an appropriate decision on their demand.

The data that had been collected and then processed using some methods. The method is selected based on the time series pattern. The methods that used are Naïve Approach, Moving Average, Single Exponential Smoothing, Constant, and Linear Regression. The error rate is calculated using MAD (Mean Absolute Deviation), MSE (Mean Square Error), and MAPE (Mean Absolute Percent Error).

Based on data processing, it can be concluded that the method that has smallest error rate is linear regression for 46 types of lubricants and constant method for the other 3 types of lubricants. Using both of those methods, the error rate of forecasting proposed can be decreased 84.92% from an existing condition and overstock can be decreased 83.34%.

PT NYZ should implement the forecasting method that has been selected and applied it on supporting applications.

Keywords : overstock, error forecasting, linear regression, constant, forecasting.