

ABSTRACT

PT.XYZ is a manufacturing company that produced building material the type of paint, and will be distributed to all regions of Indonesia. PT.XYZ still has a low forecasting accuracy that caused overstock. In the last two years, there is a gap between the stock and the demand for paint in PT.XYZ. That can be happen because PT.XYZ was not doing demand forecasting based on demand patterns or the situations that are happened in PT.XYZ, so the accuracy of demand forecasting in PT.XYZ still low and causing overstock happened. Stock provided by PT.XYZ adjusted from results of demand forecasting. Therefore, to solve the problem, the company needs to do demand forecasting using appropriate methods with demmand patterns or the situations that are happened in PT.XYZ. In this research, the methods that used are Linier Regression, Single Exponential Smoothing, Holt Exponential Smoothing, and Winter Exponential Smoothing.

After calculation of demand forecasting with each method, the method has been chosen for each brand of paint is Winter Exponential Smoothing. This method has chosen because it has the lowest forecasting error when compared with other methods. The error rate is calculated using mean square error (MSE). Using Winter Exponential Smoothing, the existing demand forecasting accuracy rate increased by 24.34% when compared tho the proposed demand forecasting. Overstock can be decreased by 26.68%.

From the result of this research should implement the forecasting demand method that has been selected to forecast demand in PT.XYZ and applied it with supporting application.

Key words: Forecasting, Overstock, Linier Regression, Single Exponential Smoothing, Holt Exponential Smoothing, Winter Exponential Smoothing, Mean Square Error (MSE).