

ABSTRACT

The demand for a product in a company is the resultant of various factors that interact with each other in the market. These factors are almost always a force beyond the control of the company, so the company can achieve what it aims for. One of the most important things to realize this is to estimate or forecast the amount of sales or customer demand for goods or services produced. The company always wishes to be able to estimate or predict the magnitude of all short-term or long-term demand, even for each of its products. In relation to preparing a sales plan, information obtained from sales forecasting will provide a useful picture of the prospects for the product in the market.

After processing the Spare Part sales data processing with three categories of Accident Part, Regular Maintenance & Key Product, then the researcher then performs forecasting based on Linear Regression forecasting guidelines, Moving averages, Single exponential Smoothing, double exponential smoothing and Weight Moving averages, so that it can be done which type of forecasting is the most optimal for use by PT. Astra Daihatsu Motor - Service Part Division in the process of fulfilling customer requests. The optimal type of forecasting can be measured from the smallest forecasting error value that can be calculated and seen in the mean absolute deviation (MAD), the mean square error (Mean Square Error - MSE), and the average absolute error percentage (Mean Absolute Percent Error - MAPE).

The forecasting method chosen is Double Exponential Smoothing with alpha 0.5 because it appears to have the smallest error value of the other 4 calculations (linear regression, moving average, SES 0.5 & WMA). So that the Double Exponential Smoothing method with alpha 0.5 can be used as a reference for forecasting demand for the next 12 periods by the company.

With the implementation of a Web-based ordering system that can be accessed in real time and added other methods to produce more accurate data with a smaller percentage of errors.

Keywords : Forecasting, Double Ekxponensial Smoothing, Web Base