

Yingyong Sandate 2011: The Study Forecasting Models of Export Quantity of Frozen Shrimp. Master of Science (Statistics), Major Field: Statistics, Department of Statistics. Thesis Advisor: Associate Professor Nida Chanbanyong, M.S. 141 pages.

The purpose of this research is to study a suitable model in forecasting and find time series size by using analysis of time series for prediction of the export quantity of frozen shrimp. The five techniques used for the study are Holt – Winters , Decomposition method , Box – Jenkins method , Transfer Function model and Combination Forecasting by using regression analysis. The suitable forecasting method for each type of data were chosen by considering the smallest value of Mean Absolute deviation (MAD) , Mean Square Error (MSE) and Mean Absolute Percentage Error (MAPE). The forecasting accuracy was investigated by using 3 Tracking Signals : TS_1 , TS_2 and TS_3

The studied data were monthly time series with trends and seasonal from January 2003 to December 2008. Each monthly data was formed into 48 months and 72 months and data from January 2009 to April 2010 were used to investigate the accuracy of forecasting.

The result of the study found that the time series size was optimal over 48 months for forecasting export quantity of frozen shrimp and combination forecasting by using Box – Jenkins method and Transfer Function model was the best techniques , it has the lowest of Mean Absolute deviation (MAD) , Mean Square Error (MSE) and Mean Absolute Percentage Error (MAPE). From ckecking an accuracy of the forecasting values it is found that the suitable forecasting period for combination forecasting is one month.

Student's signature

Thesis Advisor's signature