

Forecasting with univariate time series models : a case of export demand for Peninsular Malaysia's moulding and chipboard.

ABSTRACT

This study determines a suitable method from the univariate time series models to forecast the export demand of moulding and chipboard volume (m³) from Peninsular Malaysia using the quarterly data from March 1982 to June 2009. Export demand for moulding and chipboard were estimated using univariate time series models including the Holt-Winters Seasonal, ARAR algorithms and the seasonal ARIMA models. The seasonal ARIMA (1, 0, 4) X (0, 0, 1, 0)₄ model produced the best forecast at the lowest forecast errors of MAPE, MAE and RMSE at 18.83%, 32730.8 and 35282.13, respectively. It forecasts the volume (m³) of moulding and chipboard for export to reach more than 150000 m³, and it is expected to be within range of 100000 to 250000 m³ at 95% confidence level. The forecasts assist in decision making process and facilitate a short-term marketing plan to meet the export demand from international market.

Keyword: Forecasting; Moulding and chipboard; Univariate time series.