FORECASTING ANALYSIS OF MOTORCYCLES SALES IN NGAWI WITH ARIMA AND ARIMAX

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ABSTRACT

High demand for motorcycle and many service companies which are engaged in the sale of motorcycles, it is needed targets and strategies in motorcycle sales. This research aims to obtain the best models and forecasting value in the period of next two years in Ngawi. In this research, the data used is the sales data of all brands of motorcycles; cub, matic, and sport type in Ngawi since January 2009 to March 2014. The data from January 2009 to December 2013 is used as in-sample and the data on January 2014 until March 2014 as out-sample. The methods used for modeling are ARIMA and ARIMAX. The best model to describe the development of the total sales of all brands of motorcycles; cub, matic, and sport type in Ngawi is ARIMAX model, with MAPE values for motorcycle cub type by 26%, matic by 26% and sports by 14%.

Keywords: ARIMA, ARIMAX, Motorcycle