FORECASTING THE NUMBER OF TOTAL MARKET AND HONDA MOTORCYCLE TYPE DEMAND IN SIDOARJO USING ARIMA AND VECTOR AUTOREGRESSIVE (VAR)

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Abstract

Motor cycle is vehicle with biggest number in east java and have cheap price. In Indonesia there are a lot of motor cycle producer that the product spread into all district, one of them is Honda. In Sidoarjo, an area that have big development potential, Honda motor cycle lead the market fo 72.02%. Because of that, it’s need forecasting about total market and Honda motor cycle type demand in Sidoarjo. In this research data split into two part, first is insample data with January 2009 – December 2013, the other is outsample data with January 2014 – March 2014. This research use six variables, they are market cub(Z₁), market matic(Z₂), market sport(Z₃), Honda cub(Z₄), Honda matic(Z₅), and Honda sport(Z₆). In univariate way, they will predicted using ARIMA. And in multivariate way they will predicted using VAR. In this research goodness of prediction is measure with MAPE (mean absolute percentage error). According MAPE value, in this research ARIMA model still give better result than VAR model.

Keywords : Sepeda motor, ARIMA, VAR, MAPE