

ABSTRACT

The stability of the price of red chili pepper as one of the many staple and flavoring ingredients is one of the things that is of concern to the government. One of the actions that can be taken by the government to maintain the stability of the price of red cayenne pepper is to carry out forecasting. Forecasting itself is the result of modeling a time series. One method that can be used to model time series is Vector Autoregressive (VAR). Vector Autoregressive (VAR) is a method that can be used to model and predict data that has more than one variable simultaneously. The VAR model was built so that the relationship between economic variables can still be estimated without needing to pay attention to exogeneity problems. The level of forecasting accuracy in the Vector Autoregressive (VAR) model can be seen based on the sMAPE value. The data used is the weekly price of red cayenne pepper in Ngawi Regency which was recorded in three markets, namely at Pasar Besar Ngawi, Pasar Beran, and Pasar Paron from January 2020 to the first week of November 2023. The accuracy of prediction using sMAPE is 33.09% for the variable of red chili pepper prices at Pasar Besar Ngawi, 33.06% for Pasar Beran, and 31.69% for Pasar Paron. The sMAPE values range from 20% to 50% hence the forecasting accuracy of this study is considered adequate.

Keywords: Vector Autoregressive, sMAPE, Forecasting