SUPPORT VECTOR REGRESSION (SVR) AND ARIMA TO PREDICT THE MONTHLY CONSUMER PRICE INDEX IN INDONESIA

(Case Study: "The Monthly Consumer Price Index in Indonesia in January 2008 until Februari 2018")

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ABSTRACT

The consumer price index is a measure of the average price of goods or services consumed by households in a certain period of time. This index is used to measure the rate of inflation in a country. Inflation can also measure of an economy in a country. The growth of the consumer price index figures is certainly able to describe the price of goods or services daily needs of the chat can affect the country's economy. One of the methods used to figure out the movement of the consumer price index prediction value is Support Vector Regression (SVR). SVR is a method used to analyze the prediction by finding the best hyperplane on a function regression. In this case predicted the consumer price index by using two approaches, namely kernel linear and kernel polynomial. To get the optimal parameters in search of hyperplane then used a Grid-Search algorithm used in this research. Analysis of the results obtained shows that a good method in prediction of the consumer price index this is using the kernel linear, where out of the equation by the SVR obtained error rates i.e. MAPE obtained on training data and testing data of 0.52% dan 0.12%, even better prediction results obtained when compared with models of ARIMA.

Keywords: *Consumer Price Index, Support Vector Regression, Kernel, Grid-Search.*