

Abstract

The Gross Domestic Product (GDP) is the market value of all goods and services produced within the borders of a nation in a year. In this paper, Kenya's annual GDP data obtained from the Kenya National Bureau of statistics for the years 1960 to 2012 was studied. Gretl and SPSS 21 statistical softwares were used to build a class of ARIMA (autoregressive integrated moving average) models following the Box-Jenkins method to model the GDP. ARIMA (2, 2, 2) time series model was established as the best for modeling the Kenyan GDP according to the recognition rules and stationary test of time series under the AIC criterion. The results of an in-sample forecast showed that the relative and predicted values were within the range of 5%, and the forecasting effect of this model was relatively adequate and efficient in modeling the annual returns of the Kenyan GDP. Finally, we used the fitted ARIMA model to forecast the GDP of Kenya for the next five years.