Co-Integration Model for Predicting Inflation Movement in Nigeria

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Abstract : The maintenance of price stability is one of the macroeconomic challenges facing Nigeria as a nation. This paper attempts to build a co-integration multivariate time series model for inflation movement in Nigeria using data extracted from the abstract of statistics of the Central Bank of Nigeria (CBN) from 2008 to 2017. The Johansen cointegration test suggests at least one co-integration vector describing the long run relationship between Consumer Price Index (CPI), Food Price Index (FPI) and Non-Food Price Index (NFPI). All three series show increasing pattern, which indicates a sign of non-stationary in each of the series. Furthermore, model predictability was established with root-mean-square-error, mean absolute error, mean average percentage error, and Theil's unbiased statistics for n-step forecasting. The result depicts that the long run coefficient of a consumer price index (CPI) has a positive long-run relationship with the food price index (FPI) and non-food price index (NFPI).

Keywords : economic, inflation, model, series

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