

Exploring the asymmetric effect of oil price on exchange rate: Evidence from the top six African net oil importers

ABSTRACT

The paper investigates the oil price fluctuation on exchange rates for main African net oil importing countries, namely South Africa, Morocco, Côte d'Ivoire, Kenya, Ghana and Senegal that cover for the period from 1983Q2 to 2018Q4. In order to thoroughly examine the subject matter, this study takes a specific account of the symmetric and asymmetric effects of oil price changes in modelling process by utilizing innovative linear autoregressive distributed lag (ARDL) technique and asymmetric nonlinear autoregressive distributed lag (NARDL) technique, which accommodate the short-run and long-run asymmetries via positive (increase) and negative (decrease) partial sum decompositions of oil price shocks. The result suggests that the variables are cointegrated, signifying the evidence of long and short run relationships of each country. Evidence of long and short run asymmetries is also confirmed in Côte d'Ivoire, Ghana and Senegal, suggesting that rising and declining oil price have different effect on exchange rate, while symmetric effect is observed in South Africa and Morocco. Rising oil price has positive effect on exchange rate in South Africa and Senegal leading to depreciation of exchange rate, while falling oil price leads to exchange rate appreciation of South Africa rand, Ghanaian cedi and Senegal francs but exchange rate depreciation of Moroccan dirham and Cote d'Ivoire francs. The result further suggests that negative decrease in oil price has a larger impact on exchange rate than the positive increase that varies in sign and size across countries. This suggests that oil price changes play a significance role that influence the behaviour of exchange rate and hence leading to contribute to the development of national economic progress.

Keyword: Oil price; Economic growth; Exchange rate; Asymmetric effect; Dynamic multiplier effect structural break; ARDL/NARDL