ISBN: 978-605-307-447-2

Oil Volatility Pass-Through and Real Exchange Rate Misalignment in Commodity Exporting Countries

Nicola Rubino[1]

Abstract

We investigate the short and long run relationship between leading commodity prices and real effective exchange rates in a group of thirty countries over the period 1980-2015, paying particular attention to non-linearities in three aspects. First, we tested for unit roots using test statistics that account for the presence of structural breaks, the Perron and Vogelsang (1992, 1997, 1998) tests, which do not consider the possibility of a structural break in the alternative stationary/trend stationary hypothesis, and the Lee and Strazicich (2003, 2013) tests, which unambiguously imply trend stationarity as a result of the rejection of the null hypothesis. We thus proceeded to test for a possible co-integrating relationship through the Gregory-Hansen (1996) C/T test, complemented by the Carrion and Sanso (2006) model A test. Second, cointegrating relationships were estimated through DOLS, in order to calculate a REER (Real Exchange Rate) misalignment measure. Third, we fitted the measure into an exponential smooth transition regression model to evaluate the impact of oil price variations on the relationship between REER and leading commodity prices. Our results show that a behavioral co-integrating relationship between REER and leading commodity prices is indeed present in a small fraction of the countries considered. After testing for non-linearity, we show through a smooth transition model that the existence of short run adjustment depends on the extent of the volatility of the oil prices in a fraction of countries, while in the residual ones mean reversion remains consistent across regimes or is totally absent.

***Keywords*:** smooth transition regression models; exchange rates; non-linearities; commodity prices

[1] University of Barcelona, Spain