Are structural breaks and non-linearity essential to current account imbalance sustainability? Evidence from the G-7 countries

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Abstract

In this paper we test three types of non-linearities, i.e., the non-linearity that stems from structural breaks, size non-linearity and sign non-linearity, for the G-7 countries and examine their importance in enabling the current account imbalance to be sustainable. For this purpose, we apply a battery of linear and non-linear unit root tests. Our results show that the structural break non-linearity and size non-linearity are critical to the current account-GDP ratios of Canada, France, Italy, Japan, the UK and the US in testing the null hypothesis of a unit root. Nevertheless, the external debt-GDP ratios of the G-7 countries do not exhibit the sign non-linearity. That is, by taking the non-linear trend into consideration, the threshold autoregressive and momentum threshold autoregressive models do not detect any asymmetry in the response of the external debt imbalance to deviations from its long run non-linear trend. The external debt-GDP ratio of Germany is the only one that does not have any type of non-linearity.

Keywords: current account, sustainability, unit root, non-linearity