Dutch Disease and Exchange Rate in Algeria: An Empirical Investigation

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Abstract

This study seeks to examine the Dutch disease theory and assess its impact on the equilibrium real exchange rate’s performance ($L_{reer}$) in Algeria from 1990 to 2016 since it is, highly, dependent on oil revenues. To do so, we first provide a literature review for Dutch disease and its relationship with REER. Then, in order to test our two underlying hypotheses, we proceed to perform the Auto Regressive Distributed Lag (ARDL) model that helps in detecting the long-run cointegrating relationship. In addition, we apply the Ordinary Least Square (OLS) and the Error Correction models for the examination of both the long and the short-run relationships. As expected, our estimates suggest that the long-run performance of the real exchange rate depends, essentially, having significant positive signs, on the technological progress ($L_{prod}$), government spending ($L_{gs}$), capital flows ($L_{cf}$), informal employment ($L_{emp}$) and terms of trade ($L_{tot}$). However, oil rent ($L_{oilrent}$) and trade openness ($L_{open}$) have significant negative impacts on the $L_{reer}$. This is not in line with a priori expectations, i.e. the failure to meet the main condition for the Dutch disease presence (Spending effect) as well as the resource movement effect captured by the share of employment in informal sector cannot be confirmed. Therefore, although the industrial and agricultural sectors are deteriorating, there is no evidence of Dutch disease in Algeria. Then the short-run elasticities of variables were detected to be highly significant. The rise in all variables caused the real exchange rate to appreciate, but the increase in the first lagged variables of $L_{emp}$, $L_{tot}$, $L_{cf}$ and $L_{gs}$ led to a real depreciation. Thus, having some Dutch disease symptoms does not provide a Dutch disease evidence. Accordingly, the research objective has been achieved and hypotheses have been verified.

Keywords: Equilibrium Real Exchange Rate, Oil Revenues, Dutch Disease, ARDL, Algeria

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