Spatial Interaction and Kaldor's Growth Laws: A Cross-Country Perspective

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Abstract

The most prominent question in the economic growth literature is what makes economies grow? There have been considerable theoretical models to examine the link between various macroeconomic indicators and economic growth. Towards this, most prominently Nicholas Kaldor put forward three propositions regarding the causes of economic growth, generally referred as Kaldor's Laws of growth. The *first law* states that manufacturing is the engine of economic growth. Consequently, there is a positive relationship between the growth of GDP and growth of manufacturing output. *Second law* also known as the Verdoorn's law asserts that labour productivity growth in the industrial sector is positively related to total industrial output growth. Finally, *third law*, emphasizes that the productivity/employment in the overall economy increase due to the growth of manufacturing output. Nevertheless, these laws are empirically tested considering mainly local considerations neglecting the spatial interactions, these effects, if neglected may lead to biased and inconsistent estimates (Anselin, 1988; Elhorst, 2014). With this background, this study aims at testing the Kaldor's laws incorporating the spatial interactions across the countries. For a panel of 49 countries during the 2000-01 to 2014-15, we test the interactive hypothesis through different proximities using augmented spatial panel data framework. The novelty of spatial framework is to overcome the endogeneity arising from data generating process due to the presence of spatial lag. These models are typically designed to deal with this type of endogeneity which may be individual or interactive in nature. The results reveal that OLS estimates are undermining the relationship defined through Kaldor laws and in some cases it shows the inconsequential relationship. The results from spatial analysis support the Kaldor's laws with consistent estimates across the specifications with a strong spatial interaction across the countries. The spatial dependence is defined by a mixture of networks, however, the interaction is defined by a spatial autoregressive model with autoregressive and heteroskedastic disturbances (SARAR) where both spatial lag and spatial error estimated jointly. The results are consistent across the neighborliness measures. The first two laws show significantly higher spatial interactions than the third law reflecting the fact that manufacturing/industrial labor productivity and output growth are more spatially interactive which is imperative for sustained higher economic growth. The presence of spatial interaction has profound implications. *First*, it stresses the fact that the relationship between economic growth and manufacturing/industrial output and labor productivity is global in nature where countries are reacting to the functions transmitted from their neighbors, directly or indirectly. The reaction function is stronger between similar as well as dissimilar countries subject to the spatial proximity *Second*, on empirical grounds, the results highlight the misspecification in the earlier growth regressions and propose the need to account for spatial interactions.

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