A Natural Experiment in Brazil: Economic Impacts of the Creation of Brasilia City

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Abstract:
In this paper, we analyse the hitherto unexplored effect of the creation of Brasilia city on Brazilian regional growth patterns from 1939 to 2008. We test two conflicting theoretical frameworks, the agglomeration forces theory versus regional development policy. We applied different techniques for the estimations of models. First, cross-section Seemingly Unrelated Regression (SUR) models to measure Brasilia’s effect on the levels of income, income per capita and population for regions showed that Brasilia did not reverse the spatial economic patterns established before its creation. Rio de Janeiro had no effect for income and income per capita and had a negative effect for population of its neighbours. In contrast, São Paulo continued with its prominent role as the core of agglomeration of economic activities in Brazil. Secondly, Brasilia’s effect was analysed through cross-section SUR models for growth of income per capita. The paper tests for beta convergence and finds a weak evidence of convergence of income per capita across cities. However, this process was modified by an increase in São Paulo’s (positive) economic power on neighbouring regions while Brasilia either had zero effect or a crowding-out effect, impeding growth of its neighbour regions. Brazil's second largest city, Rio de Janeiro, had only a positive effect on growth of its neighbours in the 2000s, but not before. These results confirm some predictions of the convergence theory but the theory must be modified to incorporate agglomeration influences. Further analysis was performed to evaluate whether there was spatial autocorrelation in the estimates based on convergence theory. We found no evidence of spatial dependence once the agglomeration forces had been accounted for. These results are consistent with other studies that point to the growing influence of São Paulo’s economic power. Overall, the findings confirm that the influence of agglomeration forces outweigh effects of regional development policy in explaining regional growth in Brazil, consistent with modern economic geography literature.

Presenter: Valente Matlaba