

The Impact of Highway Access on Local Development in Brazil

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This paper studies the impact of the rapid expansion of the Brazilian road network, which occurred during the 1960s to the 1980s, on the growth and spatial allocation of population and economic activity across the country's municipalities. It addresses the problem of endogeneity in infrastructure supply and location by using an original empirical strategy, based on a "historical natural experiment" constituted by the creation of the Nation federal capital city Brasilia in 1960. Brasilia was built in a previously unpopulated area for political reasons, and the road construction program that followed was geared towards connecting the new city to other main population and economic centers, incidentally connecting other inland municipalities along the way. We construct a measure of closeness to straight lines connecting Brasilia and major economic centers of the time, and interact this with a time-varying measure of investment in the improvement of State-level transport infrastructure.

Using this as an instrument for road access at the municipality level provides us with a first stage that captures the share of the improvement in road access within each state over the period that can be ascribed to each district according to its distance to the closest exogenous straight line. This instrumental strategy is then used to assess the impact of improvements in the cost of access on local-level changes in population, overall GDP, as well as primary, secondary and tertiary sector GDP. The results support a story of concentration of economic activity in the main population centers, away from the newly better connected secondary centers. This evolution is driven by a reduction of industry and services, which appear to relocate to the main centers, and an increase in the share of agriculture. Finally, this is paralleled by a movement of population towards municipalities where cost of access improved, suggesting an intensification of commuting patterns between these towns and the main cities.