

Farther on down the road: transport costs, trade and urban growth in sub-Saharan Africa

Adam Storeygard*

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Abstract

How does isolation affect the economic activity of cities? Transport costs are widely considered an important barrier to local economic activity but their impact in developing countries is not well-studied. This paper investigates the role of inter-city transport costs in determining the economic activity of sub-Saharan African cities. Sub-Saharan Africa is a relevant and important setting because of its high spatial concentration of manufacturing and low but increasing levels of urbanization. However, the lack of panel data on both local economic activity and transport costs has prevented rigorous empirical investigation of this question. I fill this gap with two new datasets. Satellite data on lights at night proxy for city economic activity, and new road network data allow me to calculate the shortest route between cities. Cost per unit distance is identified by plausibly exogenous world oil prices. The results show that an oil price increase of the magnitude experienced between 2002 and 2008 induces near cities to become 6 percent larger than otherwise identical cities one standard deviation farther from a major port. Combined with external estimates, this implies an elasticity of city economic activity with respect to transport costs of -0.2 at that distance. Moreover, the effect differs by the surface of roads between cities. Cities connected to the port by paved roads are chiefly affected by transport costs to the port, while cities connected to the port by unpaved roads are more affected by connections to secondary centers.

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*Department of Economics, Brown University. Email: adam_storeygard@brown.edu.