

# Spatial Productivity of Road Transport Infrastructure

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## Abstract

The empirical literature studying the effects of public capital on the performance of private enterprises remains inconclusive more than 20 years after the seminal paper from Aschauer. Although aggregated models have generated results that have shown significant effects of public capital on productivity, disaggregated applications have produced results that have only shown little or no significant effects. Traditionally, the differences in these results have been explained by the existence of regional spillovers and network effects caused by transportation and communication infrastructures. According to this view, the aggregate effect seems to be composed of the direct and indirect effects of public capital investment. We firmly believe that the results from these two types of studies might be made consistent by testing for the existence of spatial dependence among geographical units and by including variables for capital services in place of the traditional stock measures. This article pays special attention to the effects of road transportation infrastructure development on productivity in the Spanish economy. In particular, a classic production function is estimated that tests different spatial econometric models by using a road services variable and panel data from the 47 mainland Spanish provinces. We found that the services provided by the road transportation infrastructure had small but positive direct and indirect effects on productivity in these provinces.

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