

# Moving Opportunity.

## Local Connectivity and Spatial Inequality

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October 2022

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### Abstract

Within-country inequality across space is large, particularly in settings where local connectedness varies significantly. How does connecting locations via transportation infrastructure affect spatial inequality of opportunity? I study improvements to road networks in Benin, Cameroon, and Mali in a spatial framework that yields a sufficient statistic for the opportunity effects of market access consistent with a broad class of data-generating processes. Using a novel “not-on-least-cost-path” instrumental-variables approach, I estimate that changes in connectivity altered the spatial distribution of opportunity. Applying estimates from the sufficient statistic result to parameterize a general equilibrium spatial model, I find substantial effects of road building. Since 1970, road investments raised the probability of primary school completion in all locations but did so by 7.5 p.p. more in the most-affected areas relative to the least-affected ones. I then use my spatial model to estimate the opportunity impacts of future road investments. Both network- and road-level characteristics matter for the effect of road upgrades. I find that roads that increase average opportunity the most are not necessarily those that decrease inequality of opportunity the most. If a social planner weights equality of opportunity this will change where roads should be built in the future.

JEL: R12, R42, O18, H54

Keywords: Inequality, Opportunity, Roads, Spatial, Market Access

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