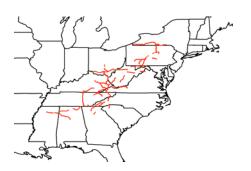# Placed Based Development Policies and Infrastructure Investments throughout the 20ᵗʰ Century

- Can Regionally targeted policies reduce regional disparities in income?

- We examine the creation of the Appalachian Development Highway System to see if roads facilitate market integration



- ADHS built between 1965 and 2010, approximately 3,000 miles of high grade road

- Adopt a model of interregional trade

- From the model, derive an estimating equation that relates *income* to *market access*

- Market Access is a measure of connectedness to other markets weighted by travel time

- Crucial Step: Measure travel times between each origin and destination

- Digitize Shell Gasoline highway maps from the 1950s, and use modern data from the FHWA.

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Example Least Cost Path in 1960 Tallahassee to Washington DC



Example Least Cost Path in 2010 Tallahassee to Washington DC



## Main Findings

| | Appalachian Counties (1) | ARC Counties (2) | Non-Arc Counties (3) |
|---|---|---|---|
| A. Counterfactual w/o ADHS, in 2015 $ | | | |
| total income (billions) | -45.9 | -32.5 | -13.4 |
| | (15.7) | (10.9) | (4.8) |
| income per capita | -170.5 | -514.6 | -63.5 |
| | (69.1) | (207.2) | (26.2) |
| B. Counterfactual w/ PARC, in 2015 $ | | | |
| total income (billions) | -22.0 | -15.0 | -7.0 |
| | (7.5) | (5.0) | (2.5) |
| income per capita | -81.4 | -236.9 | -33.1 |
| | (33.1) | (95.5) | (13.6) |

- Had the ADHS not been built, incomes would have been $45 Billion Lower per year, $170 per capita (1 percent of GDP in the 13 states)

- Given the fiscal cost, the rate of return between 1965 and 2010 ranges from 3-8%