



# Blades of Despair? The Impact of Wind Farms on Crime

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### Abstract

RQ: Do wind turbines affect crime rates in the US? And how?

- Are there explanatory impacts of wind turbines on local economy?

Method: We answer this using:

- Wind Turbine Database (USWTDB), FBI Uniform Crime Reports, US Government Finance Database, SEER, BEA
- Sun & Abraham DID with Police Agency FE and State by Year FE

Key Findings:

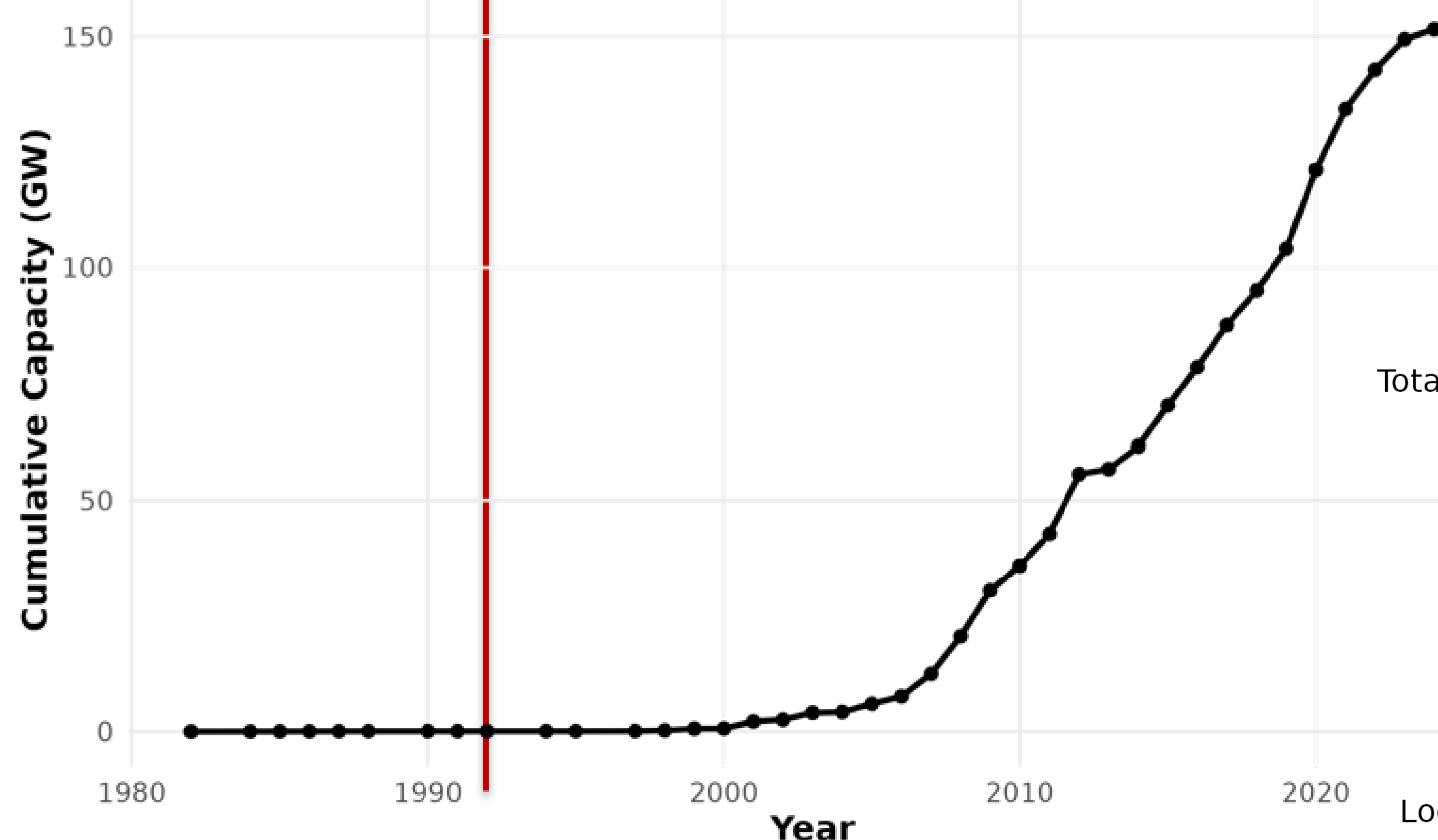
- ~2 crime incidents reductions per 1,000 people, 3-4 years after installations
- Increases in total revenue, total own-source revenue, total expenditure, capital outlays, log GDP per capita
  - Suggestive of stronger local economic activity following installations

### Introduction

Significant growth in Wind Energy over the past two decades

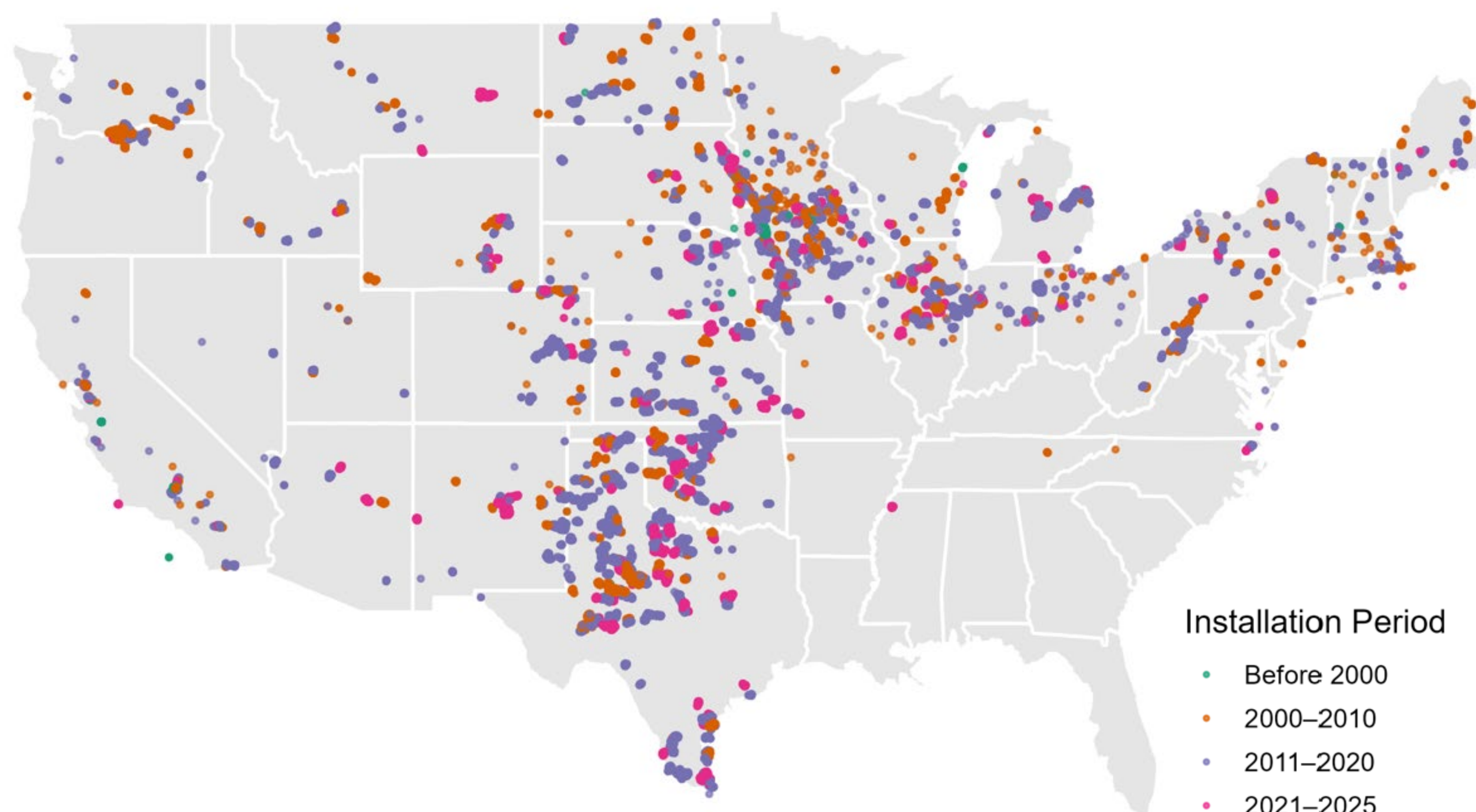
- From 6 billion kWh in 2000 to over 380 billion kWh in 2021

#### Cumulative Installed Wind Energy Capacity in the U.S.



1992 Energy Policy Act: tax credit of 1.5 cents per kilowatt of wind-power-generated electricity

#### Locations of Wind Turbines in the United States



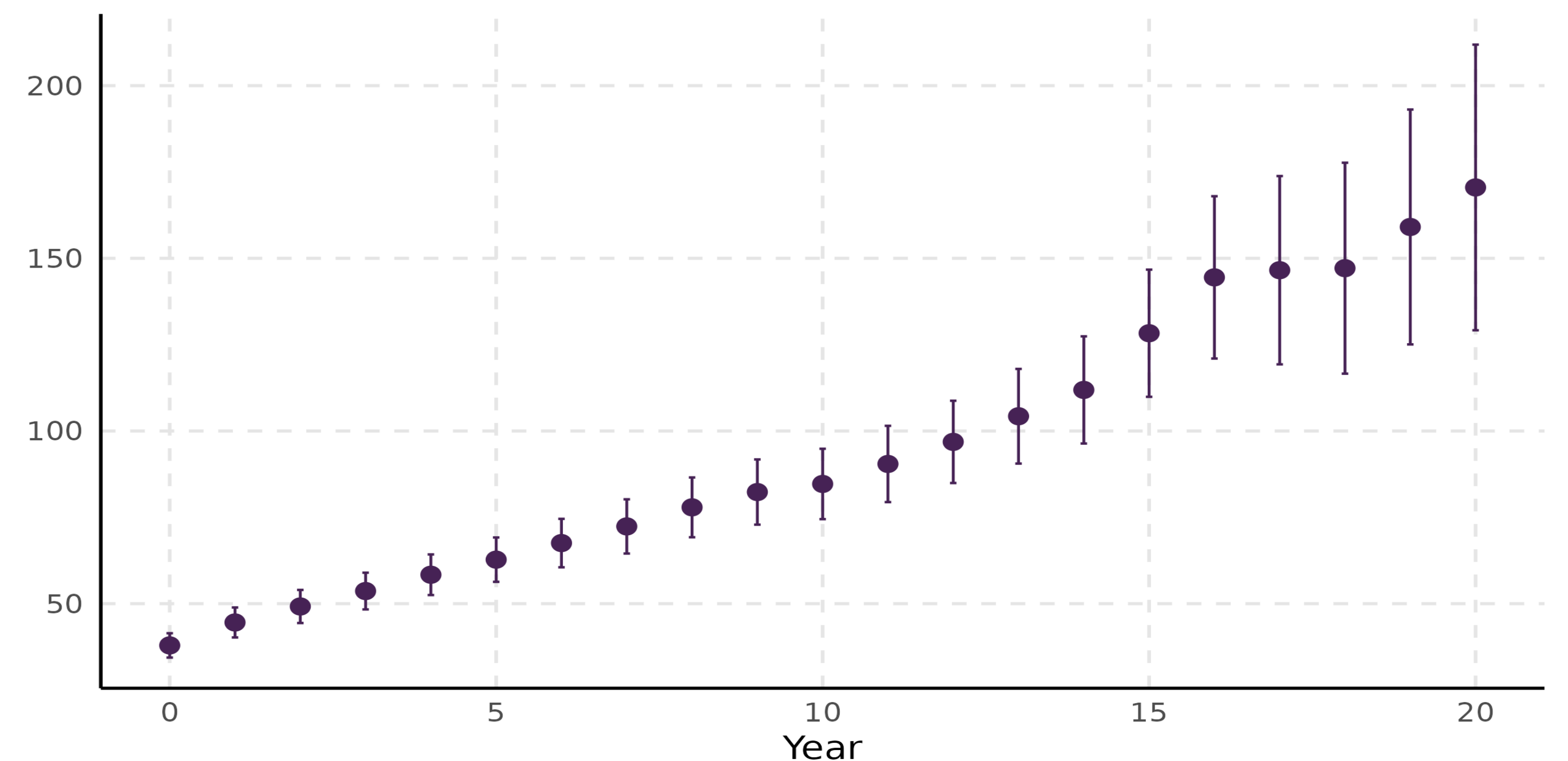
- Most wind turbines are located in rural counties in Great Plains and Midwest
  - Because of High Wind Resource Quality in those regions
- Over 75,000 wind turbines across 45 states by 2024
- Wind Turbines construction cost: typically, \$1,600 - \$2,000 per kW
- 50 MW wind project creates about 40 full-time construction jobs during the construction period
- Wind turbine Projects create about 2 wind technician jobs per 10-20 turbines
  - Permanent jobs for the 20- to 30-year life of the project

### Contact

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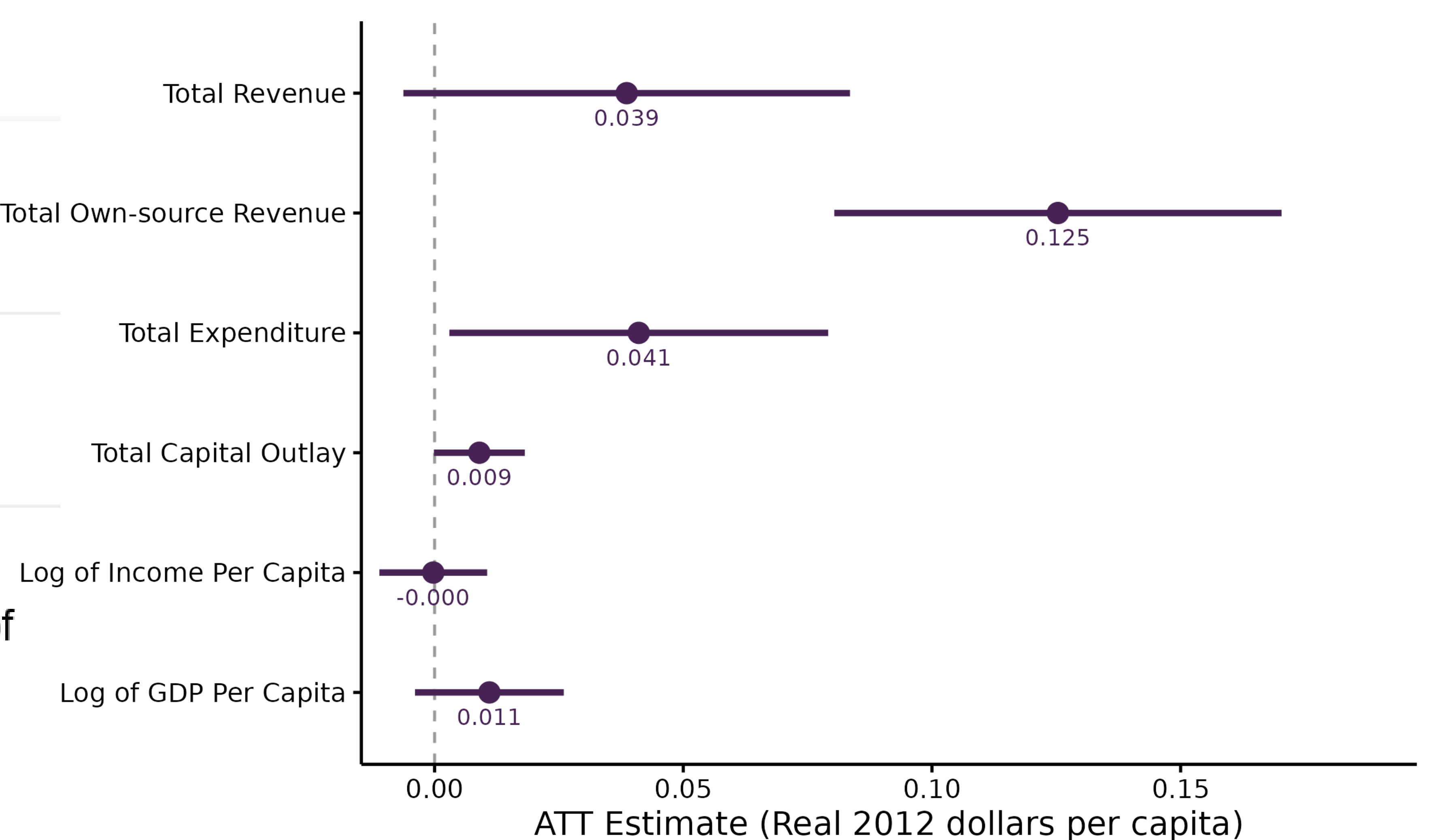
### Results

#### Cumulative Number of Wind Turbines in County



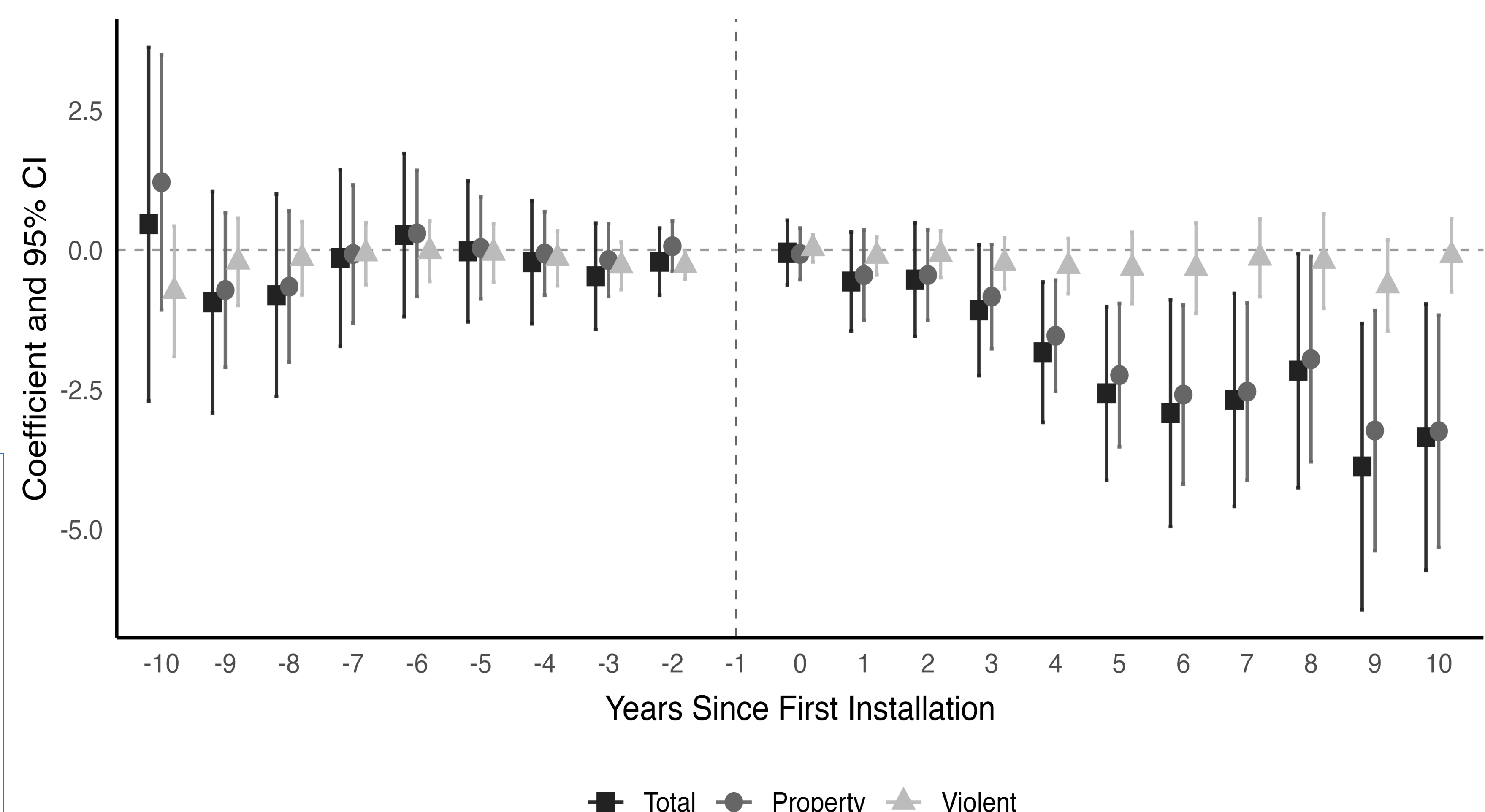
After the first turbine is installed, counties experience a steady build-out of additional turbines.

#### Effect of Wind Turbines on Government Finances



Wind turbine installation is associated with positive increase in

- Total Revenue, Total Own-Source Revenue, Total Expenditure, Total Capital Outlay, and log GDP per Capita
  - Suggestive of tax base expansion and stimulated local economic activity



#### Effects of Wind Turbine Installation on Crime

- Property crime decreases by about 2.02 incidents per 1,000 people
- Total crime decreases by about 2.21 incidents per 1,000 people
- The decline in crime emerges 3-4 years after installation.