Commodity Prices and Rural Mortality

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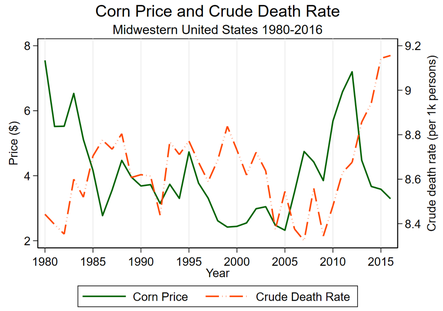
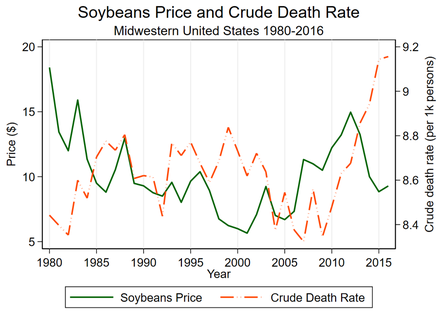
Background

- Media outlets were citing commodity prices and financial stress as significant factors affecting the mental health of US farmers.
- We study the relationship between commodity price shocks and rural mortality by looking at the county level for the period 1980 to 2016 in 16 Midwestern US states.

Data from 1980 to 2016

- Mortality data is from US Centers for Disease Control and Prevention (CDC).
- Commodity information is from National Agricultural Statistics Service Information (NASS).





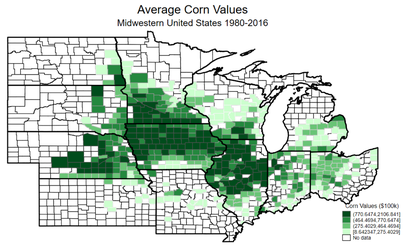
Estimation Strategy

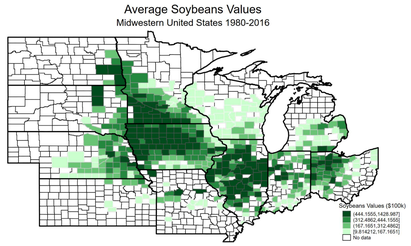
- We estimate the two-way fixed effects (TWFE) specification:

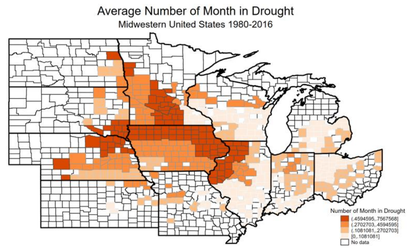
$$DeathRate_{it} = \alpha + \beta \ln(Price_{ct} * Quantity_{ict}) + \gamma X_{ict} + \delta_i + \tau_t + \epsilon_{ict} \qquad (1)$$

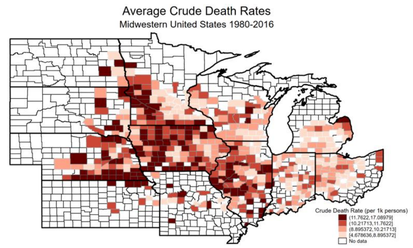
- To further exogenize the treatment variable, we also estimate versions of Equation (1) where we instrument our treatment variable $\ln(Price_{ct} * Quantity_{ict})$ with a measure of recent drought severity in county i.

Spatial Distribution

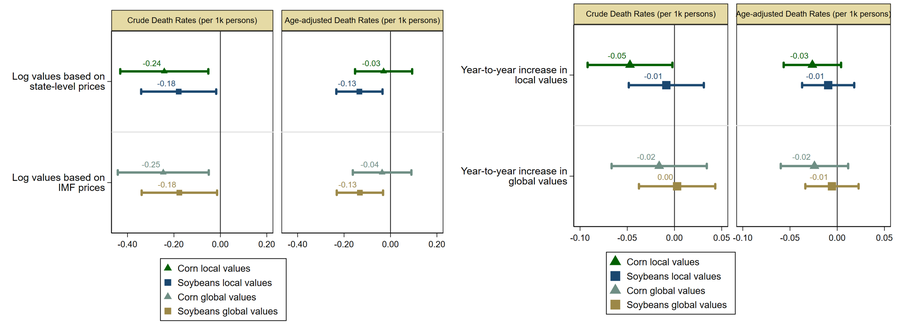




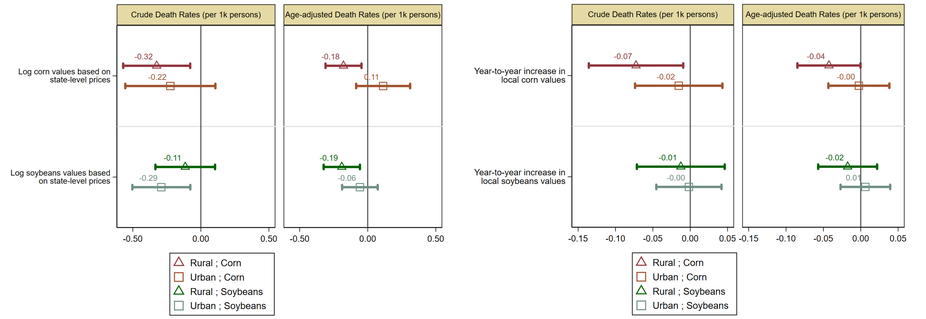




Commodity Values ⬆ Death Rates ⬇



Significant Results for Rural Areas



Conclusion

- Our study investigates the relationship between economic shocks and the welfare of rural communities by looking beyond farmers themselves.
- A 1% increase in corn values is significantly related to a decrease in crude death rates by 0.2 per 1k persons.
- The results support the notion that negative commodity price shocks translate to rural mortality.