

Opioids and the Labor Market

ACS Data Users Conference 2019

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Disclaimer

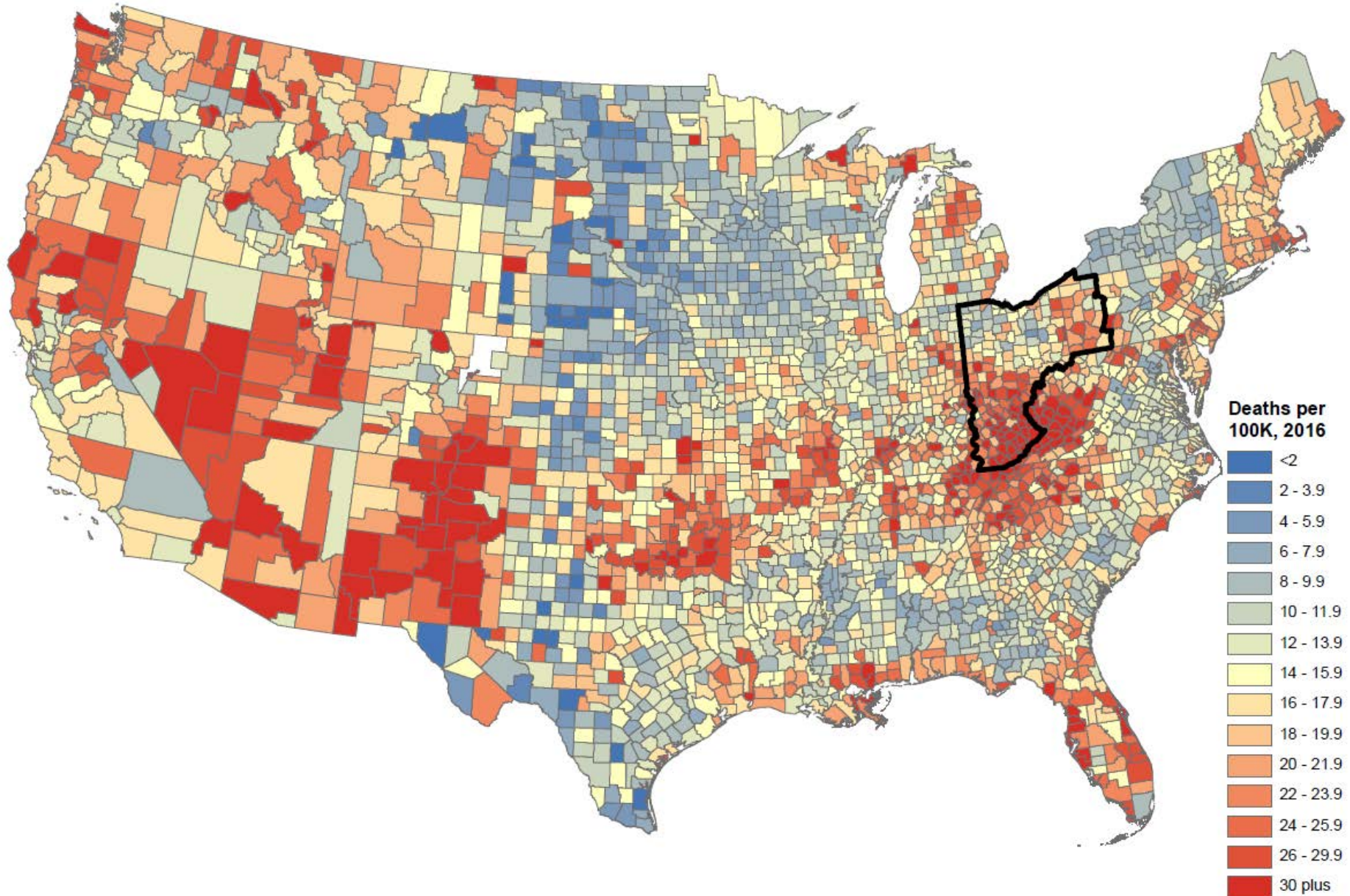
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How did we come to examine this issue?

- Senator DONNELLY: The national unemployment rate is at 4.4 percent, but the labor participation rate has gone down. . . How much of a factor do you think the opioid abuse situation has been?
- Ms. YELLEN: So I do think it is related to the decline in labor force participation among prime-age workers. I do not know if it is causal or it is a symptom of long-running economic maladies that have affected these communities and particularly affected workers who have seen their job opportunities decline.

From 2017 Senate testimony by Chair Yellen

Why is this a Cleveland Fed Issue?



Source: Center's for Disease Control

Key Pieces of the Research Literature

Case and Deaton, 2015 show that poor labor market prospects of low education groups is associated with an increase in overdose deaths, suicides, and liver disease or “Deaths of Despair”

Krueger, 2018, shows that opioid availability helps to explain poor prime-age labor market participation rates in the 2000s

Currie, Jin, and Schnell, 2018, find a positive opioid effects on employment to population rates for prime age women (and to a lesser degree for men)

Harris, Kessler, Murray, and Glenn, 2019, used Prescription Drug Monitoring Program data show that opioid prescriptions cause labor force participation rates to be lower in 10 states

Our Approach to this Issue

Examine the geographic relationship from 2006-2016 between

Opioid

Prescriptions

and

Employment/Population

Participation Rate

Unemployment

There are a lot of other things that could matter:

Age, sex, and education levels of population

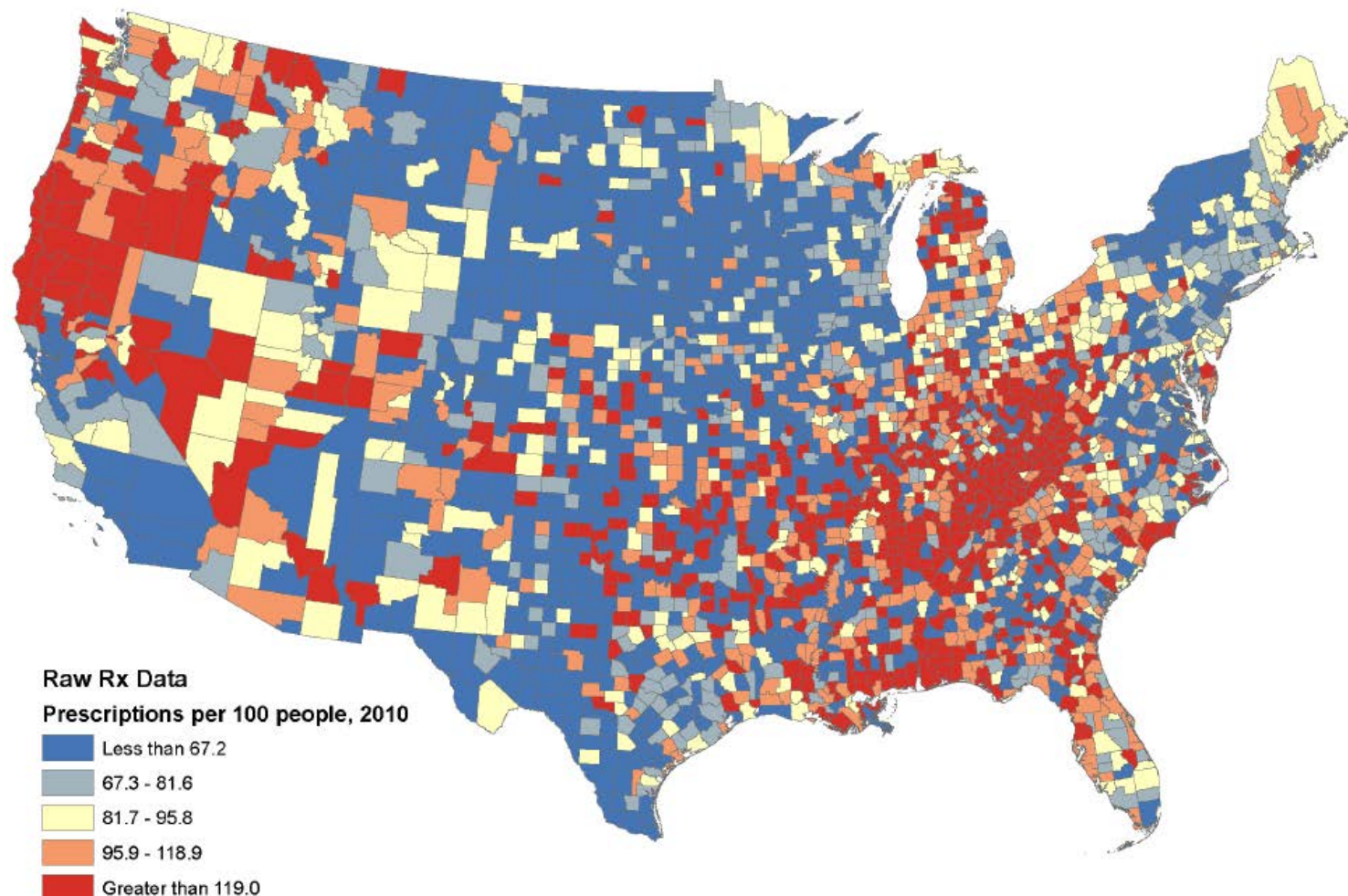
A really large recession and gradual recovery

Bad local labor markets

Economically challenged regions

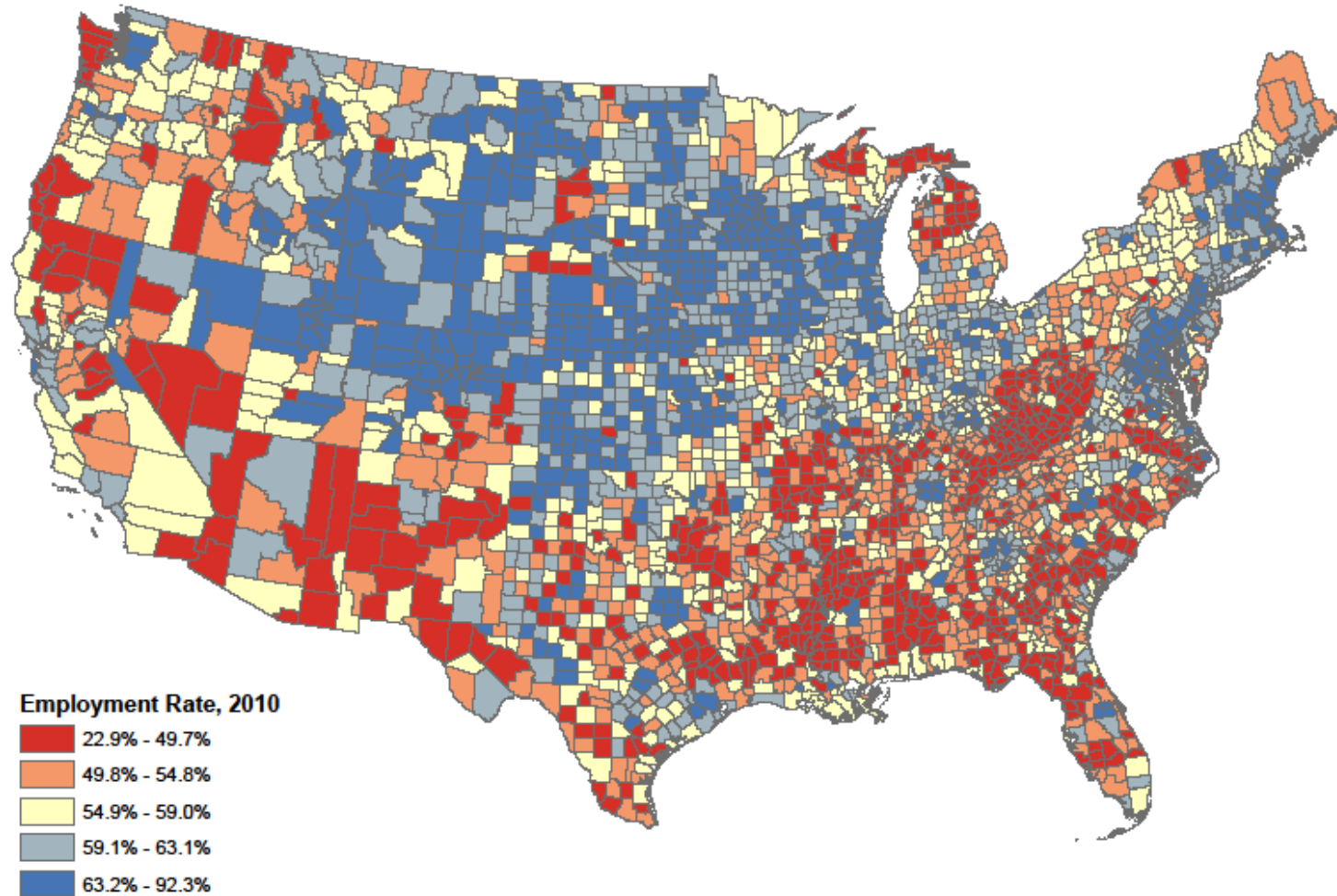
Prescription Rates Vary

Counties



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Employment to Population Rates Vary



Source: American Community Survey (5 year), 2010

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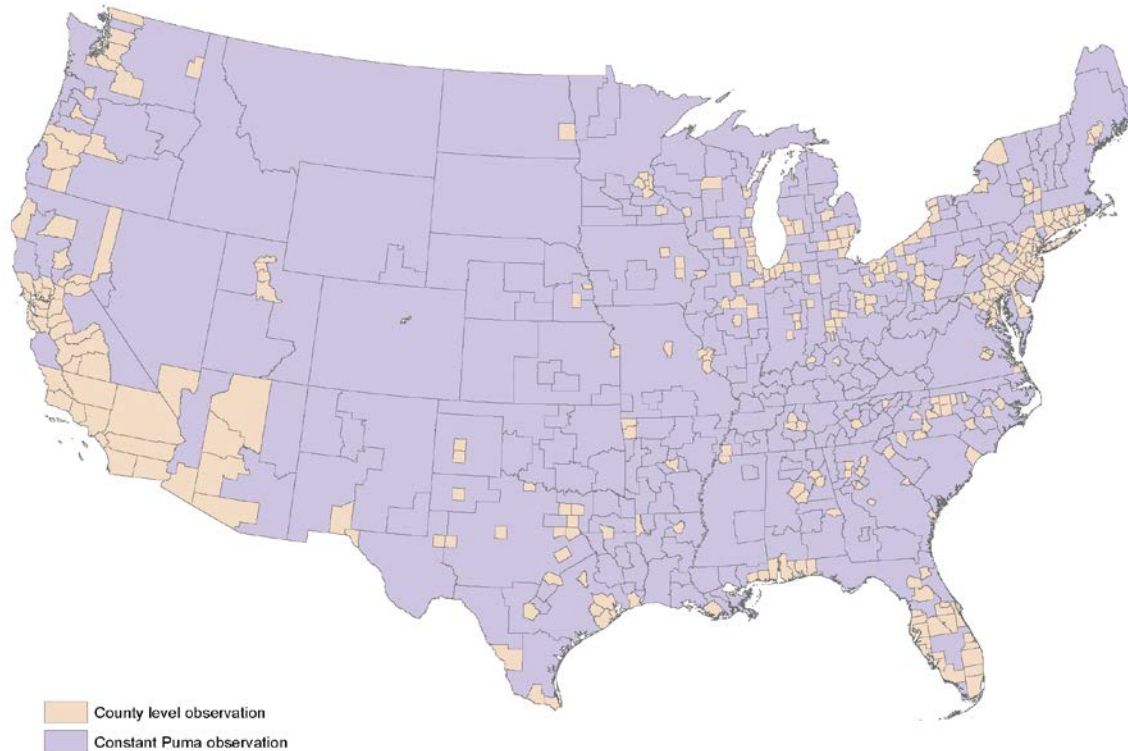
Age, sex, and education levels of population

The Great Recession and the recovery

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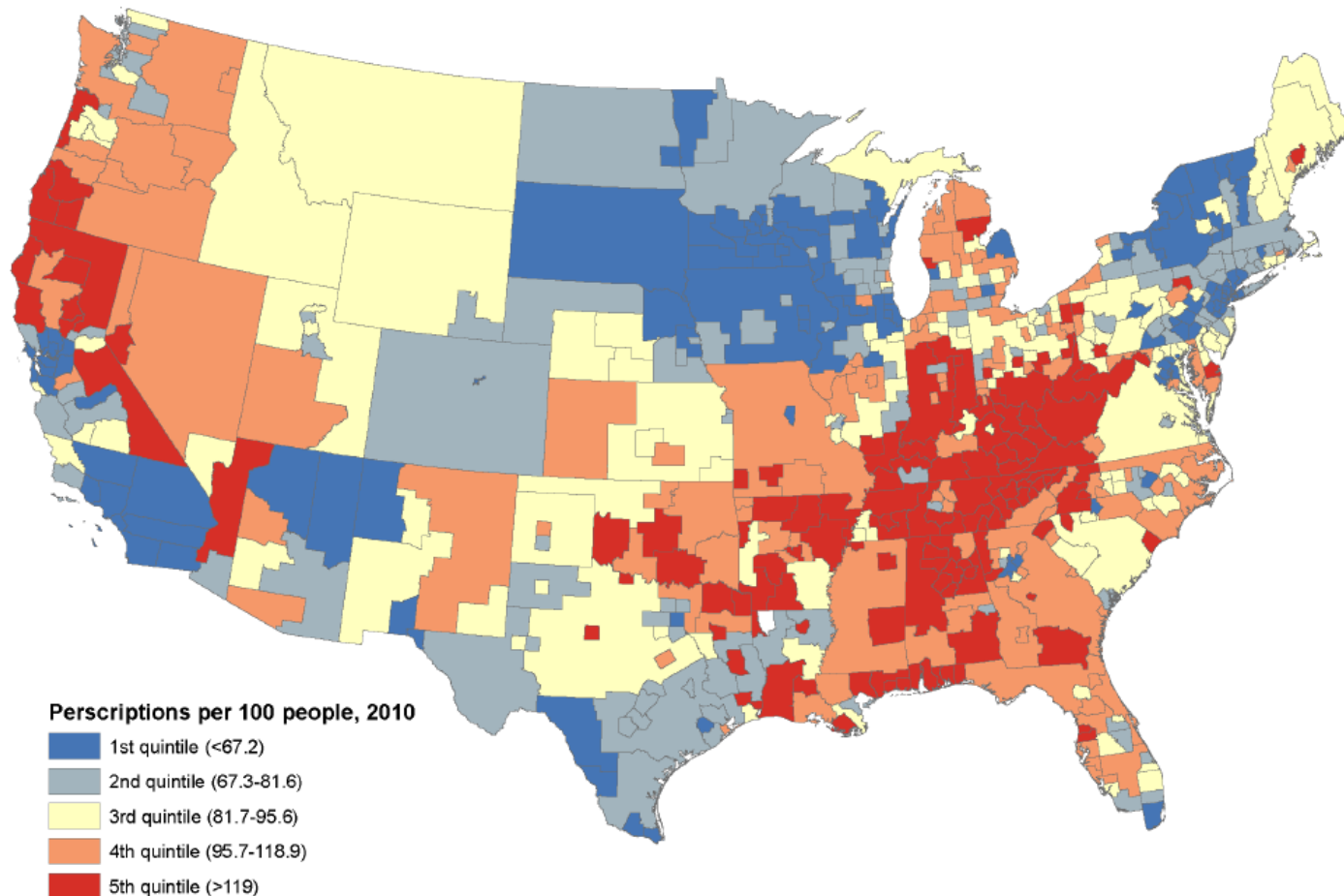
American Community Survey, individual labor market data from 2006-16



County is identified for counties over 100,000, other counties aggregated in areas with 100,000 people

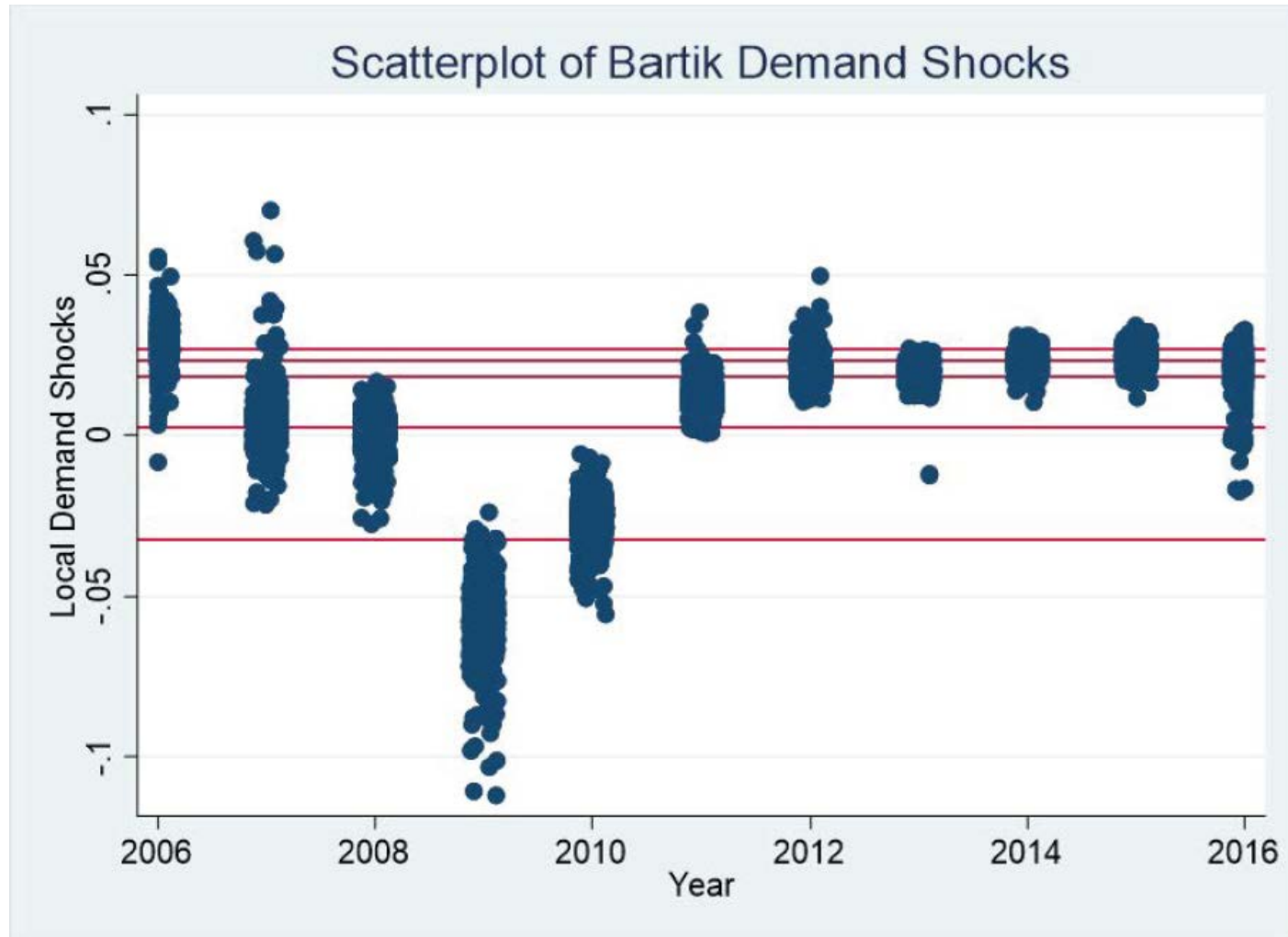
Prescription Rates in our Geography

Non-identified Counties to COUMAs



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The Recession and Local Demand Matter



Opioid Availability and Labor Market Outcomes?

Increasing the prescription rate 10%:

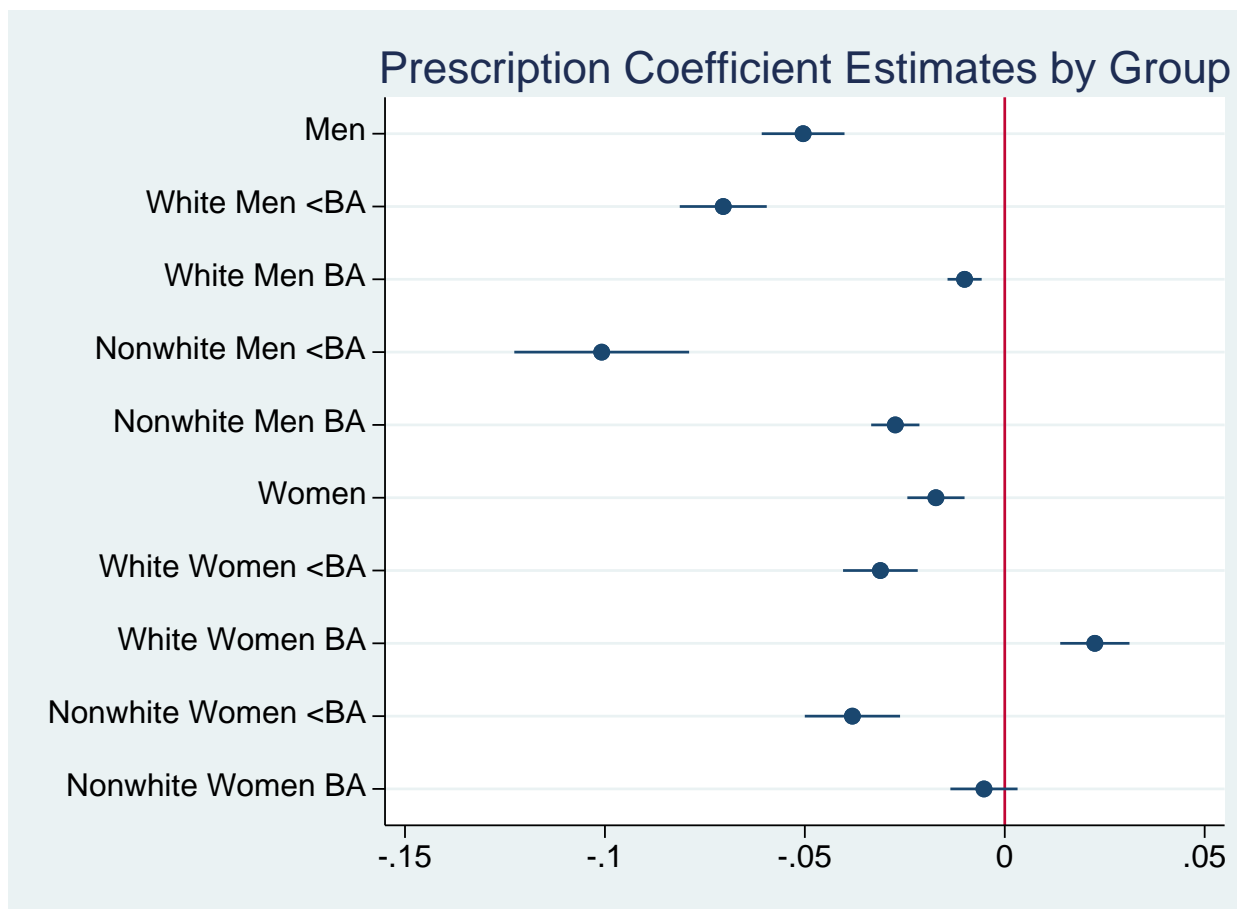
- Decreases employment/pop rate by:
 - 0.50 percentage points for prime age men
 - 0.17 percentage points for prime age women
- Decreases participation rate by:
 - 0.47 percentage points for prime age men
 - 0.16 percentage points for prime age women
- Increases unemployment/pop rate by:
 - 0.04 percentage points for prime age men
 - 0.02 percentage points for prime age women (insignificant)

Difference between a low- to a high-Rx county:

- Is a 100% change from ≈ 60 Rx's per 100 people to ≈ 120 Rx's

Demographic Differences are Large

We allow for differential effects by demographic group. College completers and women appear significantly less susceptible to their location's opioid prescription rate.

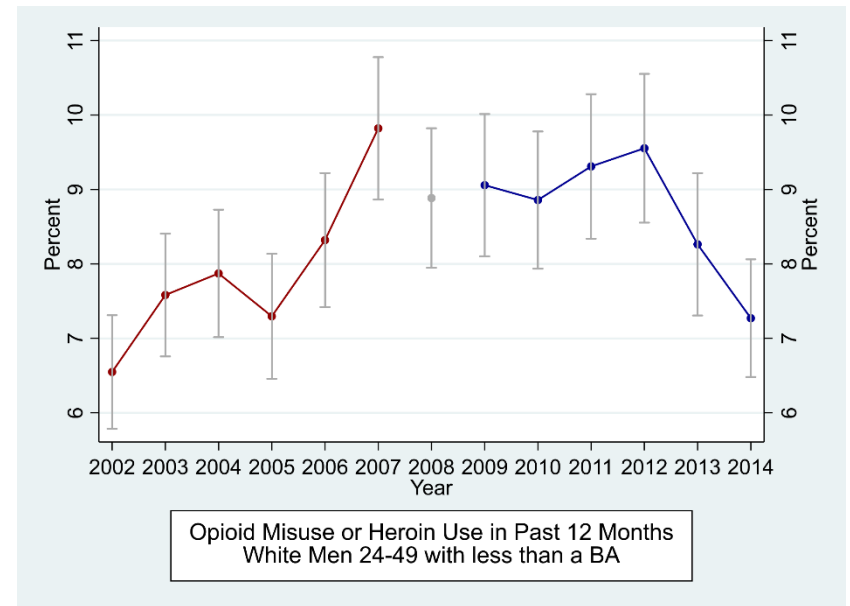
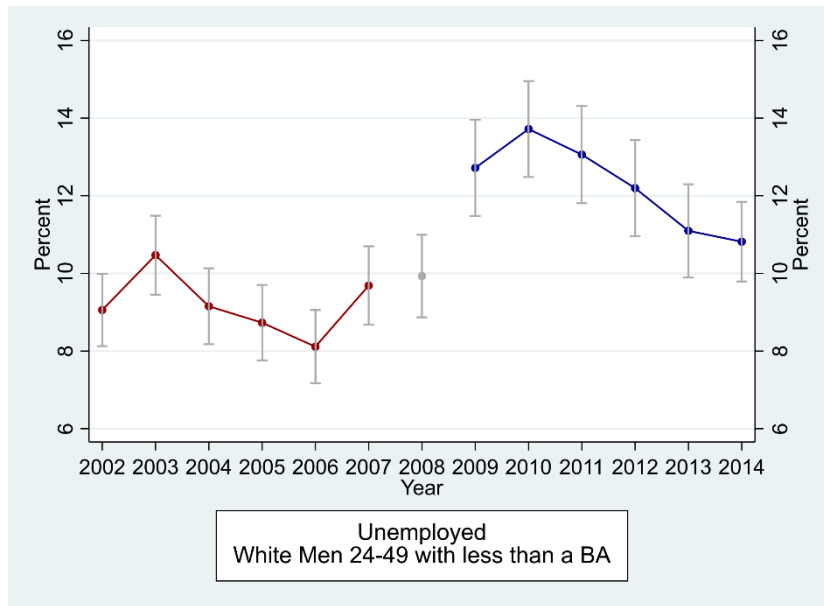


Do Economic Conditions Increase Opioid Use?

- What about the other direction – the labor market causing opioid use?
- The Great Recession was a major shock to the labor market. If the labor market drives opioid use, we should see an increase in use whose timing coincides with the Great Recession
- Maybe opioid use just occurs where labor markets are bad. Labor market weakness is persistent in many place, so if that determines it should be the case that more troubled places are more impacted

The Great Recession Did Not Increase Opioid Abuse

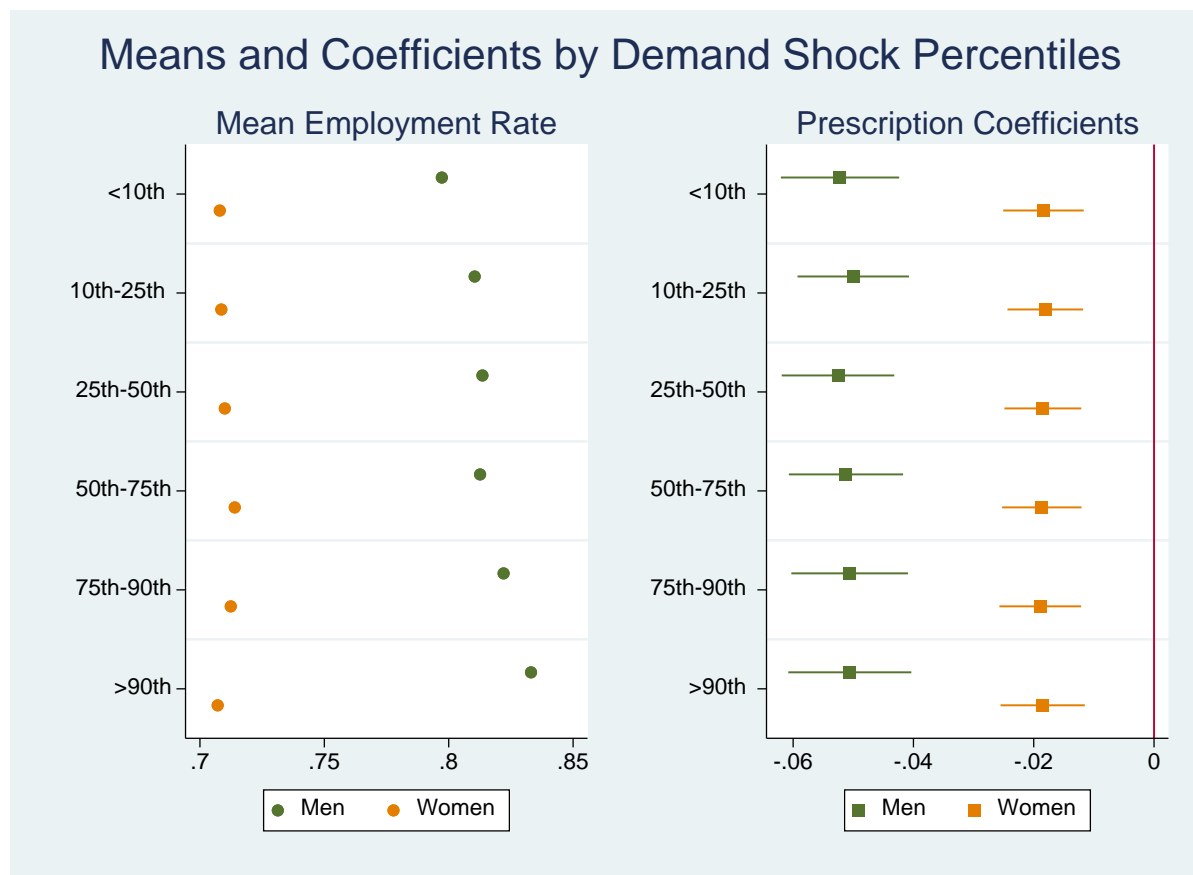
We use nation's primary dataset on drug abuse to look for recessions effects on opioid abuse?



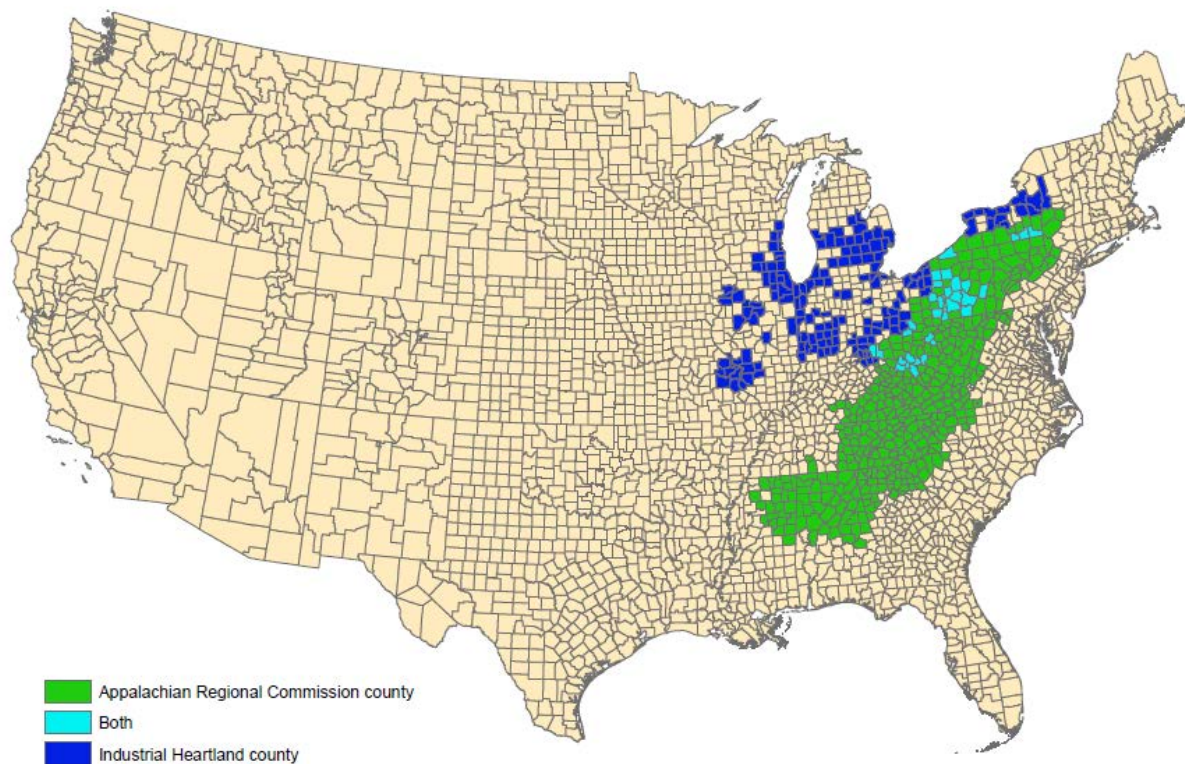
Source: The National Survey on Drug Use and Health (NSDUH)

Are More Shocked Labor Markets More Susceptible?

We allow the effects to be stronger in areas where shocks have been worse, but while it dampens male employment rates these places are not more susceptible to opioid prescriptions.



What about regions with bad economies?

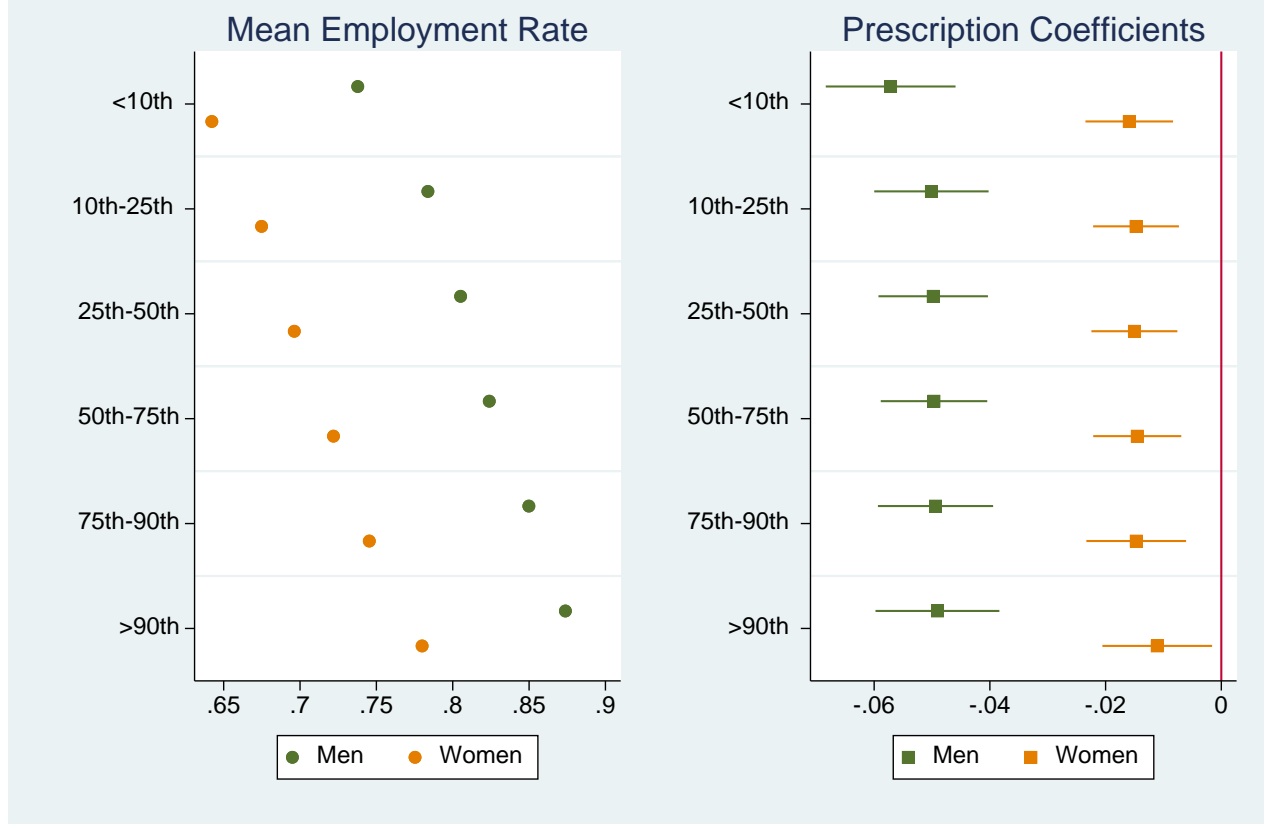


There are small, but statistically significant, additional regional effects for men (-0.003) and women (-0.001) in Appalachia and women (-0.004) in the Rust Belt counties.

What about Persistently Bad Labor Markets?

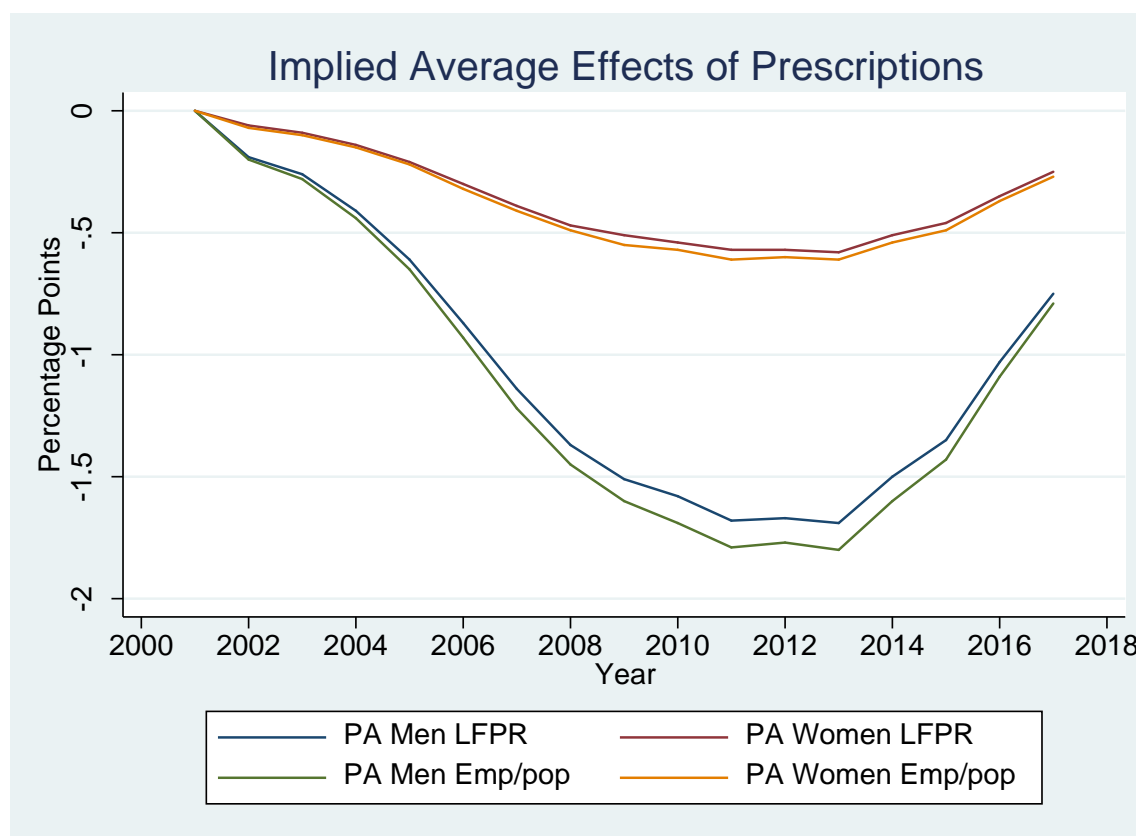
We allow the effects to be stronger in areas that have been worse/better since 2000. The status is long-lived but these places are not more susceptible to opioid prescriptions.

Means and Coefficients by 2000 Employment Rate Percentiles



Implied National Impacts are Really Large

Using our estimates and historical data on national numbers of prescriptions, we can estimate the national impact since 2001.



Opioids and the Labor Market

- Opioid prescriptions are associated with lower employment and participation rates
- Effects are largest for men with high school or less educations: white and minority
- Effects are roughly 1/3 the magnitude for women
- The Great Recession does not appear to have boosted use
- Bad labor markets do appear to be more susceptible to opioid prescriptions
- Accounts 44% of the realized decline in prime age men's labor force participation rate

<https://doi.org/10.26509/frbc-wp-201807r>