

Recent Employment Growth in Cities, Suburbs, and Rural Communities

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Federal Reserve Bank of Boston
Research Department

October 3, 2019



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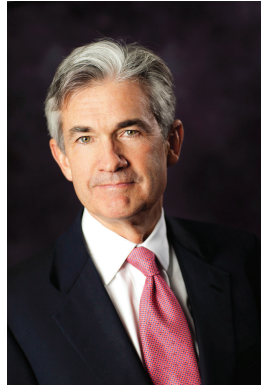


Eric Rosengren, President of Boston Fed

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Empirical Approach

- Many potential dimensions for spatial analysis of labor markets

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- We will also use some county-level demographic data from Census

Four Population-Density Groups

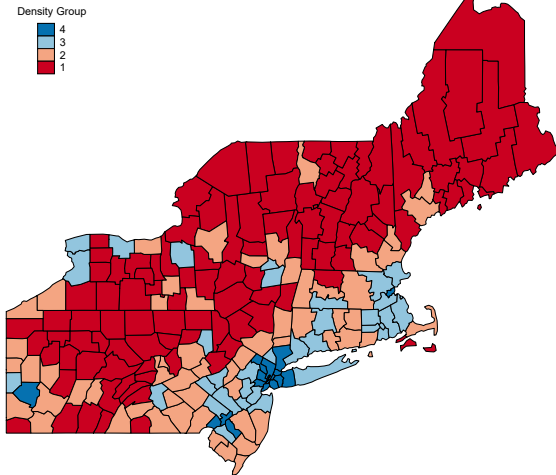
Four Population-Density Groups

Density Percentiles	No. of Counties	Share of Pop.
1–85	2,473	$\approx 30\%$
86–95	291	$\approx 25\%$
96–99	116	$\approx 30\%$
100	29	$\approx 15\%$
Total	2,909	100%

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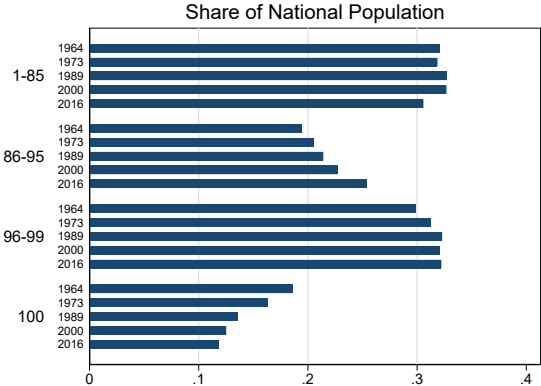
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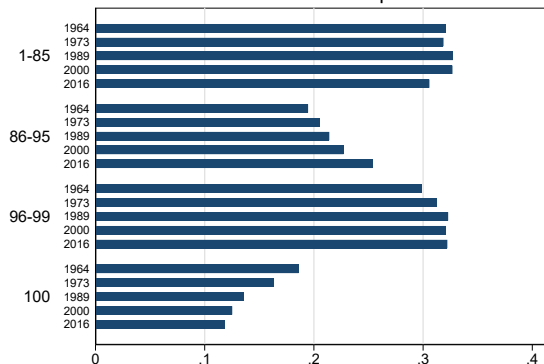
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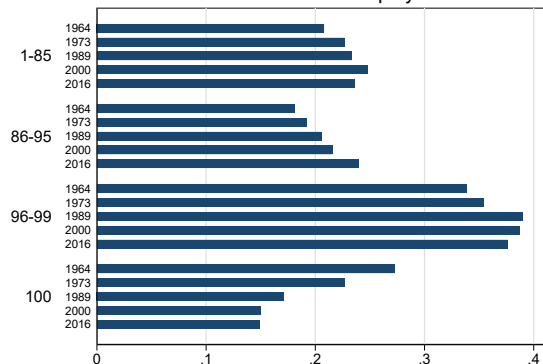


Population and Employment Shares

Share of National Population



Share of National Employment



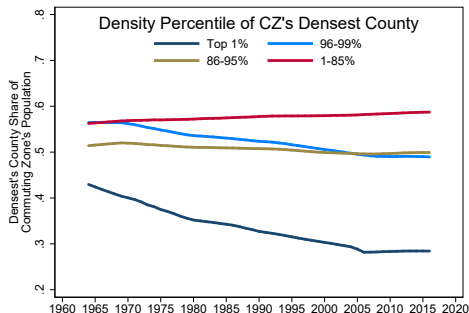
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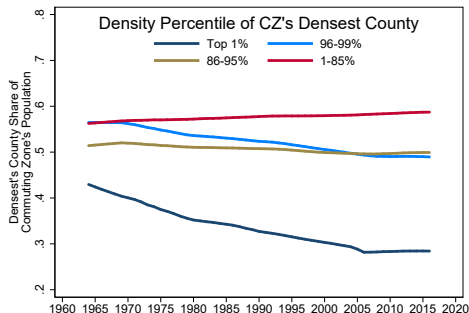


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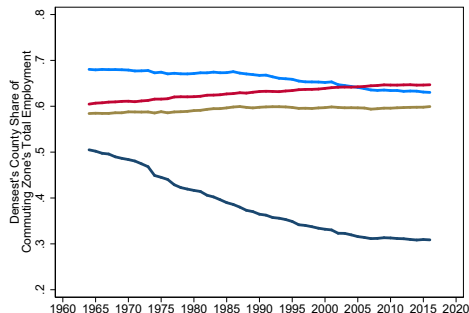
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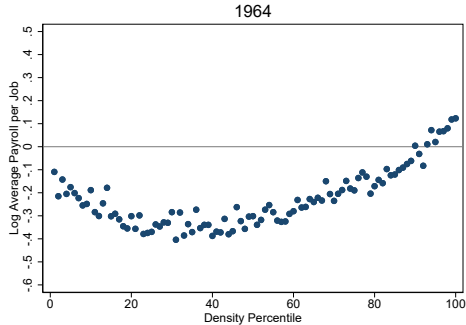
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Earnings per Job Averages by Density Percentile

Relative to population-weighted mean across all counties

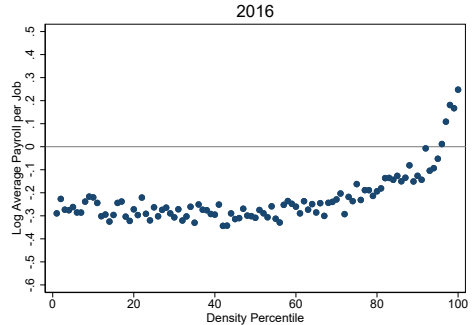
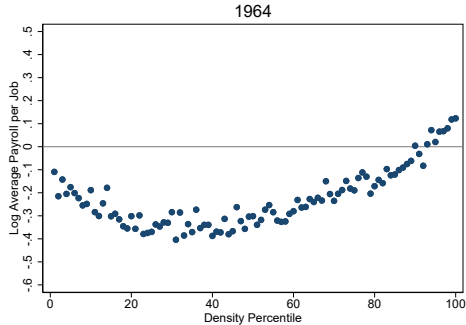
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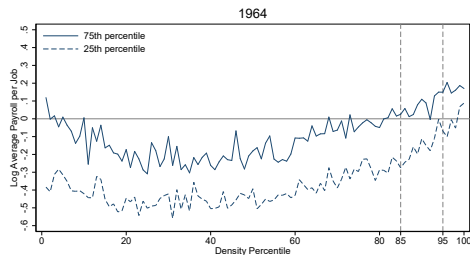
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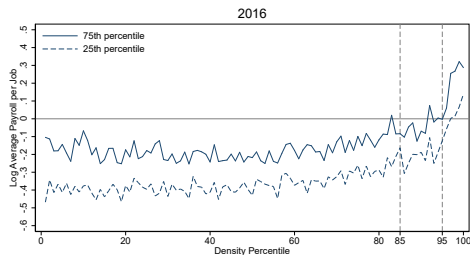
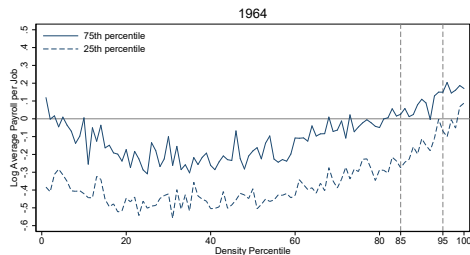


Earnings per Job Dispersion: Inter-Quartile Range

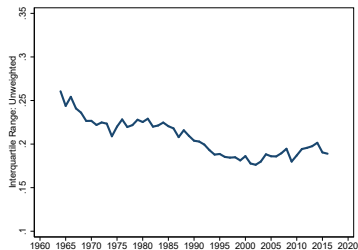
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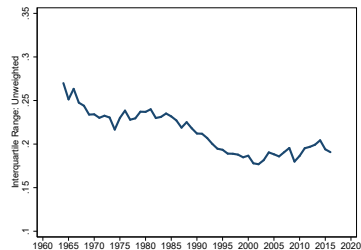
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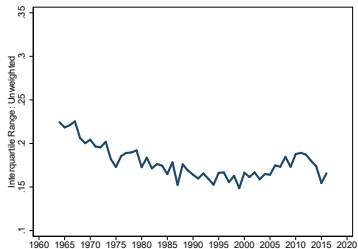
All Counties



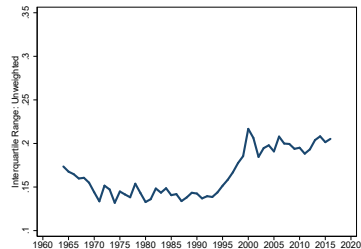
Bottom 85% of Counties



Percentiles 86–95



Densest 5%



County-Level Regression Model

■ Timing:

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Spatial Specification

$$Y_t = X_t\beta_t + WX_t\gamma_t + \varepsilon_t$$

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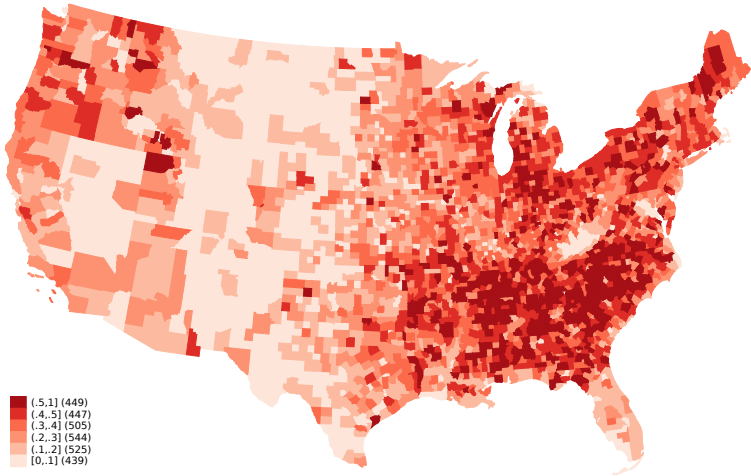
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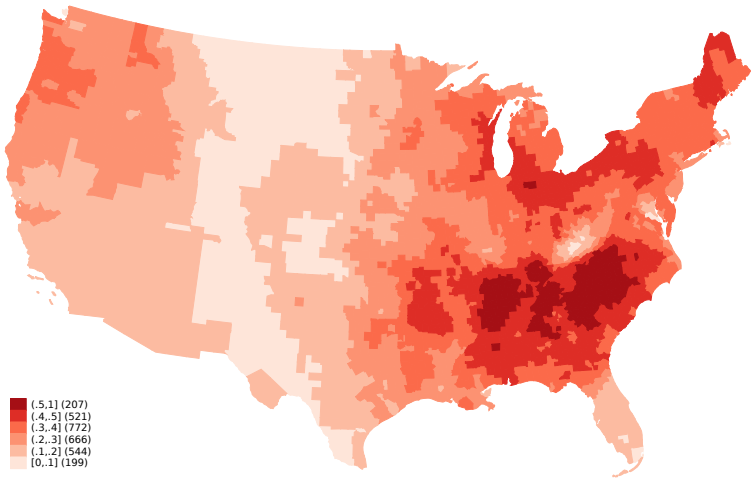
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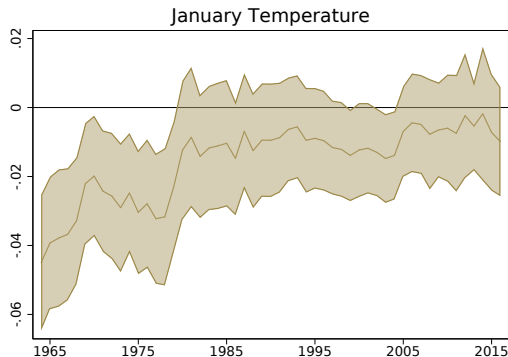
Manufacturing Shares in 1980



Neighboring Manufacturing Shares in 1980

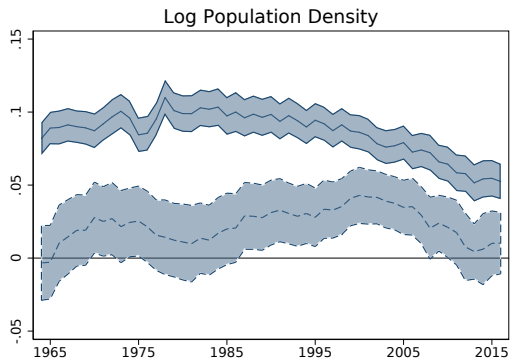


Log Earnings Per Job: Average January Temperature

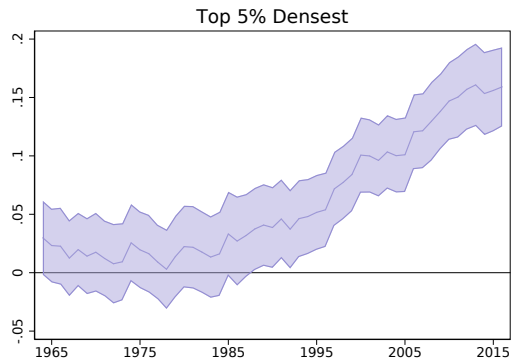
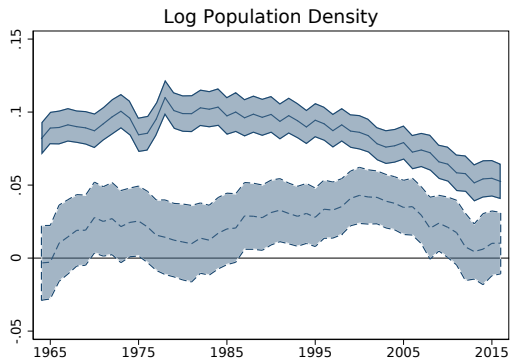


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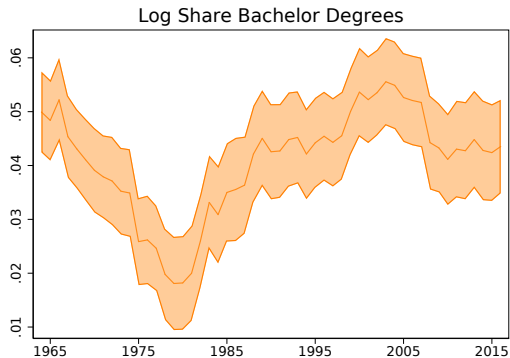


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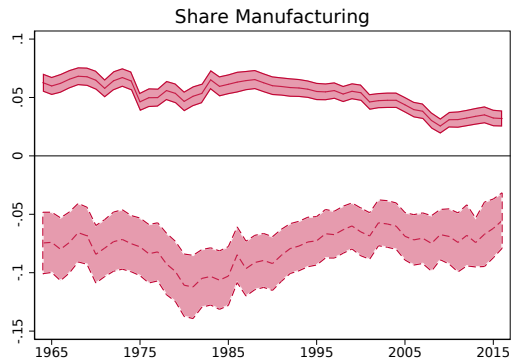
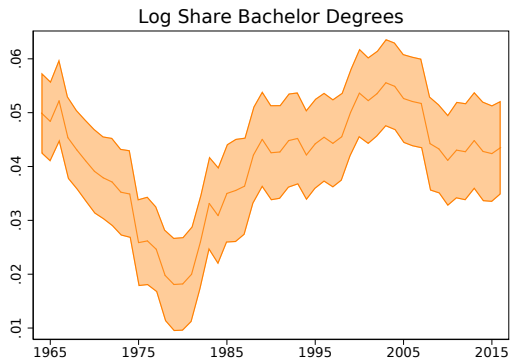


Log Earnings Per Job: Education and Manufacturing Shares

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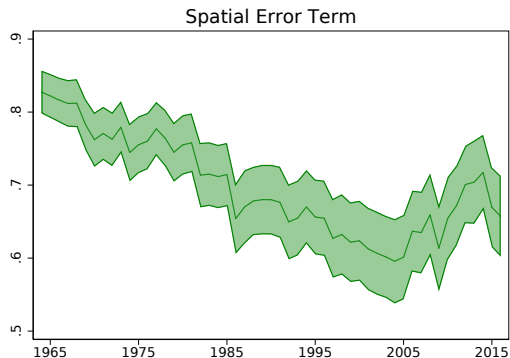


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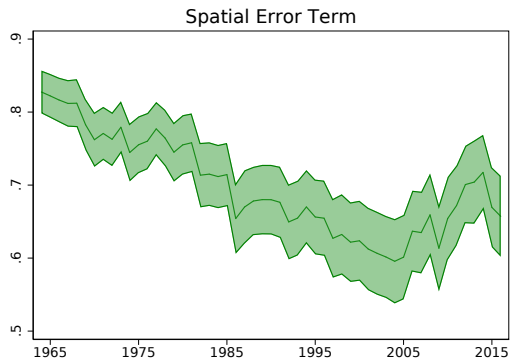


Log Earnings Per Job: Spatial Error Term

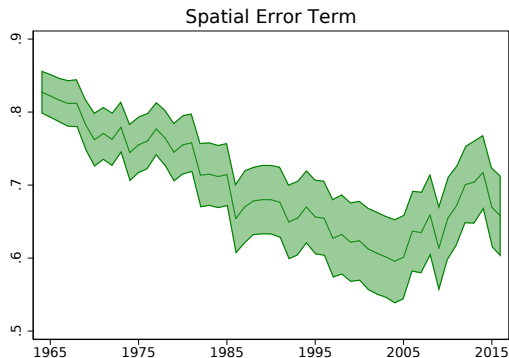
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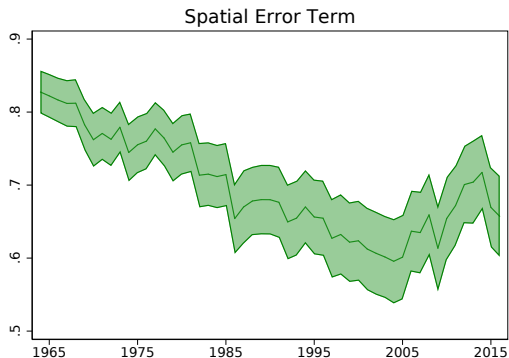


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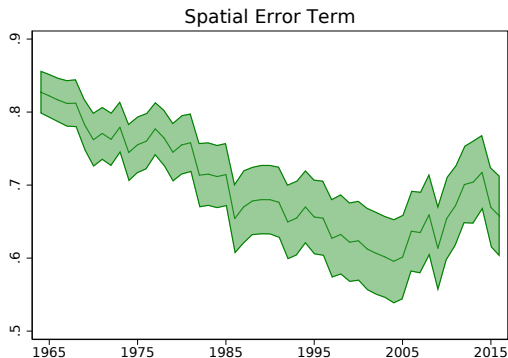
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- Similar movements in superstar cities constituent counties increase “clumpiness” of regression residuals (λ_t)

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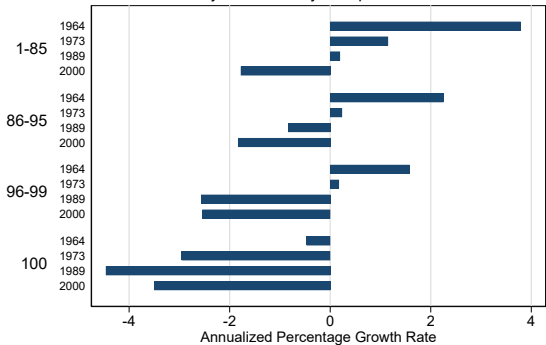
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- Population suburbanization slows in 2000s for both groups

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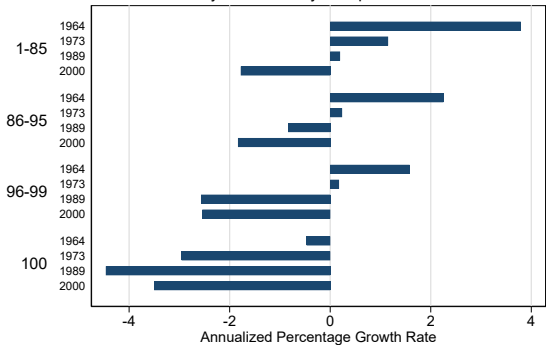
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Within-Group Manufacturing Employment Change
By Initial Density Group and Year



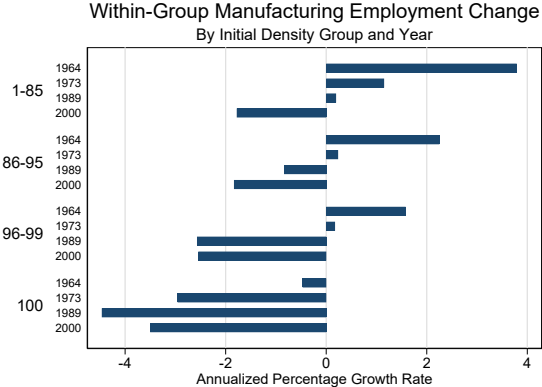
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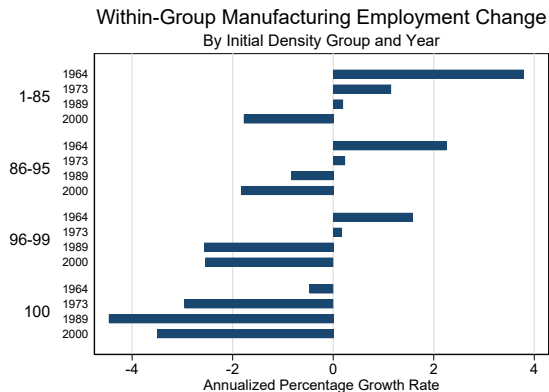


Manufacturing Employment Growth by Density Group

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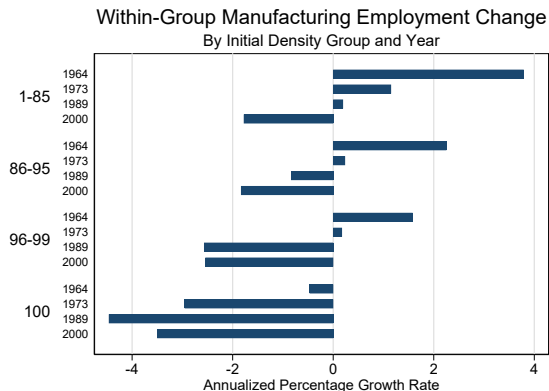


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- Big losses everywhere post-2000
- For manufacturers, 21st century has been an equal opportunity disemployer

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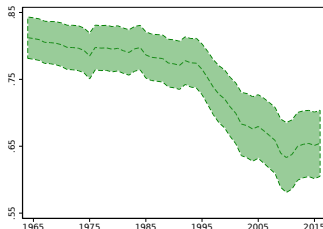
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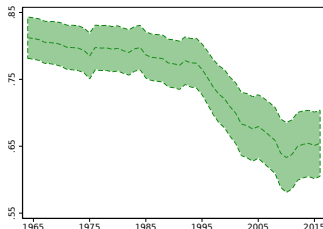
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- Implication: Current job-losers less able to diversify than earlier job losers

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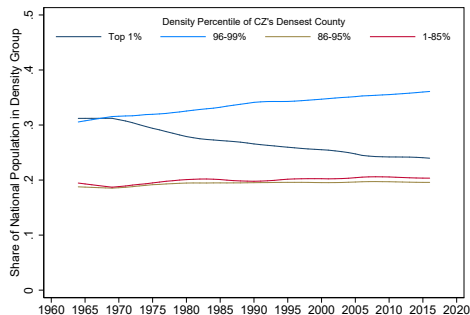
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 - A technological reallocation of traditional office tasks away from non-college workers would have large implications for urban/housing policy

The End

Commuting Zones: Population Shares

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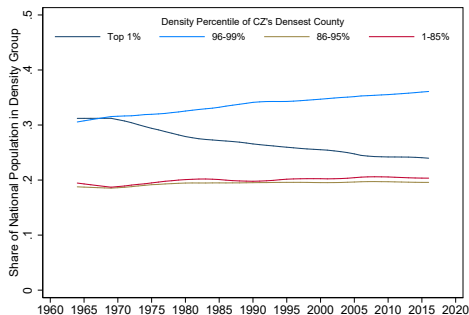
1964 County Classifications



Note: Commuting zones defined using 1990 data. Densest county of CZ defined using 1964 data.

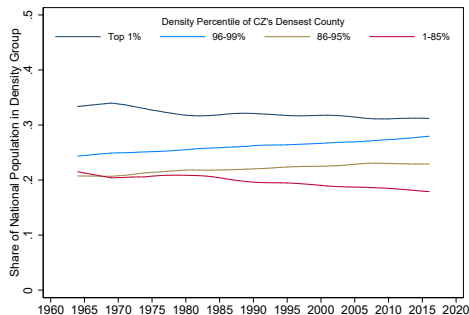
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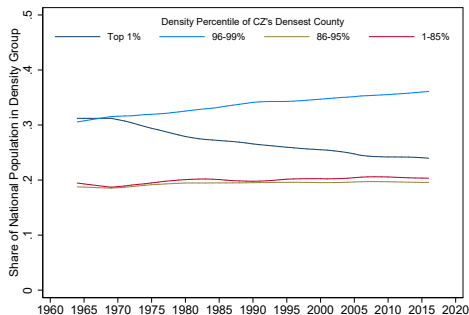
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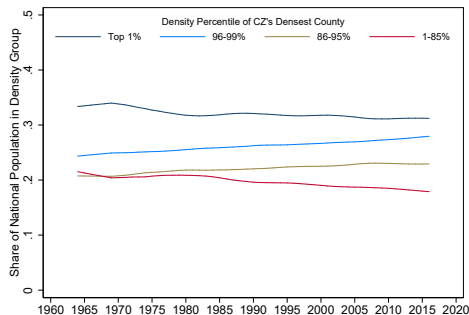
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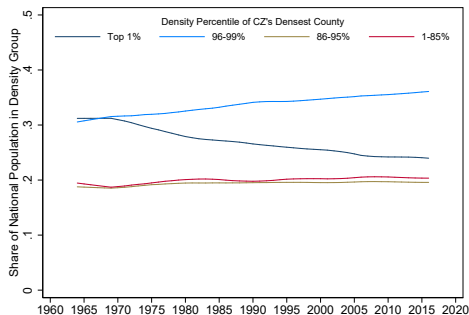


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- Evidence for population growth in middle two tiers in both panels (lt. blue and tan)

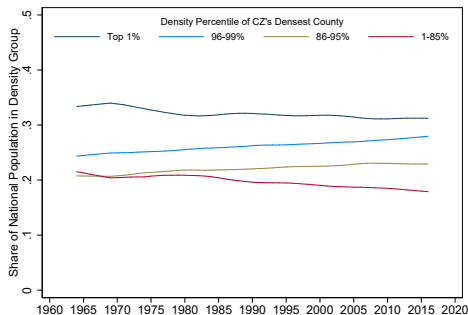
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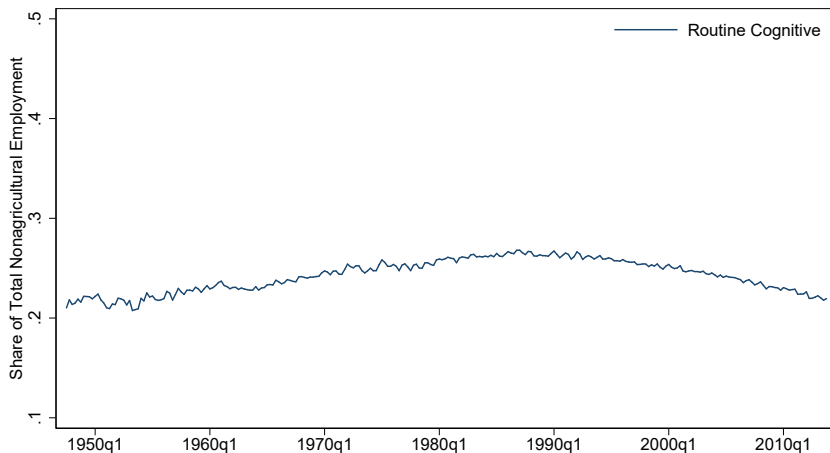
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 - Researchers typing their own papers using L^AT_EX or Scientific Word

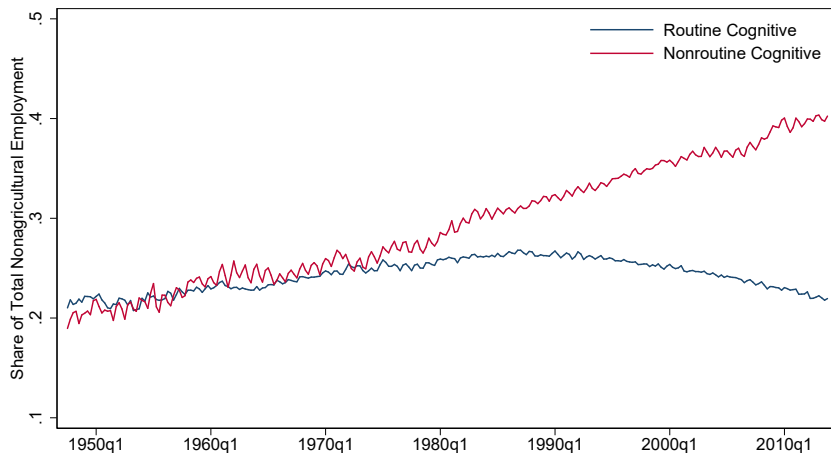
National Employment by Occupational Group

Source: CPS



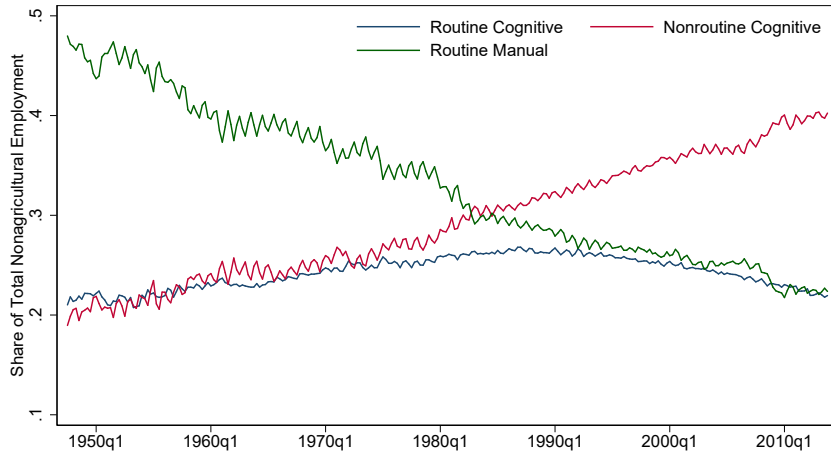
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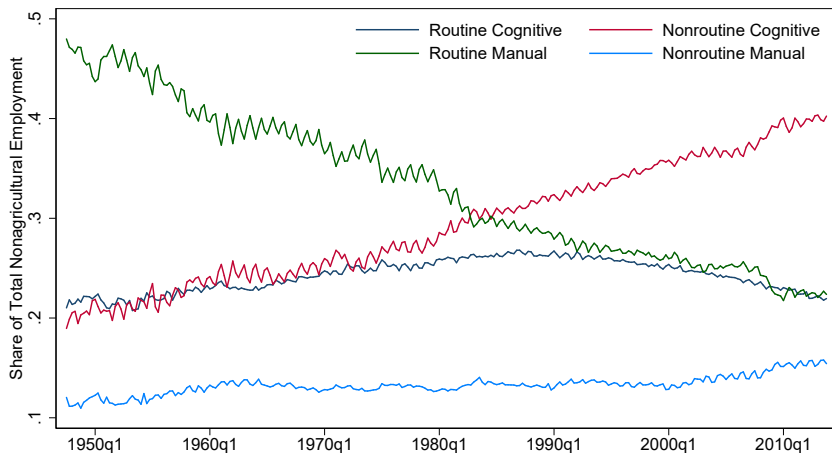
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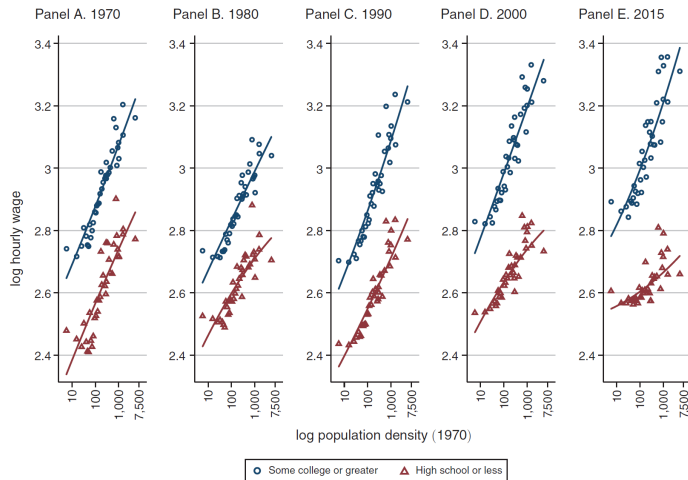
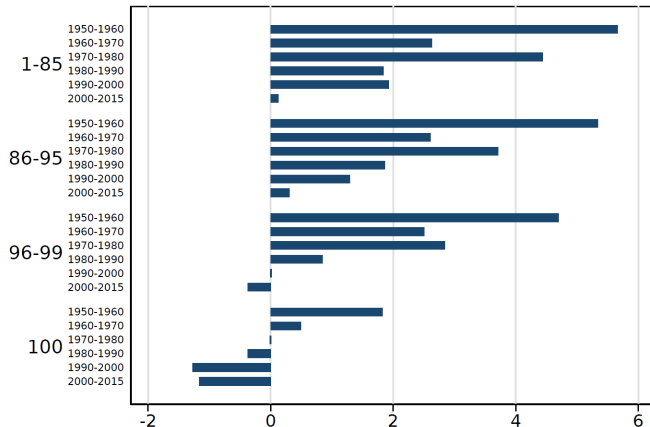


FIGURE 13. REAL LOG HOURLY WAGES OF COLLEGE AND NON-COLLEGE ADULTS, 1970–2015: WORKING-AGE ADULTS

Growth of Clerical/Office-Support Empl, by Density Group

Sources: Decennial Censuses and American Community Survey



New York City in the 1970s

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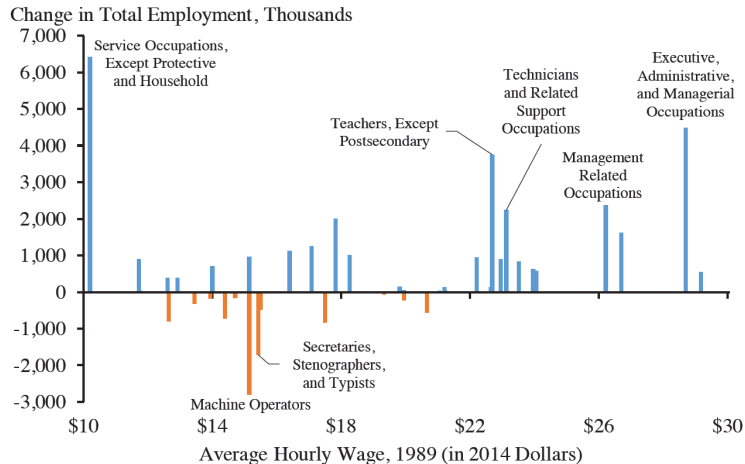
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As recently as the 1970s, pretty much every older industrial city seemed simultaneously doomed. Both New York and Detroit were reeling from the decline of their core industries, and if anything, New York seemed worse off because the car industry seemed more tightly tied to Motown than the garment sector did to Gotham. In 1977, workers in Wayne County, Michigan, which includes Detroit, were paid more than workers in Manhattan.

Edward L. Glaeser
Triumph of the City
p. 56

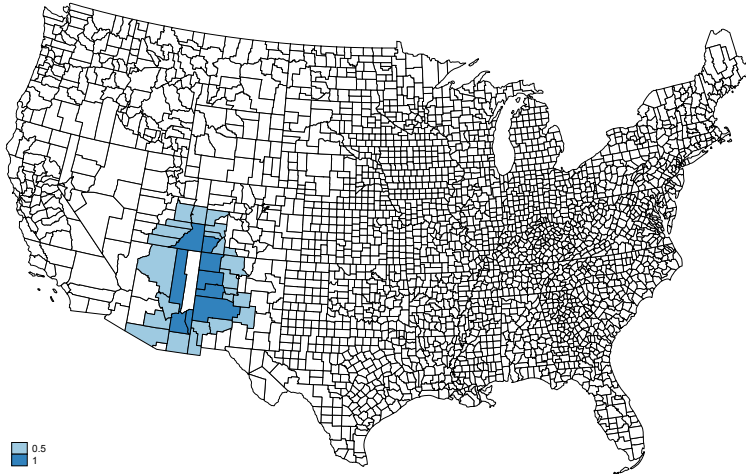
Change in Employment by Detailed Occupation: 1989–2014

Source: Council of Economic Advisers (2015 *Economic Report of the President*)



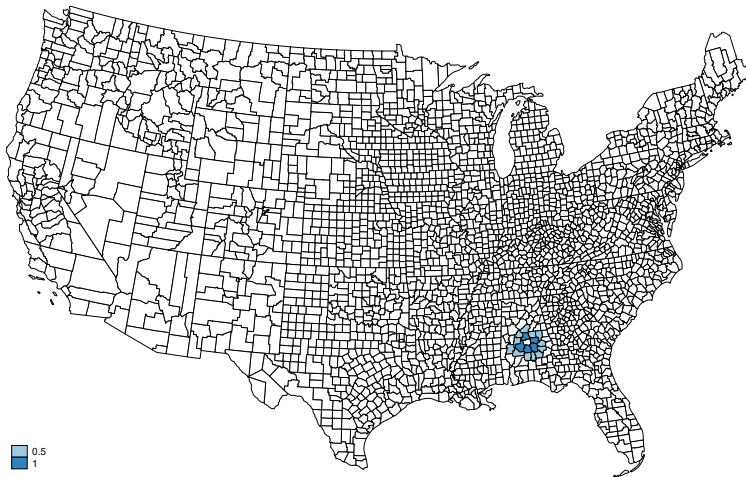
Second-Order Contiguity Matrix

Apache County, AZ



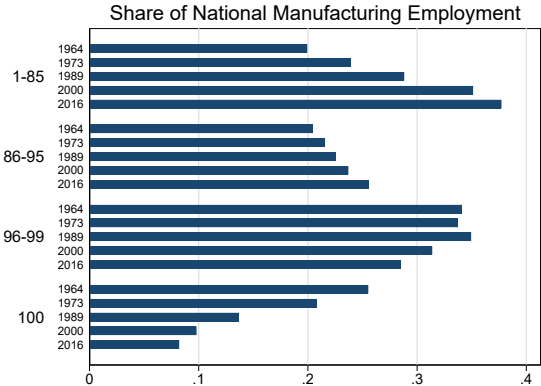
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Autauga County, AL

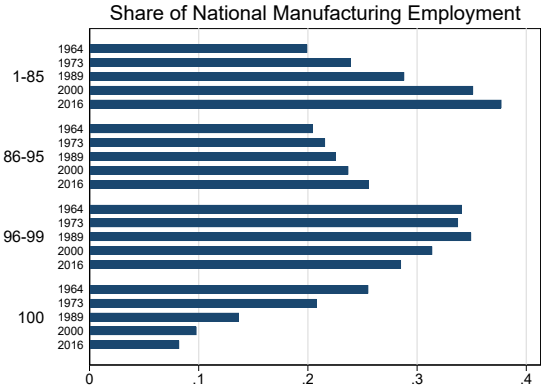


Manufacturing Employment Share by Density Group

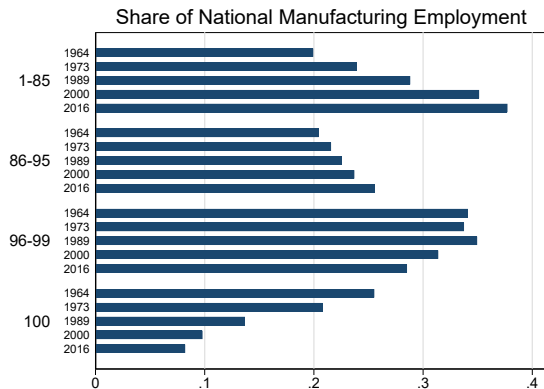
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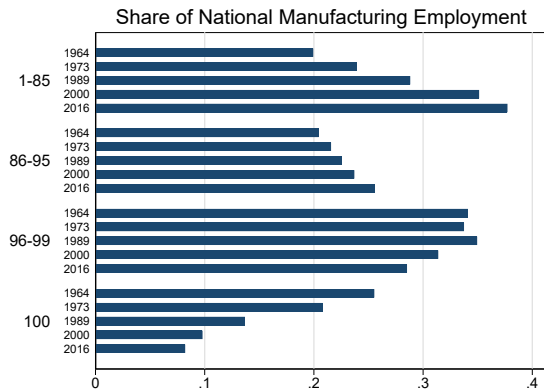


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