Urban Winners and Losers After COVID-19

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Harvard University and NBER

Farm to Factory to Urban Service Workers: to Extreme Pandemic Vulnerability

Employment levels by industry, seasonally adjusted

Click and drag inside chart to change dates displayed

— Total nonfarm　　— Total private　　— Mining and logging　　— Construction　　— **Manufacturing**
— Wholesale trade　　— **Retail trade**　　— Transportation and warehousing　　— Utilities　　— Information
— Financial activities　　— **Professional and business services**　　— **Education and health services**
— **Leisure and hospitality**　　— Other services　　— Government　　— Federal government　　— State government
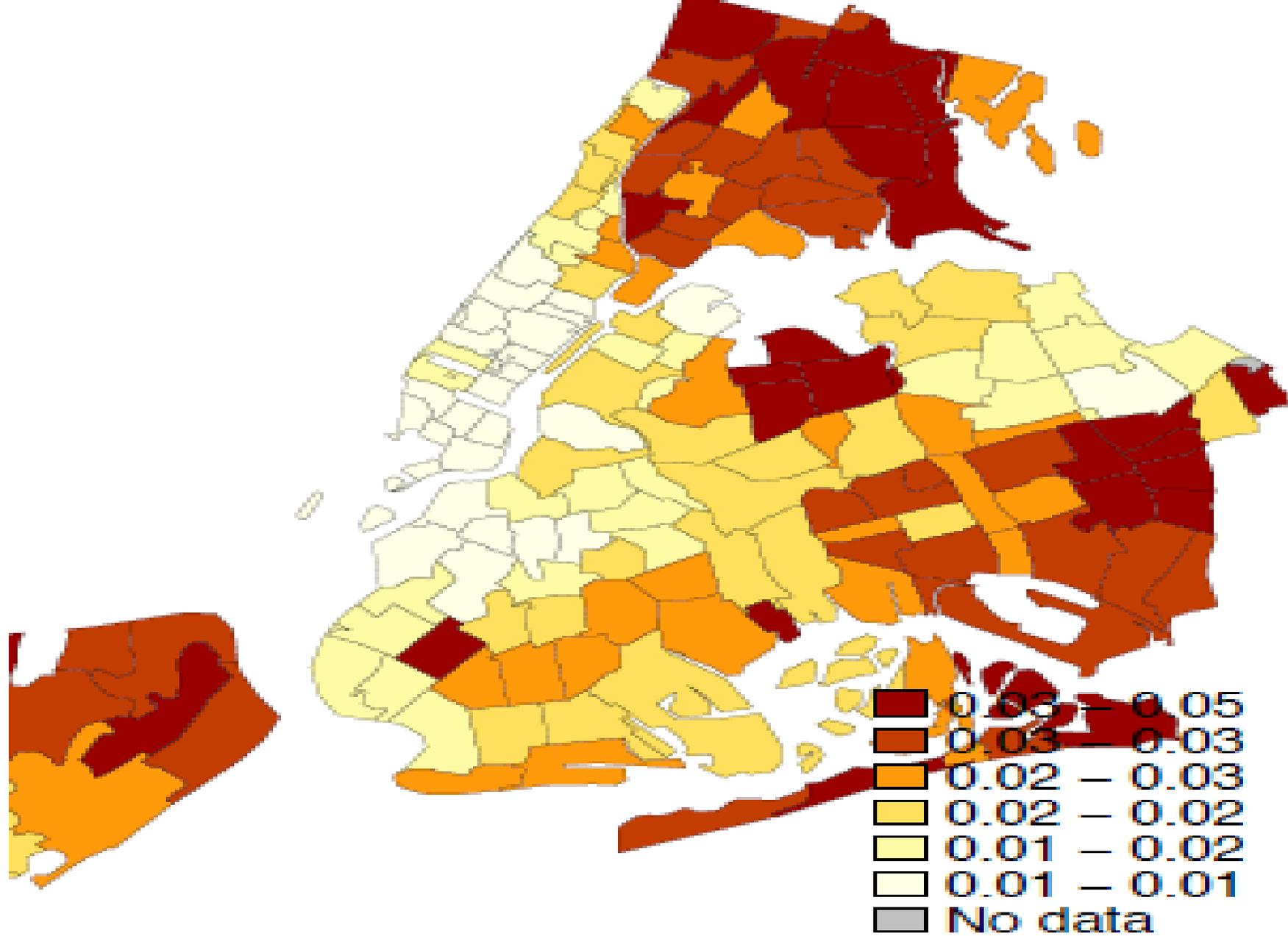— Local government

Thousands
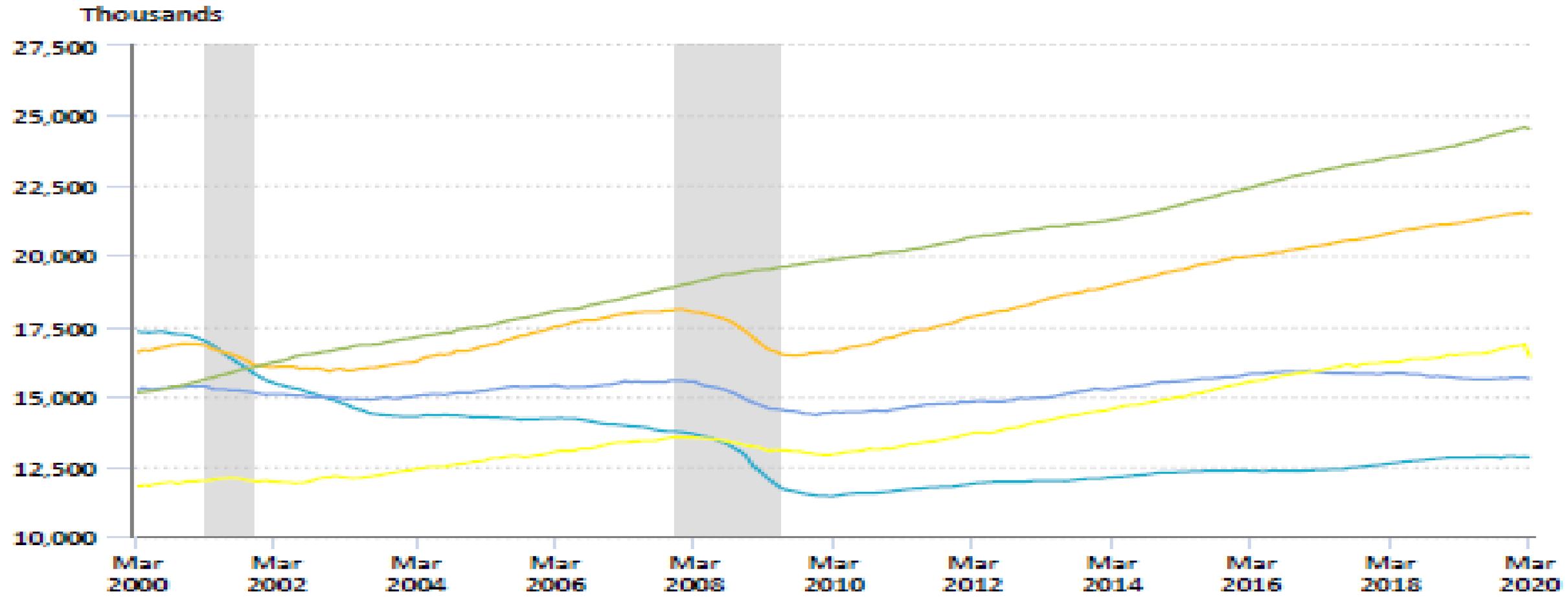
Hover over chart to view data.
Note: Shaded areas represent recessions, as determined by the National Bureau of Economic Research.
Source: U.S. Bureau of Labor Statistics.

Legend:
- -70.6 — -33.3
- -74.3 — -70.6
- -78.0 — -74.3
- -81.2 — -78.0
- -86.1 — -81.2
- -94.3 — -86.1
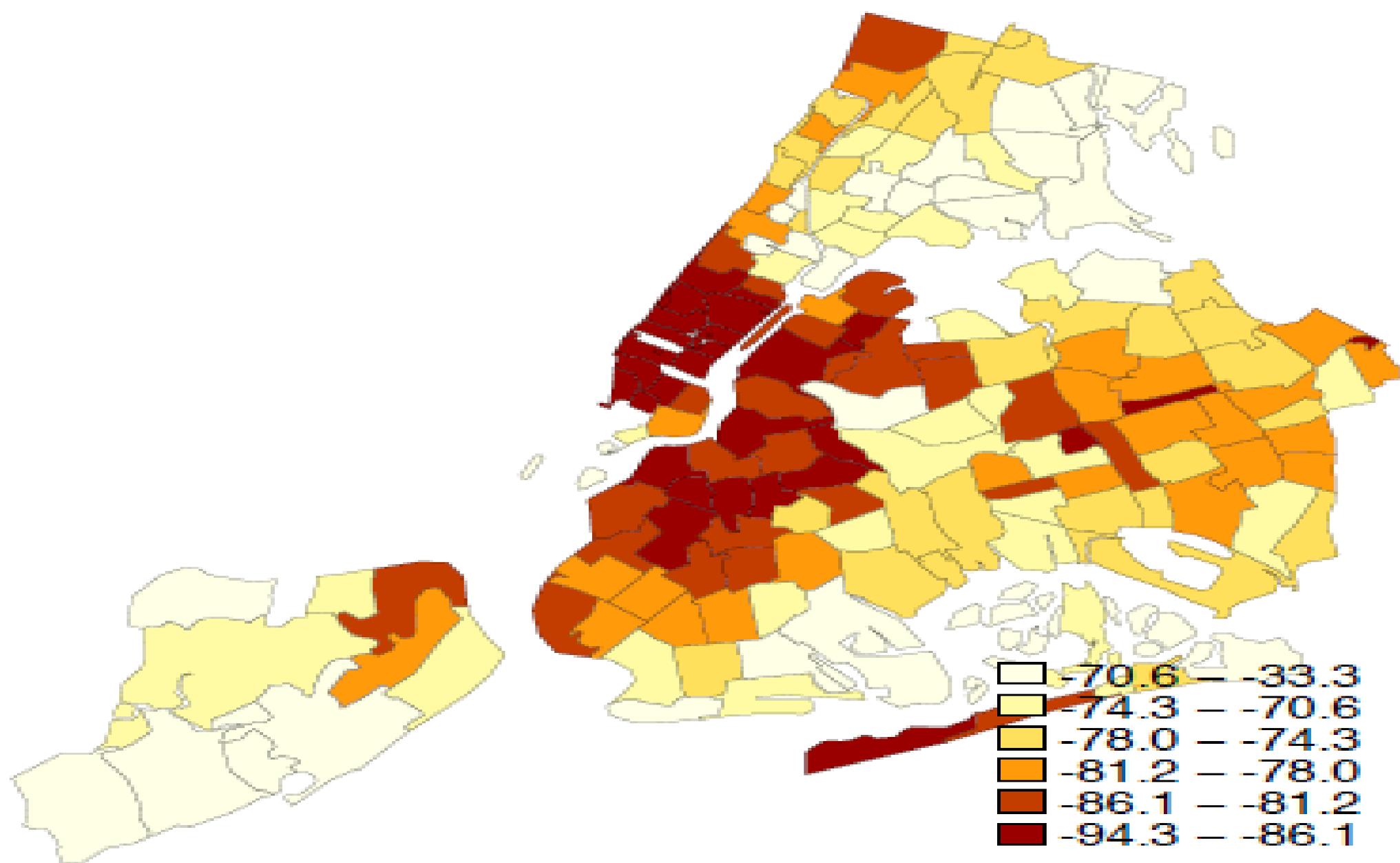
(a) Change in Trips, by Residential Zip code (SafeGraph)

(b) Cases per Person

Legend:
- 0.03 – 0.05
- 0.03 – 0.03
- 0.02 – 0.03
- 0.02 – 0.02
- 0.01 – 0.02
- 0.01 – 0.01
- No data
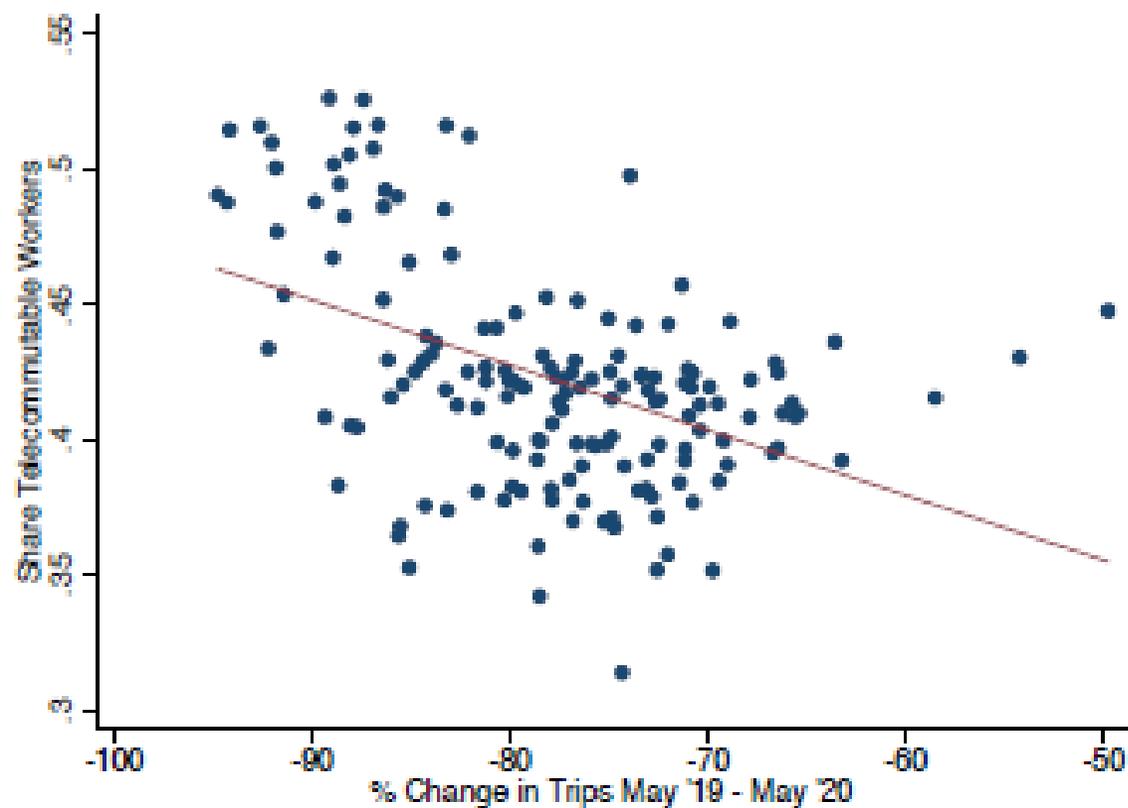
Travel Change and Instruments in NYC
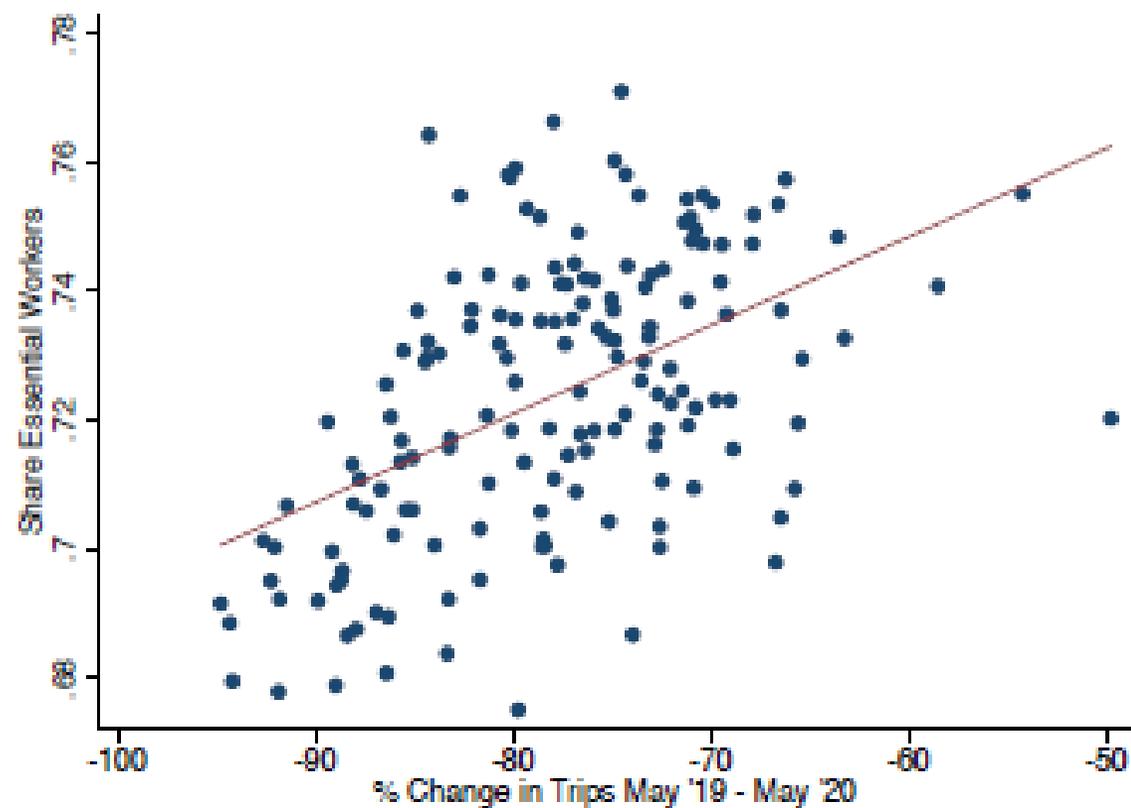
(a) % Δ in Trips vs. $ShareEssential_i$

(b) % Δ in Trips vs. $ShareTelework_i$

Source: % Change in trips from SafeGraph Weekly Patterns Data, using visitors traveling from home. % Change in trips calculated between May 13-19, 2019 and May 4-10, 2020. Share Essential workers calculated from DE and MN 4-digit NAICS essential industries. Share Telework created at the zip level using data from Dingel and Neiman (2020) weighted by local neighborhood employment composition.

Closure Rates by Industry (circa April 1, 2020)

	Currently Closed		Exp Closed December		Weeks COVID Will Last		Current v Jan Employment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Panel A: Raw Data								
All Retailers, except Grocery	0.53	0.50	0.45	0.50	14.1	9.5	0.49	0.42
Arts and entertainment	0.70	0.46	0.42	0.49	17.5	11.3	0.40	0.46
Banking/finance	0.19	0.39	0.25	0.43	16.1	10.9	0.81	0.33
Construction	0.32	0.47	0.38	0.49	14.3	10.3	0.66	0.40
Health care	0.45	0.50	0.29	0.45	15.1	10.4	0.69	0.37
Other	0.39	0.49	0.35	0.48	16.6	11.2	0.70	0.41
Personal Services	0.86	0.34	0.39	0.49	11.8	8.3	0.35	0.40
Professional Services	0.21	0.41	0.29	0.45	15.7	10.6	0.80	0.41
Real Estate	0.37	0.48	0.30	0.46	15.8	11.4	0.70	0.41
Restaurant/Bar/Catering	0.56	0.50	0.52	0.50	13.1	8.7	0.24	0.37
Tourism/Lodging	0.61	0.49	0.45	0.50	16.2	10.0	0.30	0.35
Total	0.45	0.50	0.37	0.48	15.5	10.6	0.58	0.44
N	4413	.	3953	.	4000	.	3935	.

I thought that declining demand for urban service workers would be terrible for incomes.

FRED — All Employees, Leisure and Hospitality

Y-axis: Thousands of Persons (8,000 to 17,000)
X-axis: 2016 to 2022

Shaded areas indicate U.S. recessions.   Source: U.S. Bureau of Labor Statistics   myf.red/g/N89L

But $4 trillion in Federal spending and the great resignation mean big pay increases

FRED — Average Hourly Earnings of All Employees, Leisure and Hospitality

*Shaded areas indicate U.S. recessions.* Source: U.S. Bureau of Labor Statistics myf.red/g/N89G
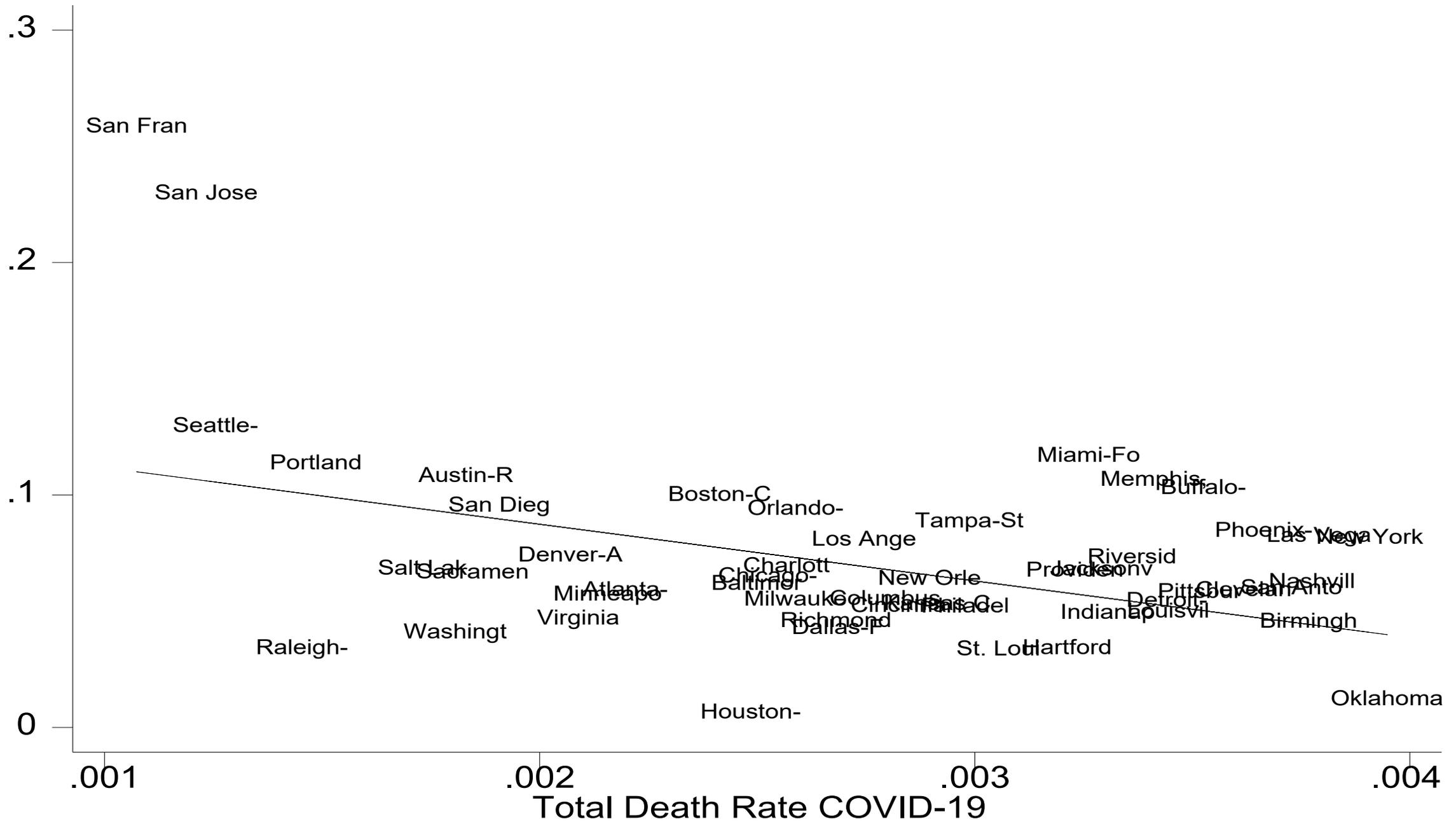
Measuring Urban Winners and Losers

- Earnings and employment data from the Quarterly Census of Employment and Wages goes to Third Quarter 2021

- Repeat home sales data from the Federal Housing Finance Agency (FHFA) from December 2021.

- Permit data from the Census of Construction covers the entire year 2021.

- Strategy is always to take percent changes over two year period.

- For the nominal variables (prices and earnings) we correct for inflation (CPI)– 7% from Q3 2019 to Q3 2021.

- The data are interesting on their own, but we also produce an index.

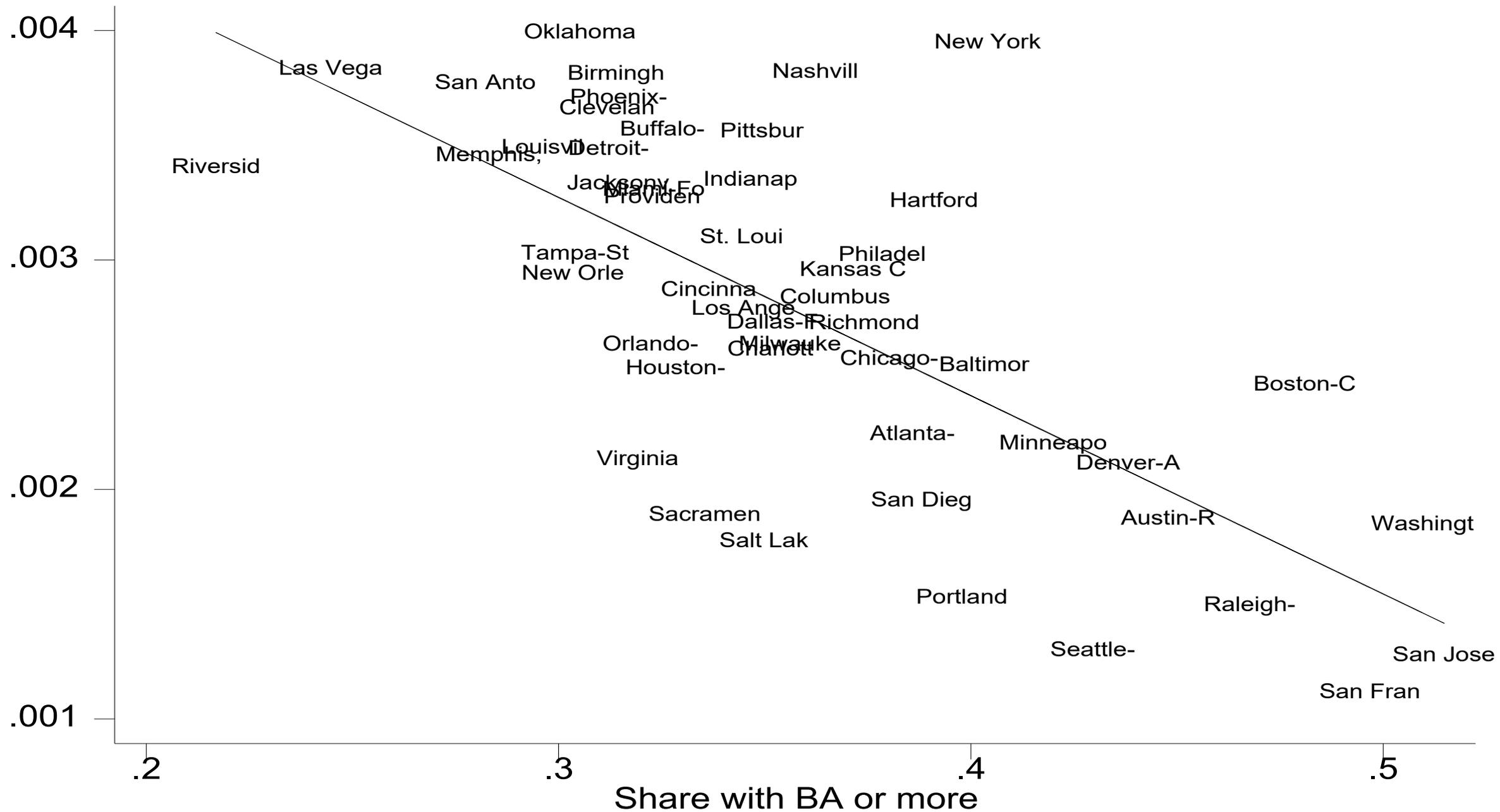# Rising Wages and Falling Employment→ A Labor Supply Shift
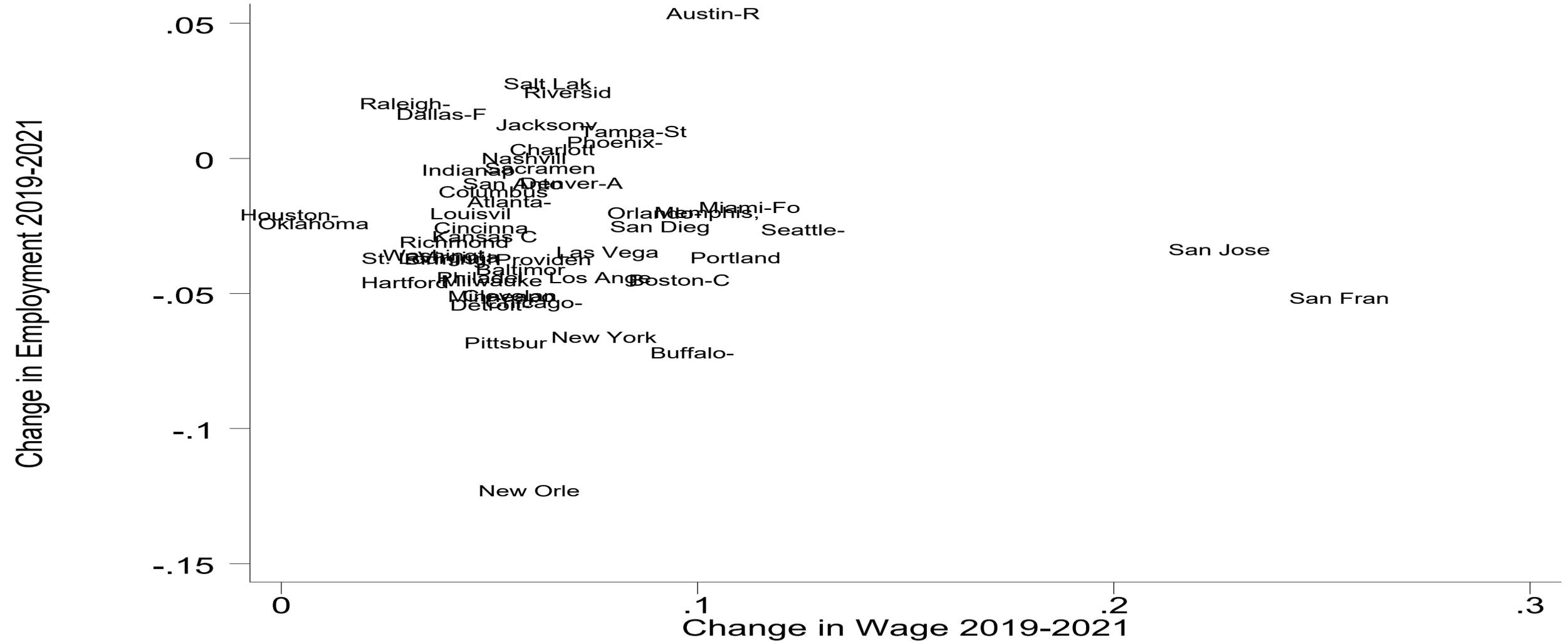
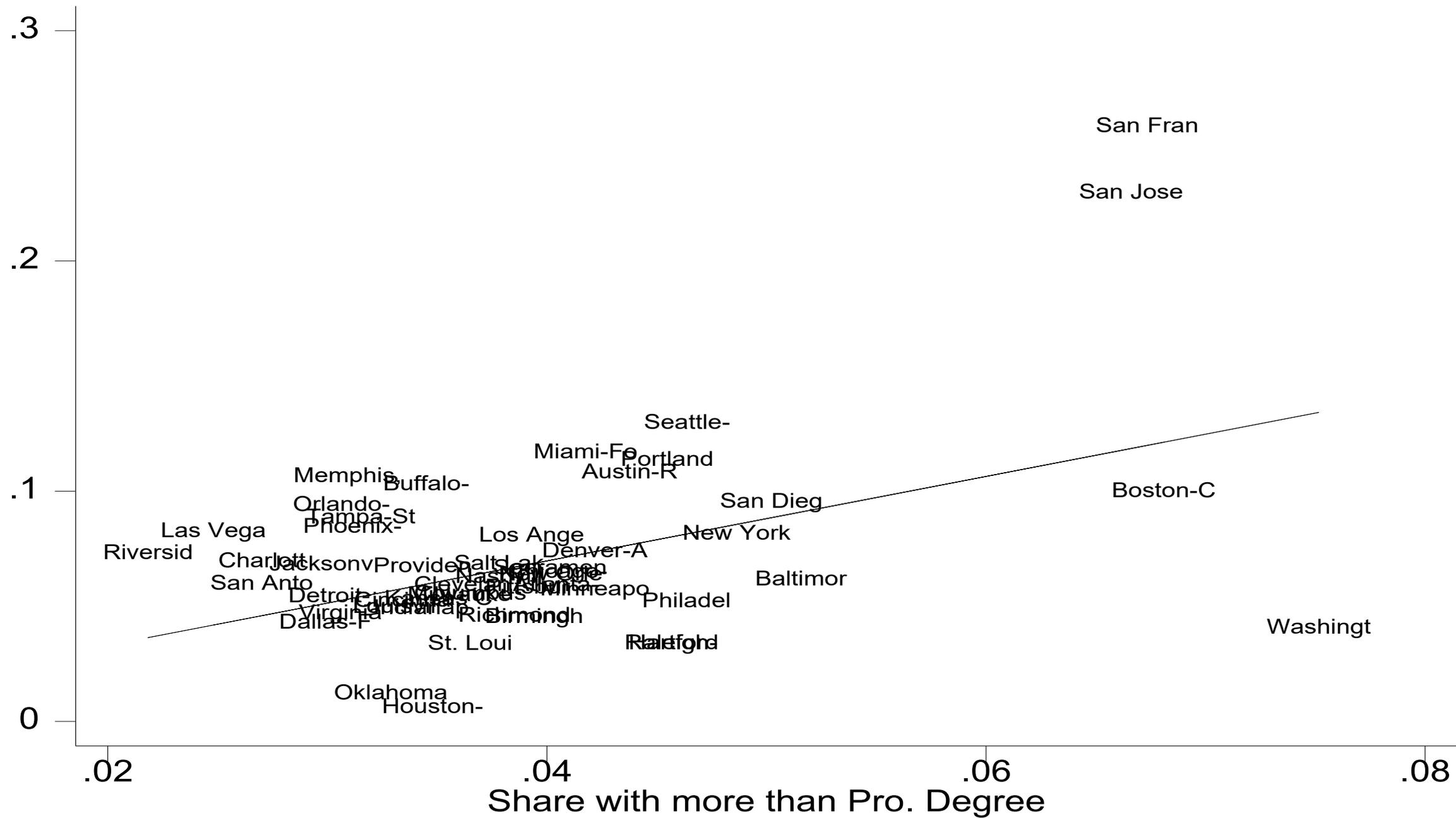| Correlation Coefficients (50 observations)	Change in Earnings 2019-2021	Change in Employment 2019-2021	Total COVID-19 Death Rate
Change in Earnings	1.000	-0.0616	-0.4369
Change in Employment	-0.0616	1.000	-0.1475
COVID-19 Death Rate	-0.4369	-0.1475	1.00
Log(Population)	0.1142	-0.0724	-0.0922
Share of Adults with a B.A. or More	0.4040	-0.0538	-0.7115
Share of Adults with a Professional Degree +	0.4644	-0.2708	-0.5730
Average Precipitation	-0.1009	0.2027	-0.0720
Average Maximum Temperature	0.1549	0.4283	0.0651

Change in Wage 2019-2021
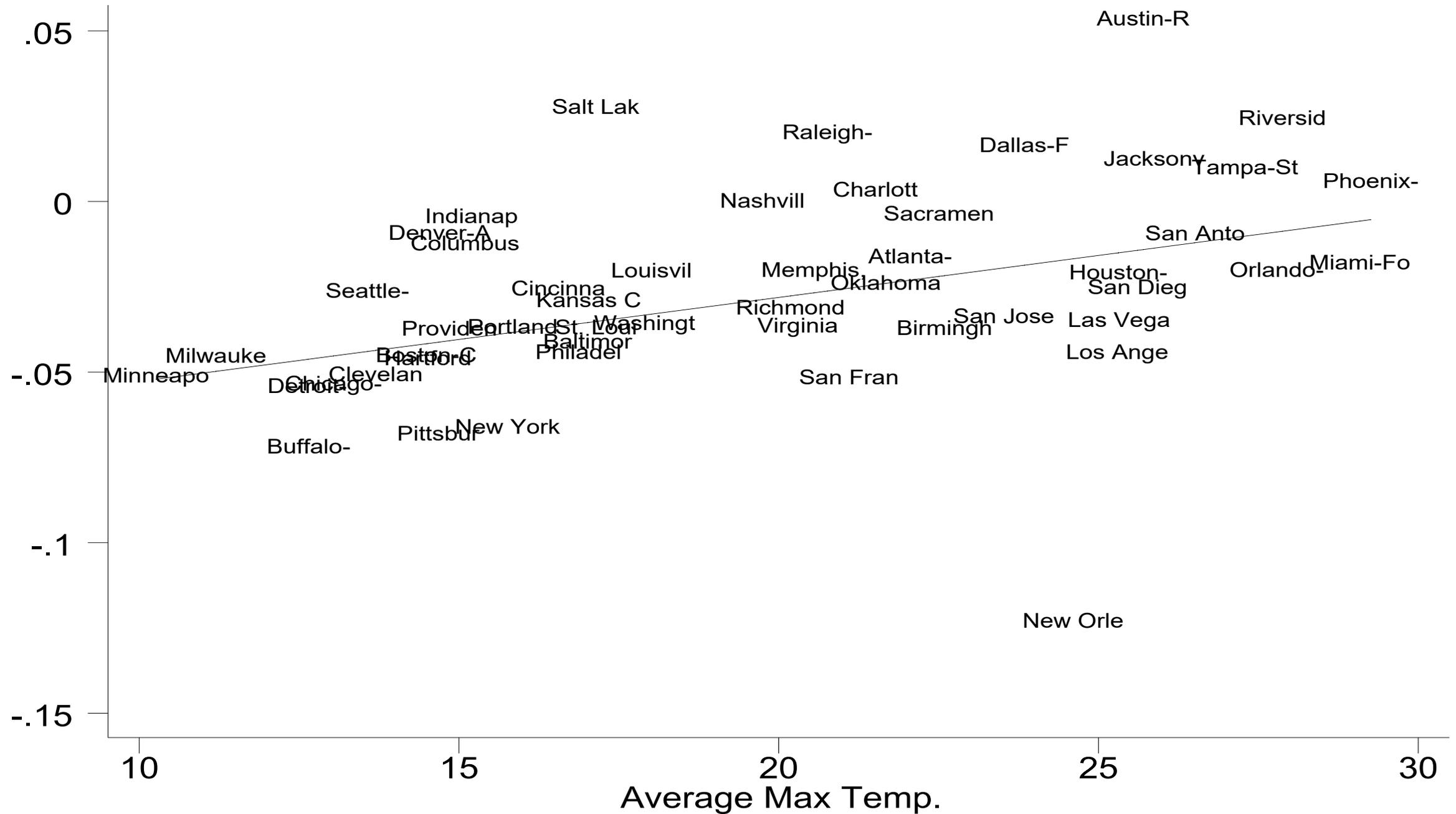
Total Death Rate COVID-19 ——— Fitted values

.004

Oklahoma   New York

Las Vega   Nashvill

San Anto   Birmingh

Phoenix-

Clevelah

Buffalo-   Pittsbur

Memphis, Louisv Detroit-

Riversid

Jacksonv Fo   Indianap

Man-Fo   Hartford

Providen

.003   St. Loui

Tampa-St   Philadel

New Orle   Kansas C

Cincinna   Columbus

Los Ange

Dallas-FRichmond

Orlando- Milwauke

Charlott Chicago-Baltimor

Houston-   Boston-C

Atlanta-   Minneapo

Virginia   Denver-A

.002

San Dieg

Sacramen   Austin-R   Washingt

Salt Lak

Portland   Raleigh-

Seattle-   San Jose

San Fran

.001

.2   .3   .4   .5

Share with BA or more

Change in Wage 2019-2021 ——— Fitted values

Change in Employment 2019-2021 ────── Fitted values

.05

Austin-R

Salt Lak

Riversid

Raleigh-

Dallas-F

Jacksonv Tampa-St

Charlott

Phoenix-

Nashvill

0

Indianap

Denver-A

Columbus

Sacramen

Atlanta-

San Anto

Memphis

Orlando Miami-Fo

Louisvil

Oklahoma

Houston-

Seattle-

San Dieg

Cincinna

Richmond

Kansas C

San Jose Las Vega

Provident Portland St. Lou Washingt

Virginia

Birmingh

Baltimor

Los Ange

Milwauke

Boston-C

Philadel

-.05

Minneapo

Hartford

Chi Clevelan

San Fran

Detroit-

Pittsbur New York

Buffalo-

-.1

New Orle

-.15

10   15   20   25   30

Average Max Temp.

The Non-Effect of COVID-19 on Urban Trends

- Before COVID-19, I would have highlighted the flight to the sunbelt and the rise of the skilled city as two central facts about urban change in the US since 1970.
  - I wrote a paper explaining the rise of the sunbelt in 2007: this is not a consumer city fact, it is rising productivity (probably because of pro-business policies and better infrastructure) and easy housing supply.
- To my eyes, these two effects continue to dominate changes in urban labor markets.
- Skills show up in higher wages. Temperature shows up in higher levels of employment.
- These variables may have also shifted labor supply, which seems to have shifted substantially over the period.
- Final labor market task: Change in Emp- .2*Change in Emp=Great Resignation (labor supply elasticities of .1-.3) – strongly correlated with temperature.
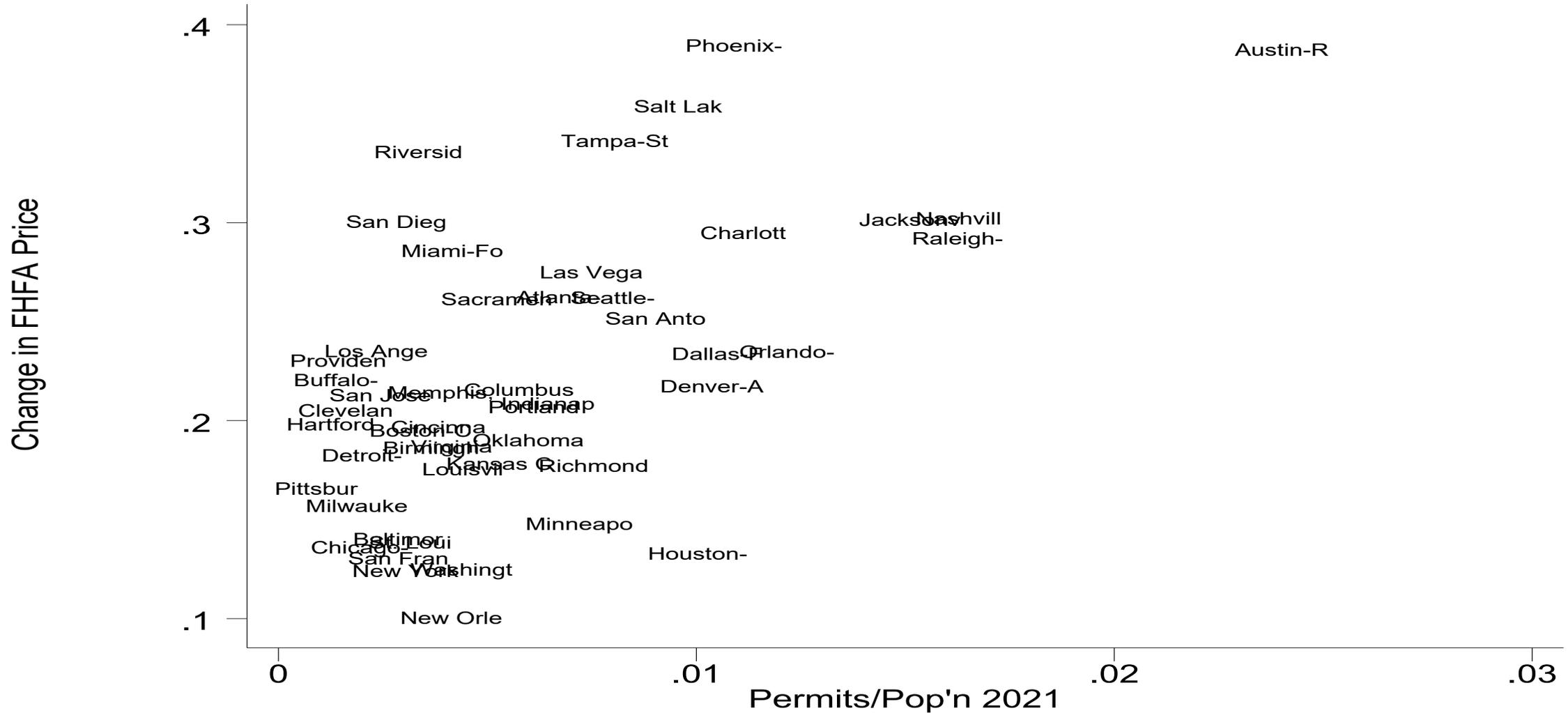
Housing Markets: The Strange Case of Philadelphia (we're just going to drop it for the housing work)
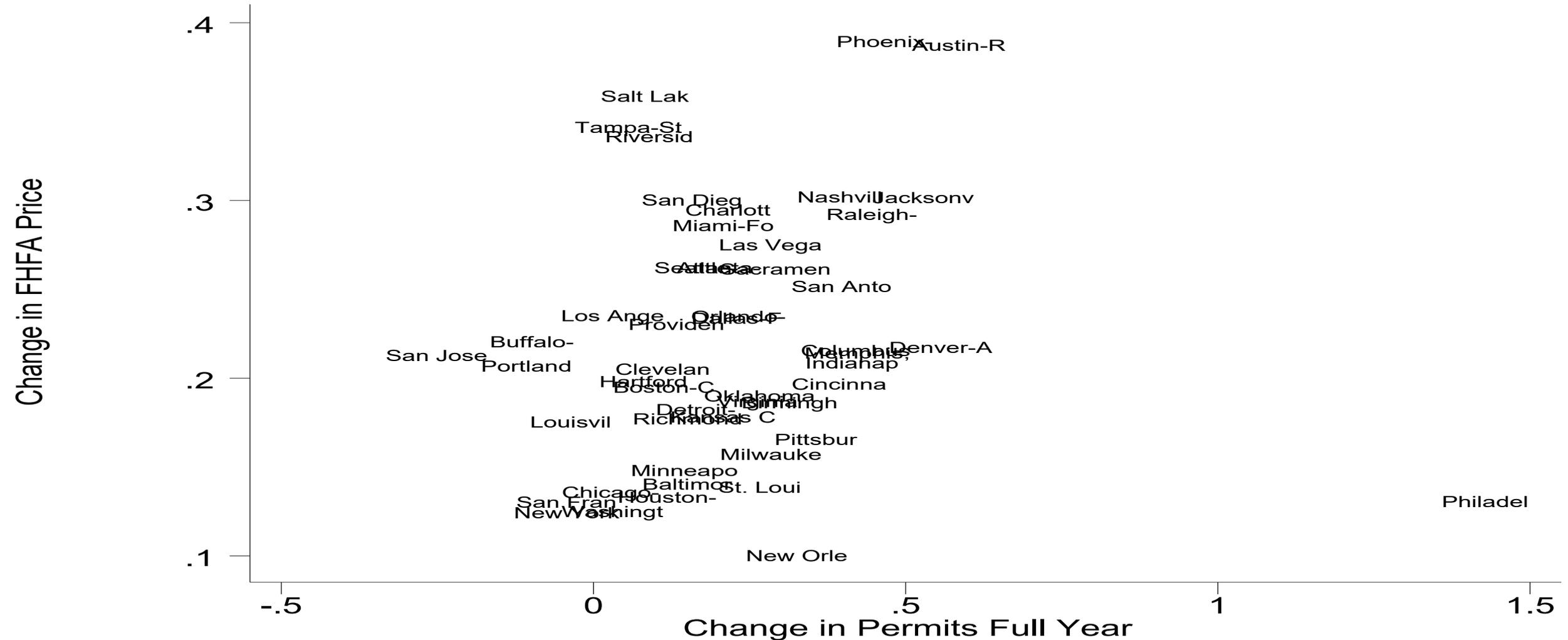
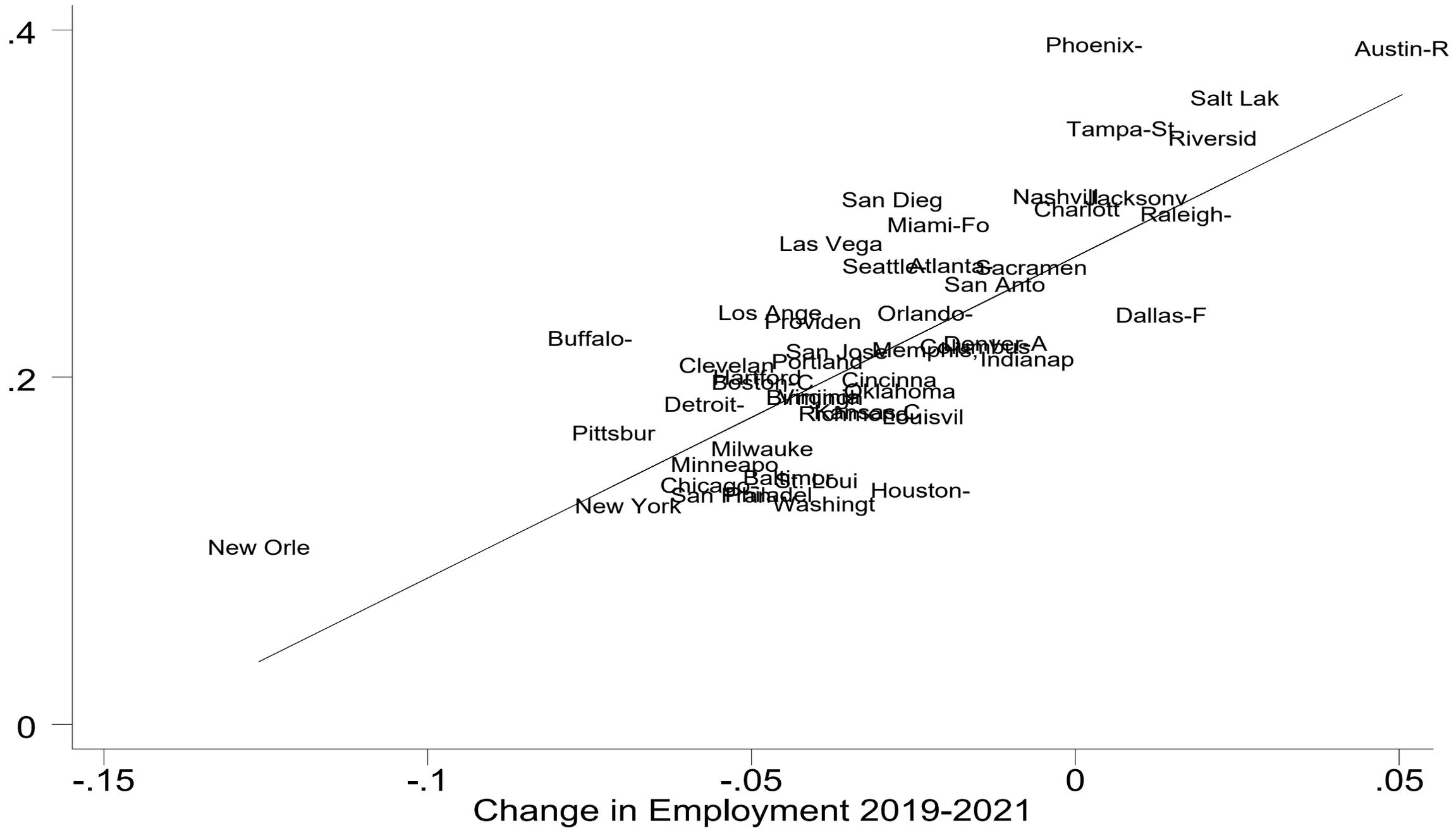# Changes in Prices and Changes in Permits: Moving along a housing supply curve
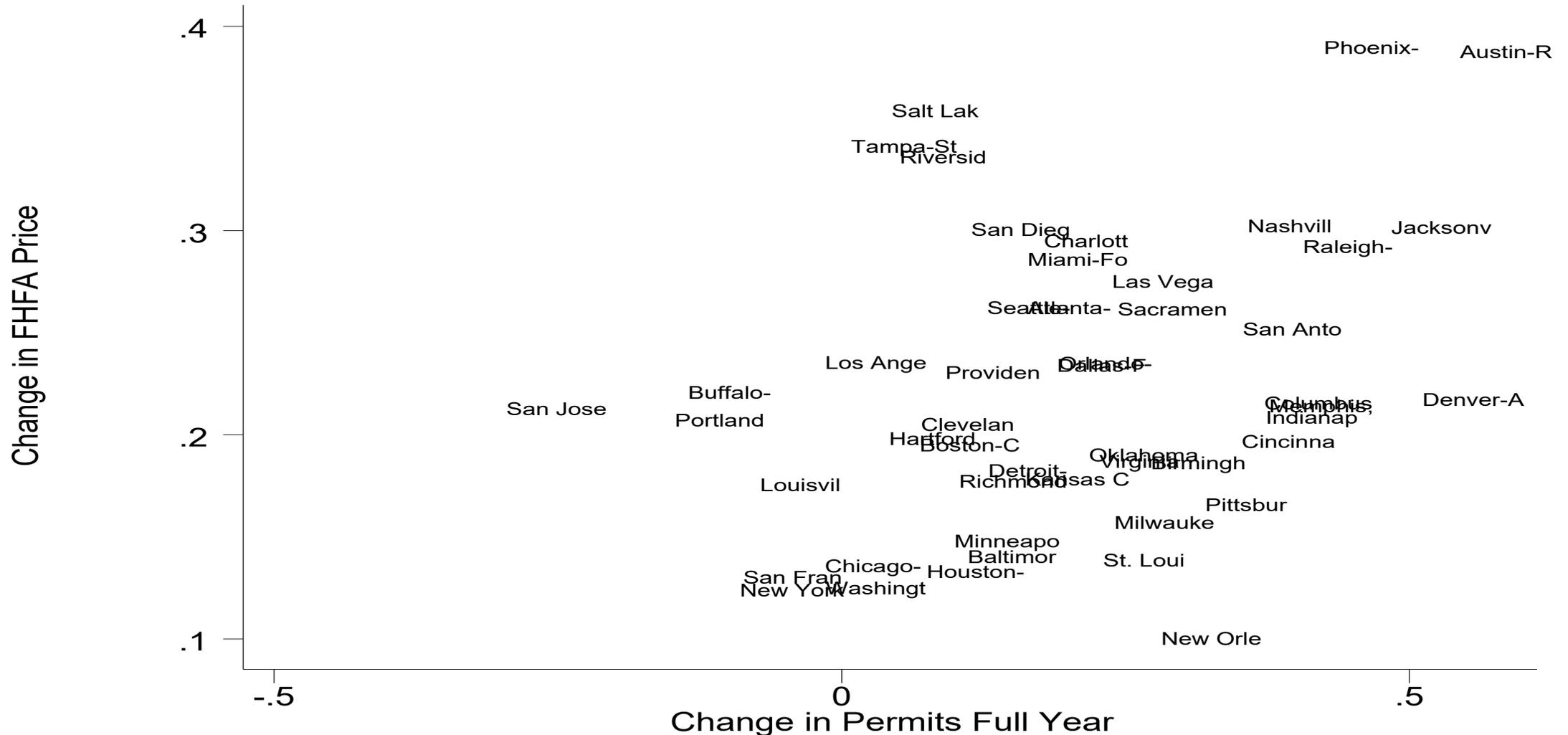
Level of Permitting and Price Growth

| Correlation Coefficients (49 observations)	Change in Housing Prices 2019-2021	Change in Permits 2019-2021
Change in Prices	1.000	0.3157
Change in Permits	0.3157	1.000
Change in Earnings	0.1202	-0.3654
Change in Employment	0.7784	0.3917
COVID-19 Death Rate	-0.0125	0.2172
Log(Population)	-0.1038	-0.2785
Share of Adults with a B.A. or More	-0.2063	-0.2202
Share of Adults with a Professional Degree +	-0.3223	-0.3950
Average Precipitation	-0.2595	-0.0056
Average Maximum Temperature	0.5140	0.1863

Change in FHFA Price

Scatter plot with labeled metropolitan areas:

- Phoenix-
- Austin-R
- Salt Lak
- Tampa-St
- Riversid
- San Dieg
- Nashvill
- Jacksonv
- Charlott
- Raleigh-
- Miami-Fo
- Las Vega
- Seattle
- Atlanta
- Sacramen
- San Anto
- Los Ange
- Orlando-
- Dallas-F
- Providen
- Buffalo-
- San Jose
- Memphis
- Columbus
- Denver A
- Indianap
- Clevelan
- Portland
- Boston-C
- Cincinna
- Hartford
- Detroit-
- Virginia
- Oklahoma
- Richmond
- Kansas C
- Louisvil
- Pittsbur
- Milwauke
- Minneapo
- Chicago
- Baltimor
- St. Loui
- Houston-
- San Fran
- Philadel
- Washingt
- New York
- New Orle

X-axis: Change in Employment 2019-2021 (-.15, -.1, -.05, 0, .05)
Y-axis: (0, .2, .4)

Putting Things Together

- First, if I was in the macro-prudential business, I would start getting worried about price corrections in the housing sphere.

- The Phoenix MSA experienced massive price increases over the last two years (40% real) and is permitting 15% more units than in 2006.

- Second, there is less of an obvious theoretical justification for using both permits and prices to get at the total state of the housing market.

- The demand curve is supposed to be a function of the total level of housing (old and new) in a metropolitan area; the supply curve is a function of the current flow of housing.

- There are models that suggest putting them together, but instead I am just going to use the average z-score for percent changes in permits, prices, wages and employment level– and I'll stick Philly back in for good measure.

The Index is not linked to overall population
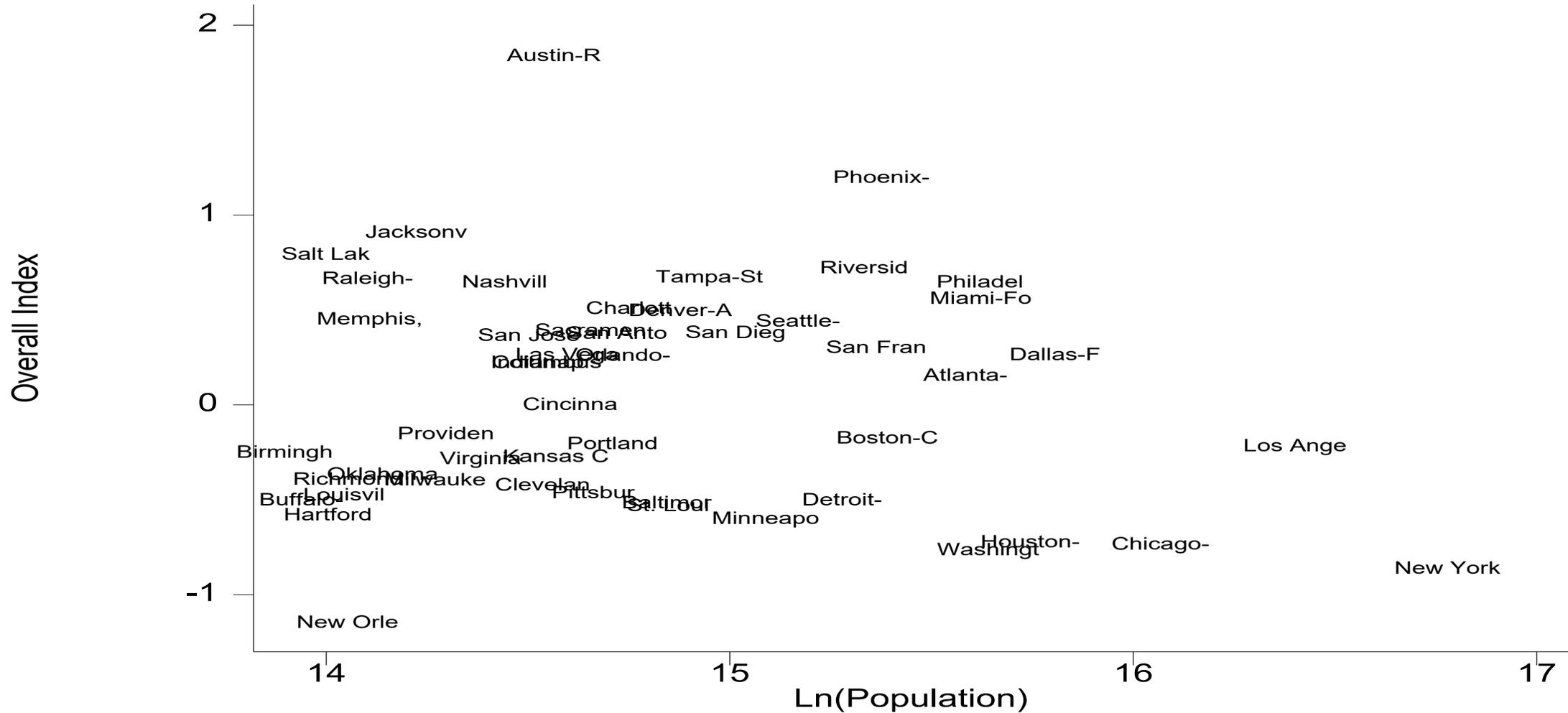
But it is strongly correlated with temperature

Overall Index

Metropolitan Area	Percent Home Price Growth	Percent Weekly Wage Growth	Percent Employment Growth	Percent Change in Housing Permits
Austin-Round Rock-Georgetown, TX	38.3%	10.4%	5.0%	58.5%
Phoenix-Mesa-Chandler, AZ	38.5	8.0	0.3	46.7
Jacksonville, FL	29.7	6.4	0.9	52.8
Salt Lake City, UT	35.4	6.4	2.5	8.2
Riverside-San Bernardino-Ontario, CA	33.1	6.9	2.1	9
Tampa-St. Petersburg-Clearwater, FL	33.7	8.4	0.7	5.4
Raleigh-Cary, NC	28.7	3.0	1.7	44.6
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	12.6	4.8	-4.7	142.8
Nashville-Davidson--Murfreesboro--Franklin, TN	29.7	5.8	-0.3	39.5
Miami-Fort Lauderdale-Pompano Beach, FL	28.1	11.3	-2.1	20.8
Charlotte-Concord-Gastonia, NC-SC	29.0	6.5	0.0	21.5
Denver-Aurora-Lakewood, CO	21.3	7.0	-1.2	55.6
Memphis, TN-MS-AR	20.9	10.2	-2.3	42.3
Seattle-Tacoma-Bellevue, WA	25.7	12.5	-2.9	16.5
Sacramento-Roseville-Folsom, CA	25.7	6.2	-0.7	29.1
San Diego-Chula Vista-Carlsbad, CA	29.6	9.1	-2.8	15.8
San Antonio-New Braunfels, TX	24.7	5.5	-1.3	39.6
San Jose-Sunnyvale-Santa Clara, CA	20.8	22.5	-3.7	-25.1
San Francisco-Oakland-Berkeley, CA	12.6	25.4	-5.5	-4.3
Dallas-Fort Worth-Arlington, TX	22.9	3.9	1.3	22.9
Las Vegas-Henderson-Paradise, NV	27.0	7.8	-3.8	28.3
Orlando-Kissimmee-Sanford, FL	23.0	9.0	-2.3	23.2
Indianapolis-Carmel-Anderson, IN	20.4	4.5	-0.7	41.4
Columbus, OH	21.1	5.1	-1.5	42.0
Atlanta-Sandy Springs-Alpharetta, GA	25.8	5.5	-1.9	20.1

Observations on the Top Half of the List

- Price and Employment Growth are the strongest correlates of this aggregate measure (.8) – mainly because they correlate so strongly with each other.

- Permit growth is a .58 correlation and wages are .32.

- The top half is dominated by the sunbelt (19/25).

- The other six include Philadelphia, which doesn't belong there.

- Salt Lake City, Seattle and Denver.   Not sunbelt, but consumer cities.

- Columbus OH and Indianapolis, IN → pro-business mid-western cities.

- And Austin dominates along almost every dimension.

SURVIVAL OF THE CITY

LIVING AND THRIVING IN AN AGE OF ISOLATION

EDWARD GLAESER AND DAVID CUTLER

Metropolitan Area	Percent Home Price Growth	Percent Weekly Wage Growth	Percent Employment Growth	Percent Change in Housing Permits
Cincinnati, OH-KY-IN	19.2	4.8	-2.9	39.4
Providence-Warwick, RI-MA	22.6	6.3	-4.0	13.3
Boston-Cambridge-Newton, MA-NH	19.0	9.6	-4.8	11.3
Portland-Vancouver-Hillsboro, OR-WA	20.2	10.9	-4.0	-10.7
Los Angeles-Long Beach-Anaheim, CA	23.1	7.6	-4.7	3.0
Birmingham-Hoover, AL	18.2	4.1	-4.0	31.4
Kansas City, MO-KS	17.4	4.9	-3.2	20.8
Virginia Beach-Norfolk-Newport News, VA-NC	18.2	4.3	-4.0	26.2
Oklahoma City, OK	18.5	0.8	-2.7	26.6
Richmond, VA	17.3	4.2	-3.4	15.1
Milwaukee-Waukesha, WI	15.2	5.1	-4.8	28.4
Cleveland-Elyria, OH	20.0	5.5	-5.4	11.1
Pittsburgh, PA	16.1	5.4	-7.1	35.6
Louisville/Jefferson County, KY-IN	17.1	4.5	-2.4	-3.6
Buffalo-Cheektowaga, NY	21.6	9.9	-7.5	-9.9
Detroit-Warren-Dearborn, MI	17.8	5.0	-5.7	16.4
Baltimore-Columbia-Towson, MD	13.6	5.7	-4.4	15.0
St. Louis, MO-IL	13.4	2.9	-4.0	26.6
Hartford-East Hartford-Middletown, CT	19.4	3.0	-4.9	8.0
Minneapolis-St. Paul-Bloomington, MN-WI	14.3	5.3	-5.4	14.6
Houston-The Woodlands-Sugar Land, TX	12.8	0.2	-2.4	11.8
Chicago-Naperville-Elgin, IL-IN-WI	13.1	6.1	-5.7	2.8
Washington-Arlington-Alexandria, DC-VA-MD-WV	12.0	3.7	-3.9	3.0
New York-Newark-Jersey City, NY-NJ-PA	11.9	7.7	-6.9	-4.5
New Orleans-Metairie, LA	9.6	6.0	-12.6	32.6

A Few Observations on the Bottom Half

- LA is drawn down by its low housing permits growth; Portland is down because it permitted fewer units than in 2019.
- Houston doesn't deserve to be at the bottom. It didn't have massive permitting growth, because it was already permitting 60,000 units per year and people don't expect to pay much more than housing costs for a unit.
- New Orleans is pretty much at the bottom by any measure.
- NYC's wage growth is good, but pretty much everything is a next to New Orleans.
- Ranks 37-47 is filled with the former industrial heavyweights.

But don't count NYC out.

- Crisis # 1: The British occupation ends in 1783 leaving the cities deserted .
  - Followed by New York's explosion as the continent's most important port and eventually the center of American manufacturing.
- Crisis # 2: The 1929 crash leaves the financial markets in shambles. The city's massive building boom ensured empty towers for over a decade.
  - WWII and then the 1950s led to a revitalization of the city.
- Crisis # 3: De-industrialization plus rising social problems plus the coming of the car created the crisis of the 1970s.
  - The reinvention of NYC around financial services was the crucial adjustment.

Globalization and Automation Killed NYC Industries, Like NYC Garments

The Decline of the Costs of Moving Goods
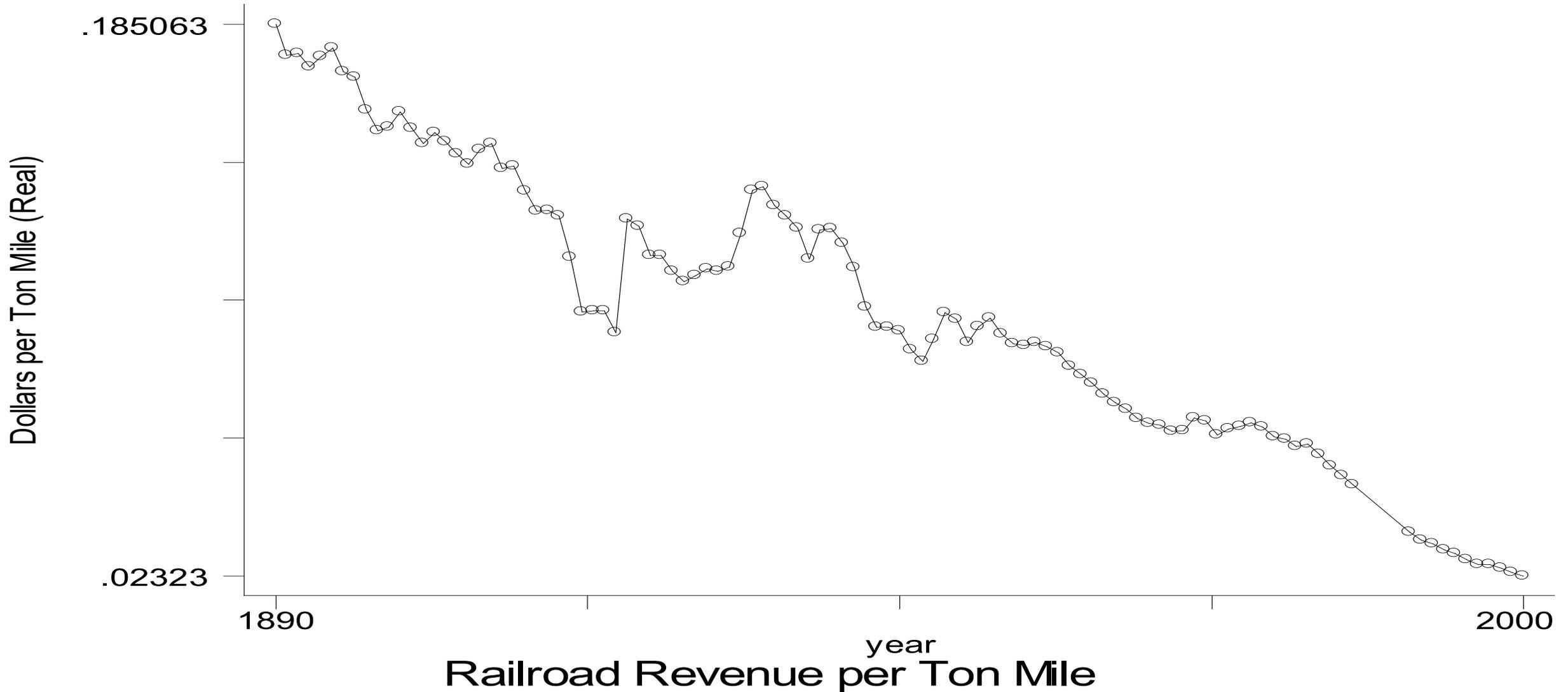
Average Population Growth by Average January Temperature (Quintiles)
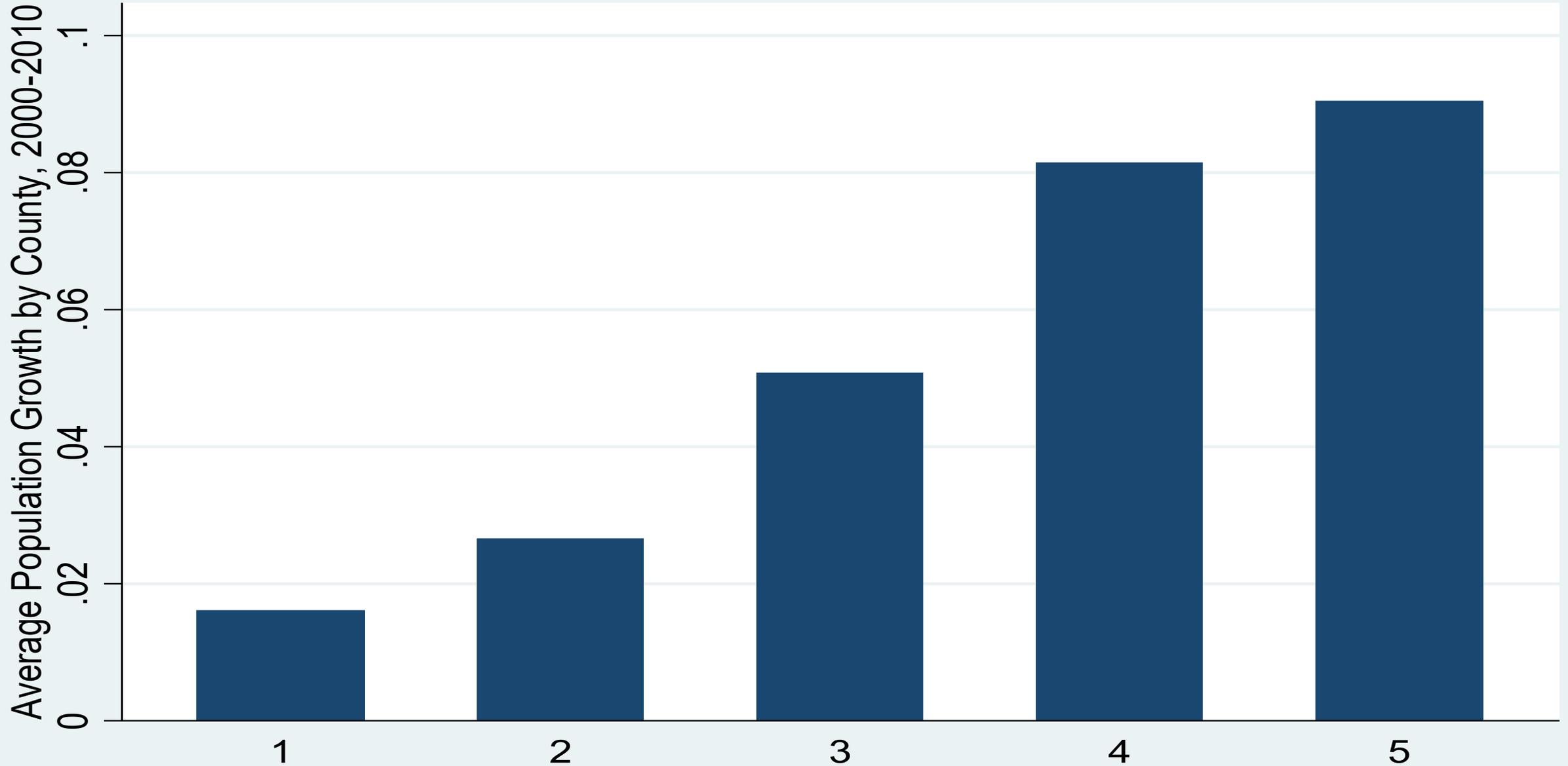
But these…

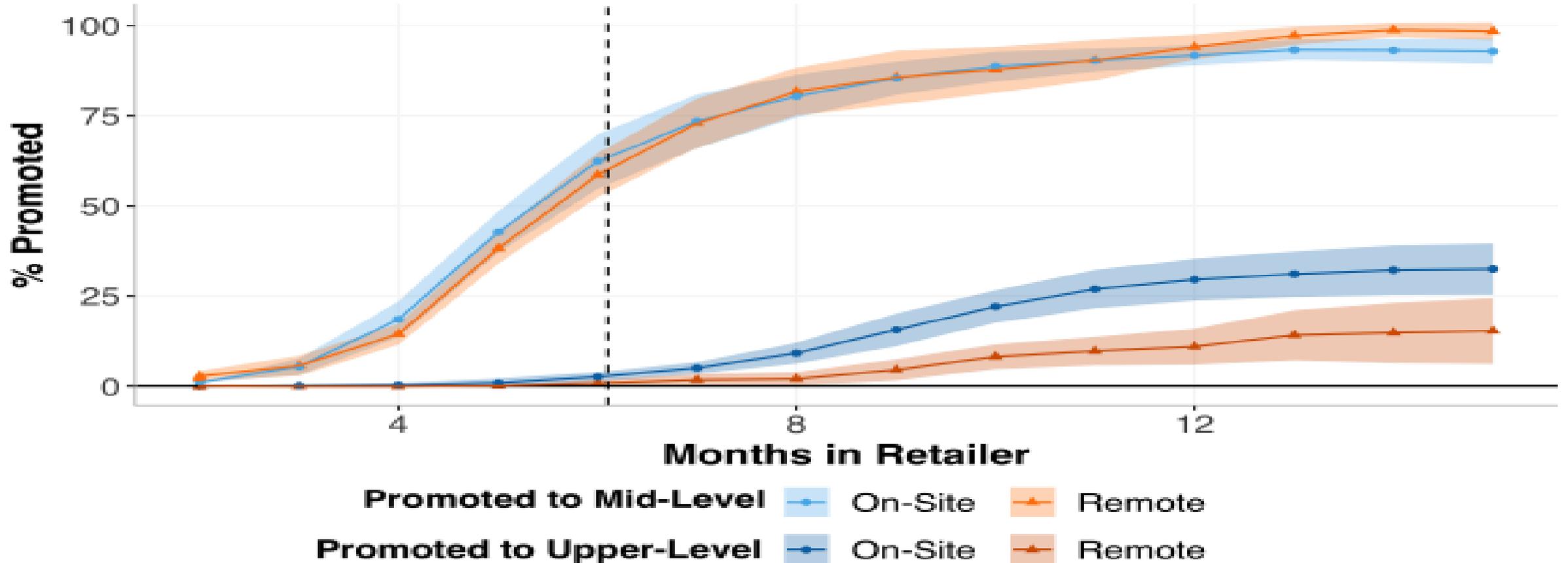Image by ChtiTux

Image by Danamania

Didn't kill finance and urban information jobs, and zoom is unlikely to kill the office either

Image by Runner1928

Emmanuel and Harrington: Going Remote

Figure A.2: Promotion Shares By Tenure for Remote and On-Site Workers

Check for updates

The effects of remote work on collaboration among information workers

Longqi Yang [1✉], David Holtz [2,3], Sonia Jaffe [1], Siddharth Suri [1], Shilpi Sinha[1], Jeffrey Weston[1], Connor Joyce[1], Neha Shah[1], Kevin Sherman [1], Brent Hecht [1] and Jaime Teevan [1]

The coronavirus disease 2019 (COVID-19) pandemic caused a rapid shift to full-time remote work for many information workers. Viewing this shift as a natural experiment in which some workers were already working remotely before the pandemic enables us to separate the effects of firm-wide remote work from other pandemic-related confounding factors. Here, we use rich data on the emails, calendars, instant messages, video/audio calls and workweek hours of 61,182 US Microsoft employees over the first six months of 2020 to estimate the causal effects of firm-wide remote work on collaboration and communication. Our results show that firm-wide remote work caused the collaboration network of workers to become more static and siloed, with fewer bridges between disparate parts. Furthermore, there was a decrease in synchronous communication and an increase in asynchronous communication. Together, these effects may make it harder for employees to acquire and share new information across the network.

Companies Don't Hire Remote Workers!
(Work is by Morales-Arilla and Daboin)

Postings and Employment Remotability
Blue = Postings, Red = Employment
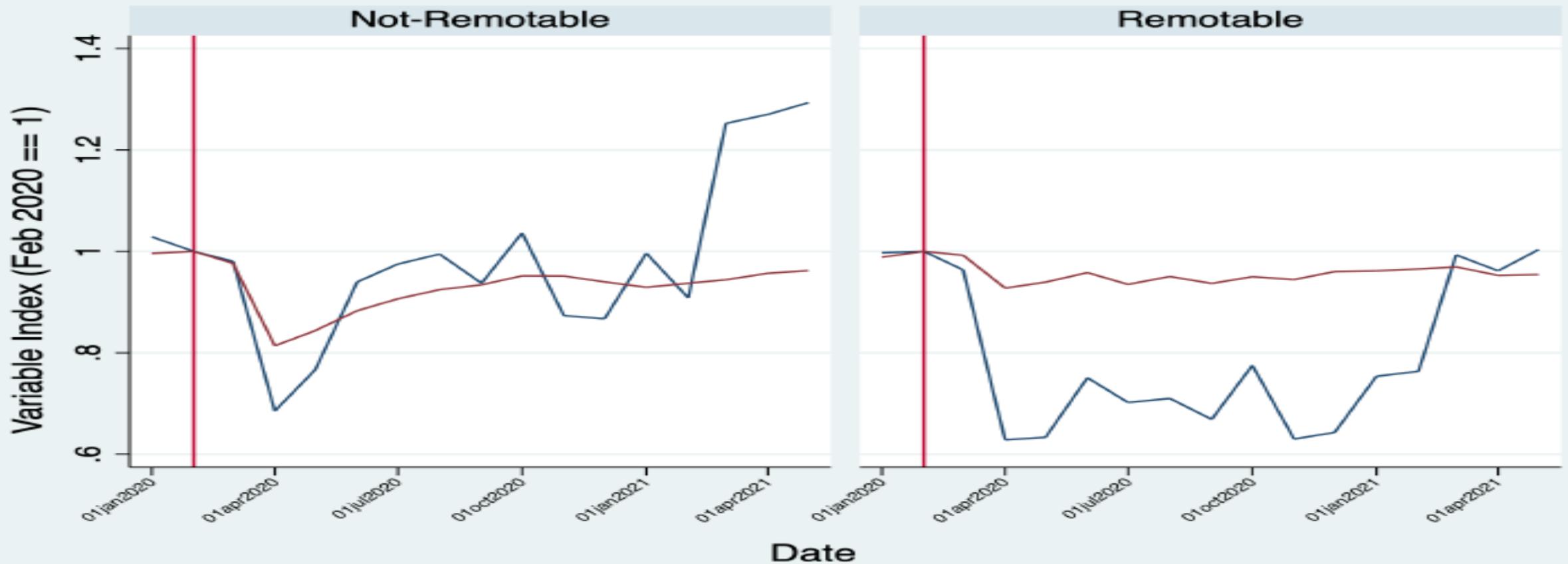
The Inequality of the Remote Workplace

May 2020	Total Civilian Population	Unable to Work Due to Pandemic (Closure or Lost Business)		Total Employed Population	Teleworking Due to Pandemic	
		Number	Percent		Number	Percent
Total, 25 years and over	222,559	41,616	18.7	123,109	45,989	37.4
Less than a high school diploma	19,607	3,941	20.1	6,887	355	5.2
High school graduates, no college[3]	61,403	12,025	19.6	28,708	4,379	15.3
Some college or associate degree	57,510	12,235	21.3	31,581	7,928	25.1
Bachelor's degree and higher[4]	84,038	13,416	16.0	55,933	33,327	59.6
Bachelor's degree only	51,890	9,011	17.4	33,778	18,069	53.5
Advanced Degree	32,148	4,405	13.7	22,155	15,258	68.9

Everything Depends on the Medical Response

- # 1: If COVID-19 mutates in a deadlier fashion or if a new pandemic reappear, then the costs for cities and all the economy are enormous.
- # 2: If this finally ends, and doesn't happen again then the shock is real but doesn't change urban life massively. Still there will be short term shifts:
  - Commercial space is more vulnerable than residential.
  - Cities will still reallocate from old to young, and remote work will continue.
- #3: Global talent has just gotten more mobile– and yet there is a dire need to help the urban disadvantaged.
  - Smarter government rather than more or less government.
  - Fewer regulations that bind small businesses or builders.
  - The need to experiment and evaluate.

The Political Risks for Cities

https://www.graftonarchitects.ie/