



Survival of the City

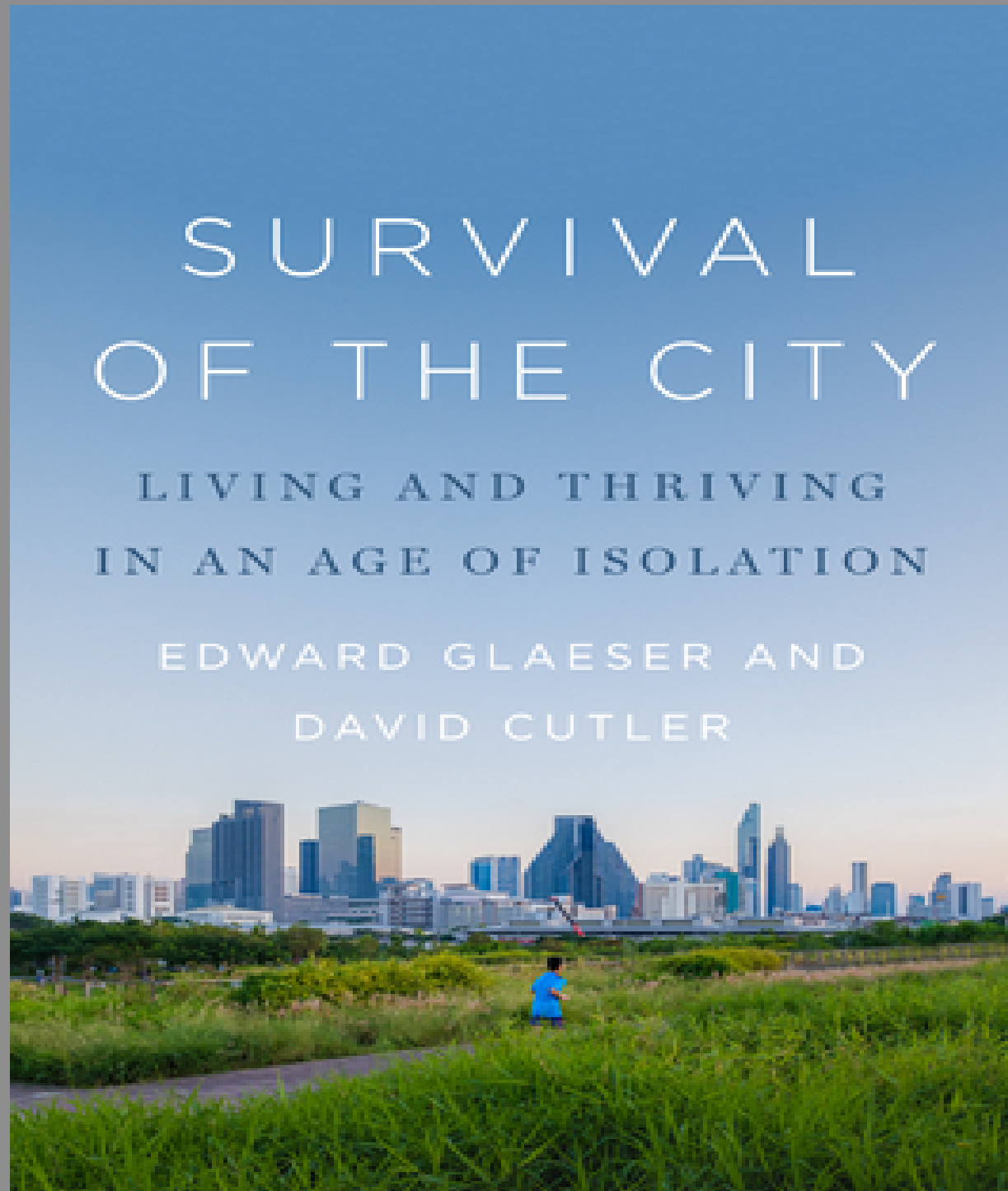
Ed Glaeser

Harvard University

28. Oct. 2021 Markus Brunnermeier

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New Book by Ed Glaeser and David Cutler



Resilience of Cities



- Which cities bounce back after a shock?
 - Organically grown (bottom-up) Jane Jacobs
 - Designed by centrally (top-down) Robert Moses
- Can we learn something about resilience of autocracy vs. democracy?
- Is countryside more resilient, less specialized?
 - Agglomeration leads to **specialization**
 - Spillover and spillbacks different **social norms**
 - But “Stadtluft macht frei” (city air is liberating) Vaccination rates
Polio
 - Trust in authorities
 - Redundancies

Covid and city design

- Fewer high rise buildings (lift fear)
 - From sky scrapers to office parks
 - Spread out cities \Rightarrow traffic
- Donut effect due to Covid for metropolitan areas
 - City centers are struggling, suburbs thriving



- Smart cities
 - Digitalization – New form of hygiene management (like sewage in 19th century)

“Zooming” not Zoning and cities - WFH

- Telecommuting ⇒ redesigning traffic, physical transport
- Impact on climate change
- Impact on real estate prices
 - Higher prices in suburbia?
 - Higher office vacancy rate
 - Change in office design
- Impact on couples/marriages
 - Fewer long-distance relationships
 - Better gender equality?
 - More children?



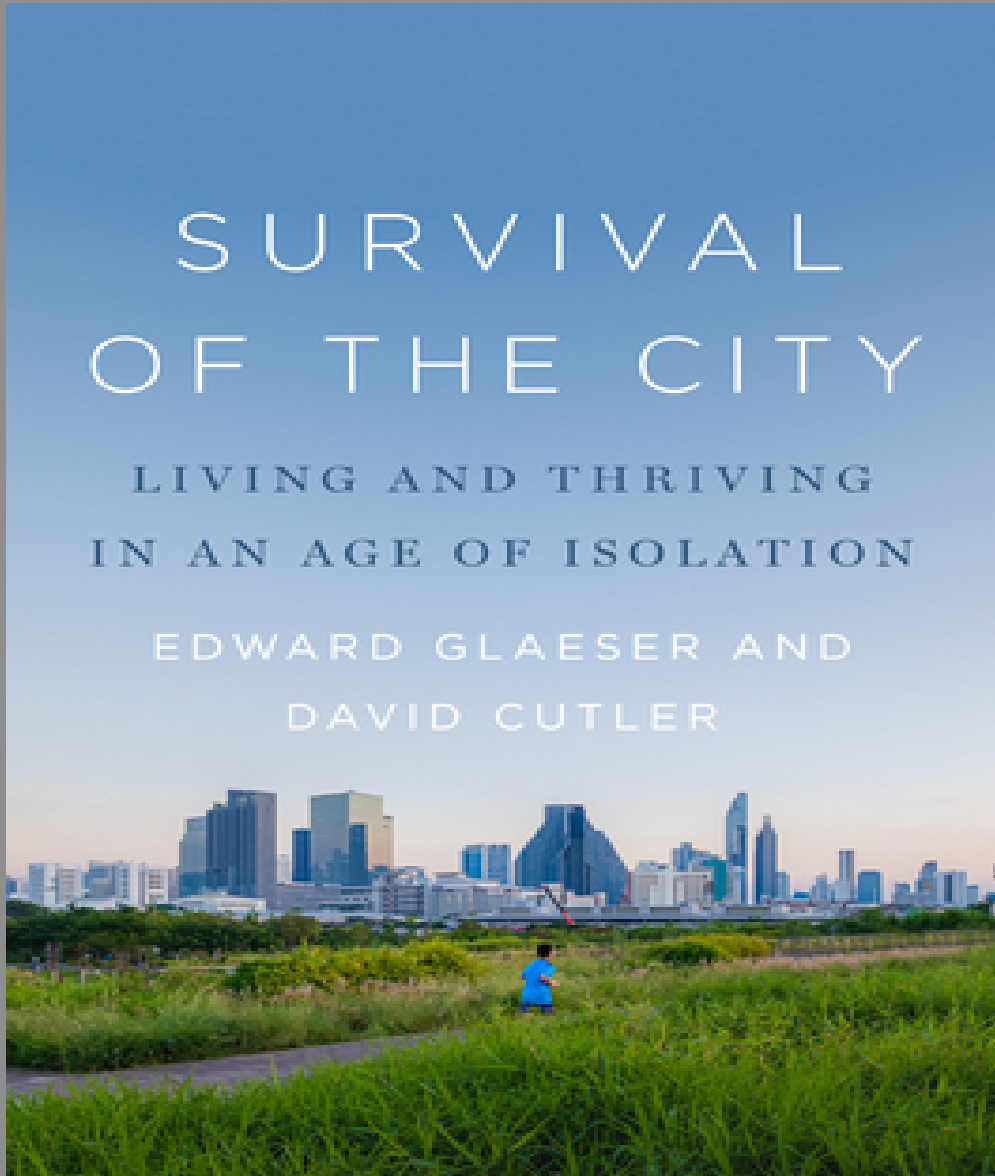
Virtual, Physical, and Social Mobility

- Virtual mobility enables
- Physical mobility of the rich ... leaves poor behind
 - Does zoom make it easier for the rich to leave?
 - More segregation?
- Social mobility can not be easily promoted

- Enhanced competition among cities
 - Good: improved governance
 - Bad: tax revenue for social mobility programs d

Poll Questions

1. Will Covid-19 affect cities differently than 9/11?
 - a. Yes
 - b. No
2. What cities will be hurt most by the double shock of zoom and Covid?
 - a. Mega cities
 - b. Metropolitan
 - c. Midsized
3. What share of the US labor force will be working remotely in 3-5 years?
 - a. Below 10%
 - b. 10% - 20%
 - c. Above 20%



Markus Brunnermeier

28. Oct. 2021

Princeton

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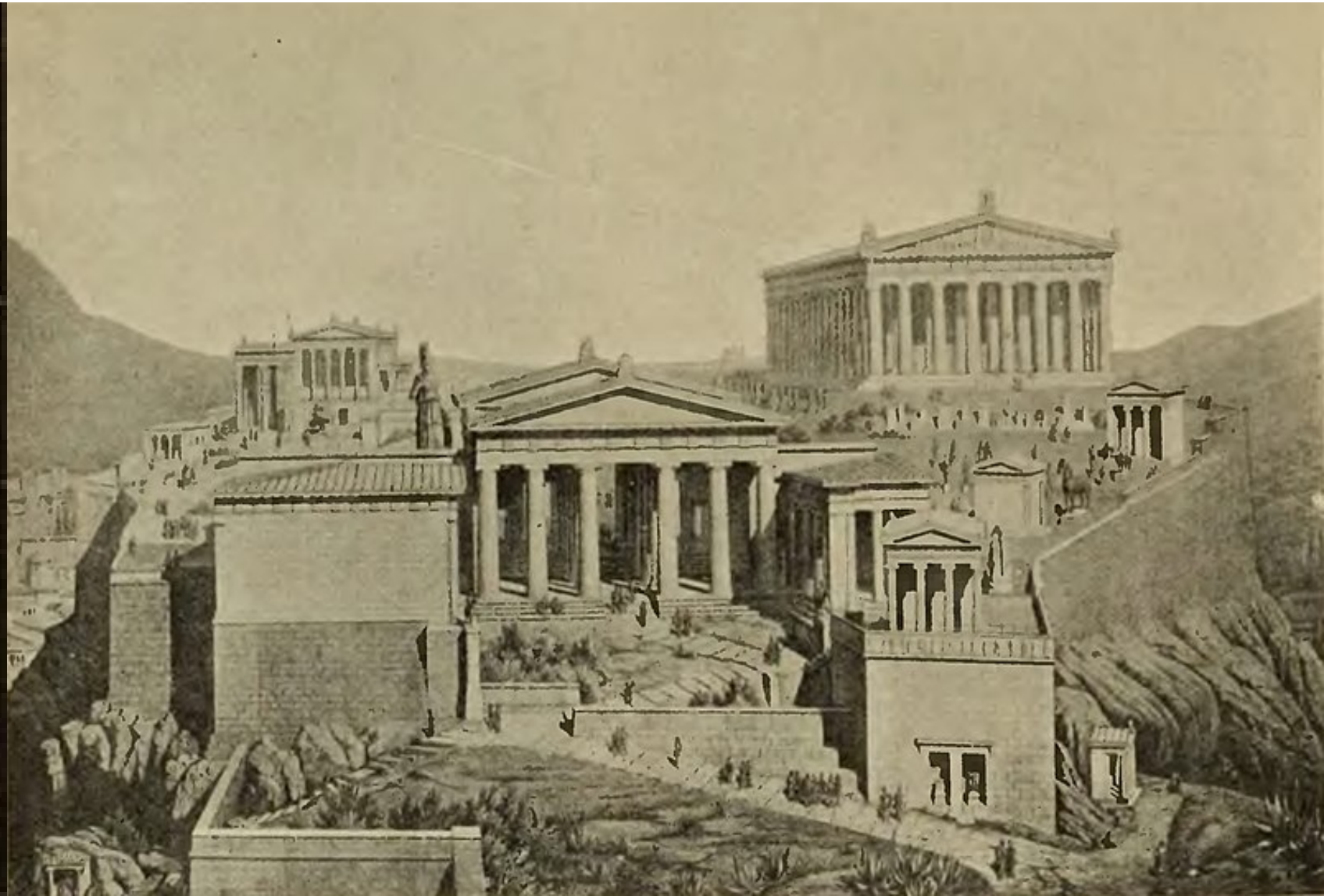
SURVIVAL OF THE CITY

LIVING AND THRIVING
IN AN AGE OF ISOLATION

EDWARD GLAESER AND
DAVID CUTLER



The Plague of Athens (430 B.C.E)



The Limited Impact of the Antonine Plague



The Cyprian Plague of the Third Century

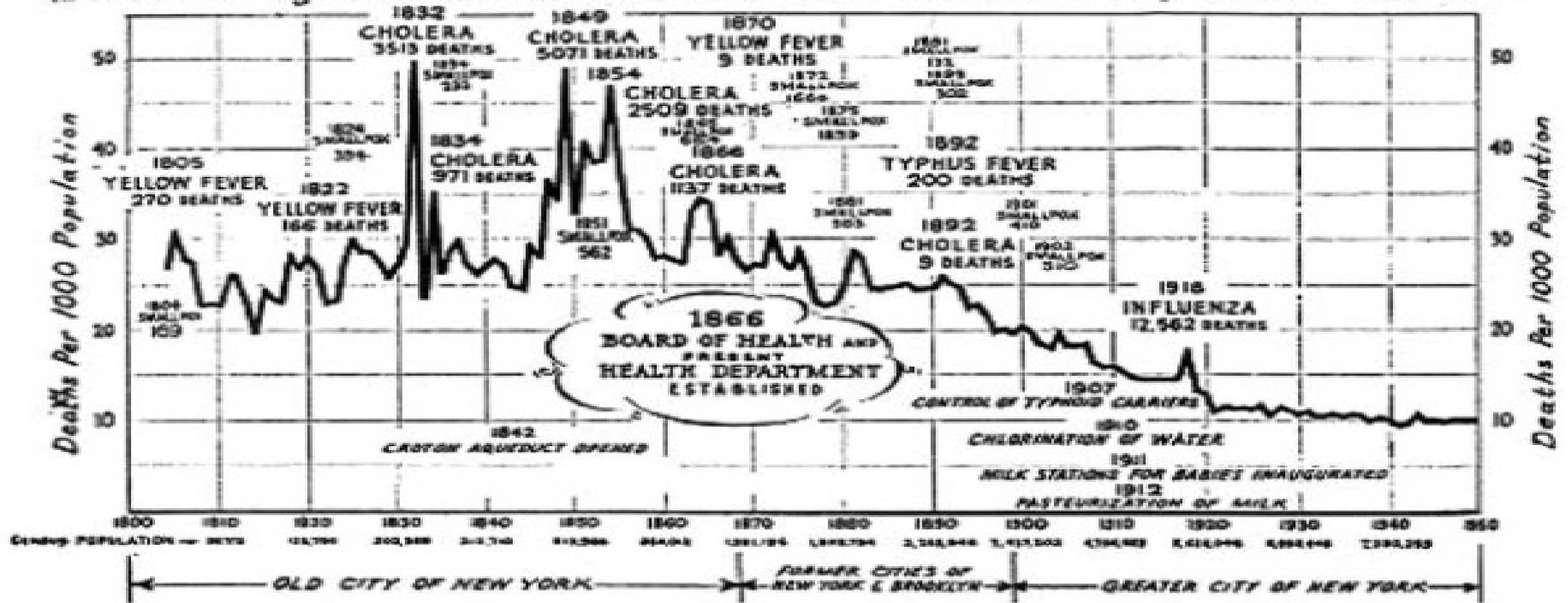


Justinian's Flea



The CONQUEST OF PESTILENCE in NEW YORK CITY ~

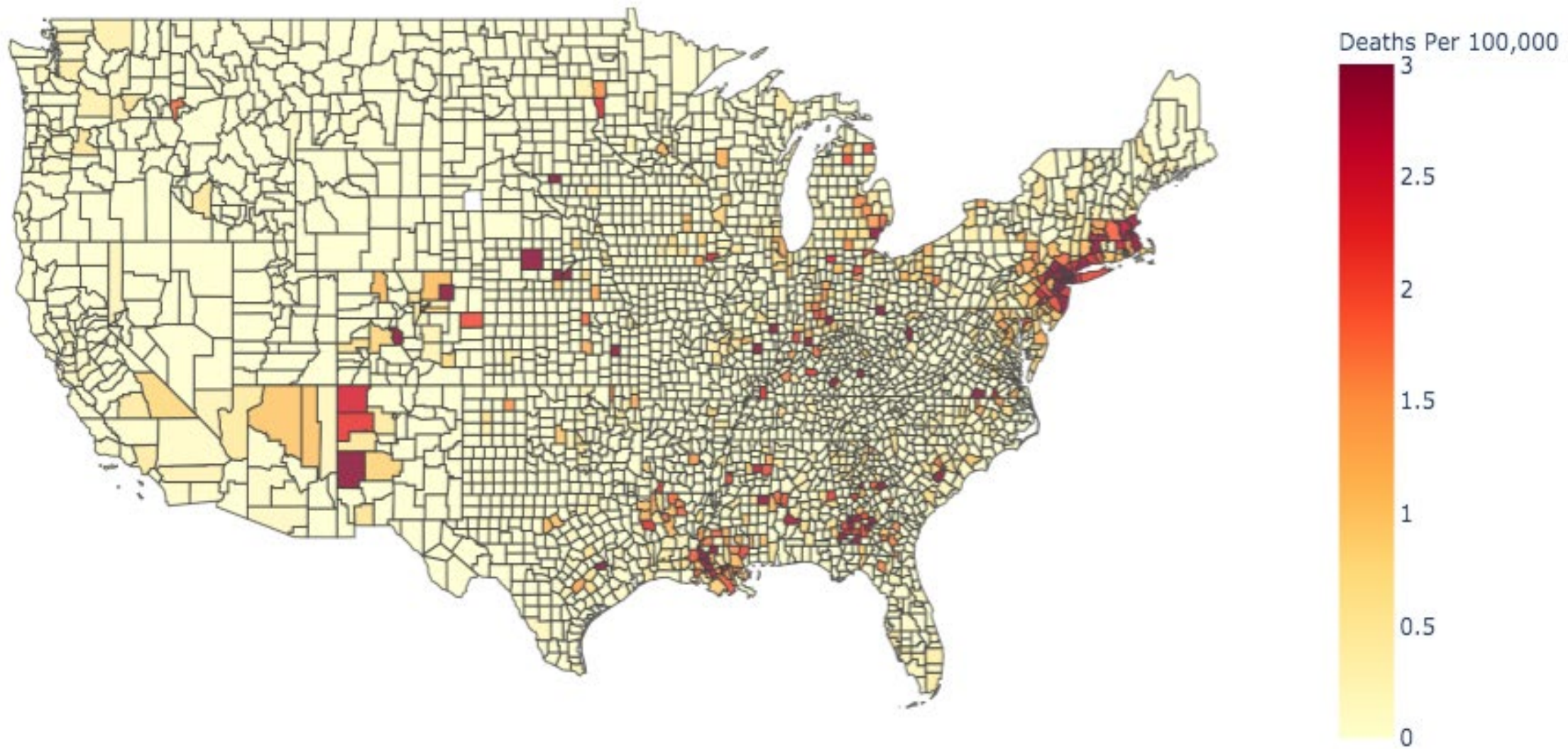
... As Shown by the Death Rate as Recorded in the Official Records of The Department of Health.

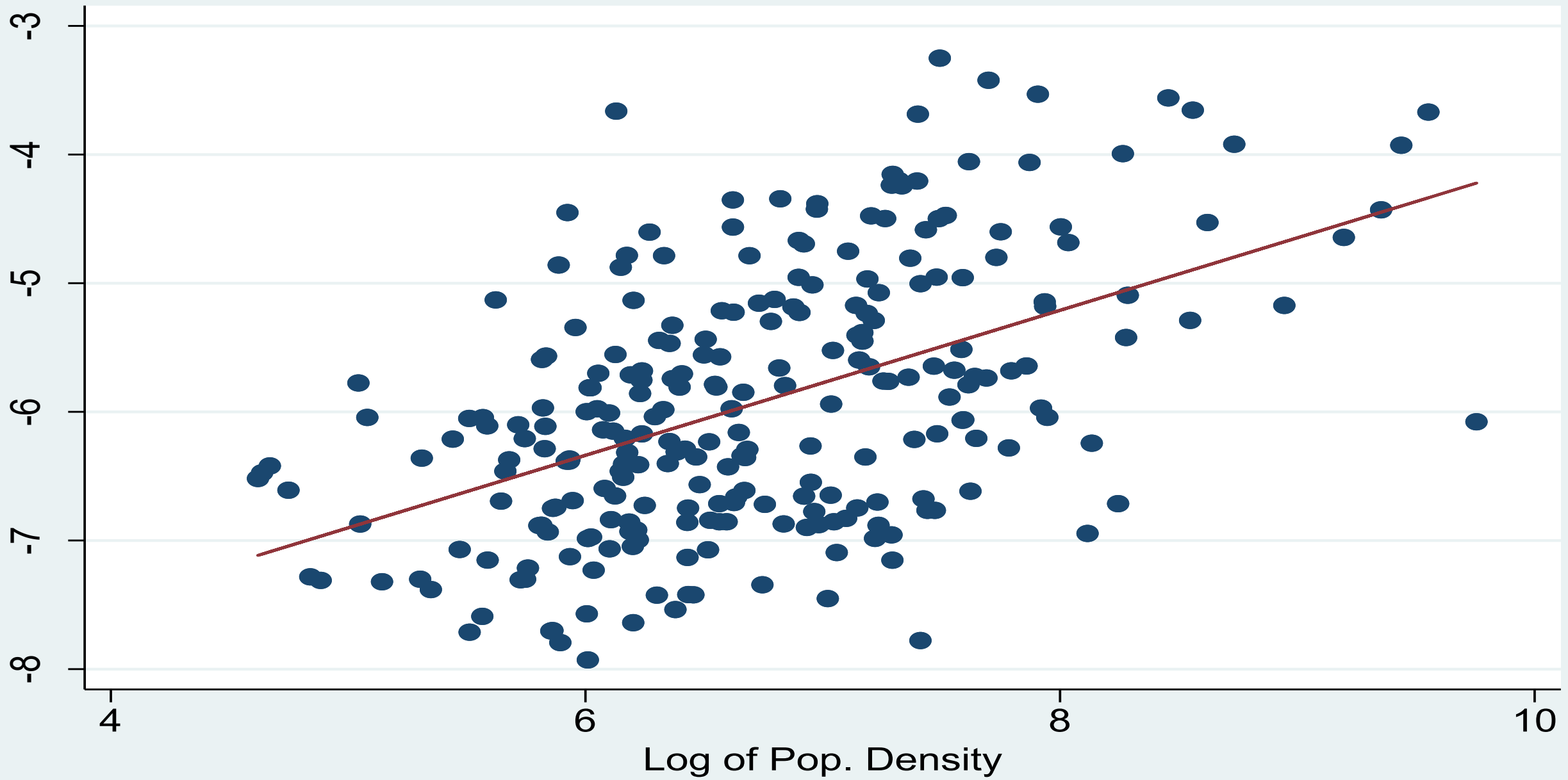


New York City's Department of Health shows the timeline of the city's mortality rate, which sharply dropped with the provision of clean water in the nineteenth century.

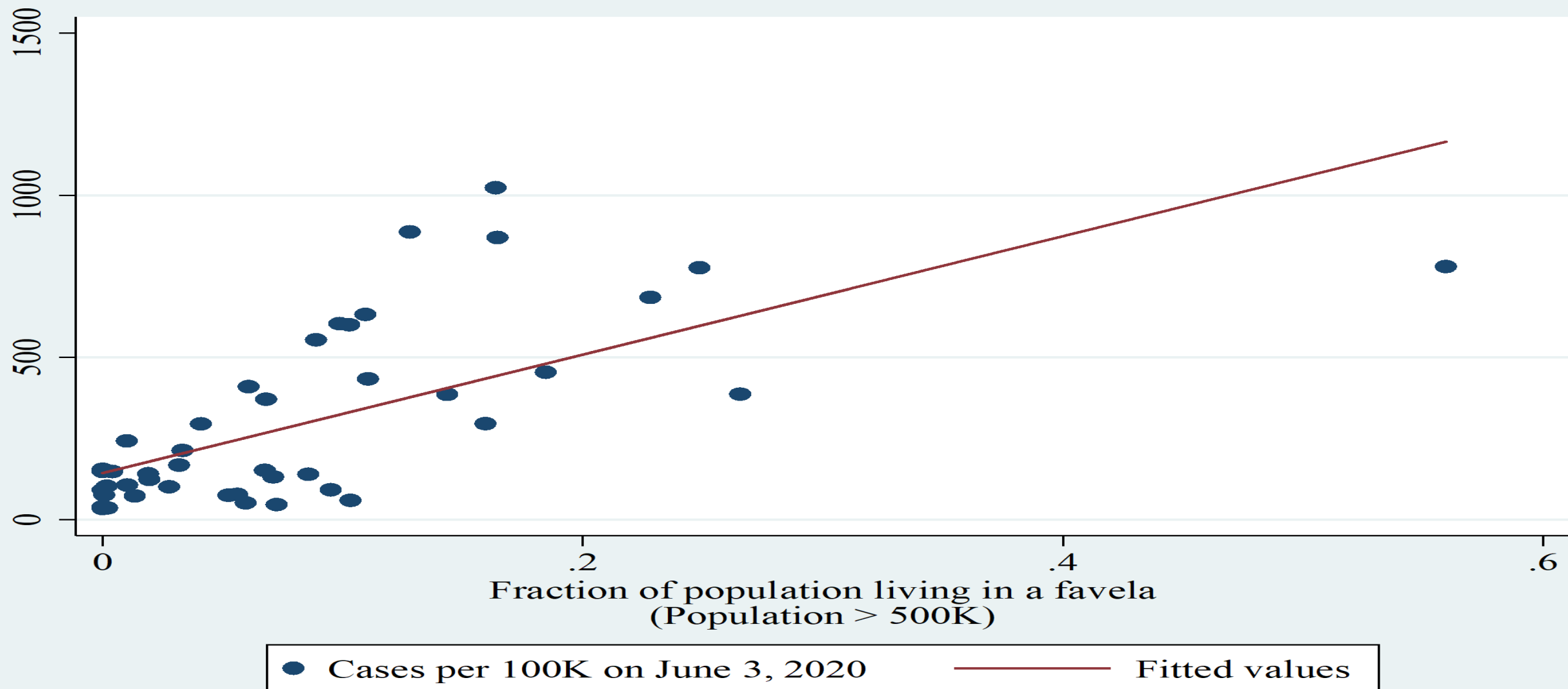
New York City Department of Health and Mental Hygiene

4/30/20 Daily New Deaths (7-Day Average) Per 100,000

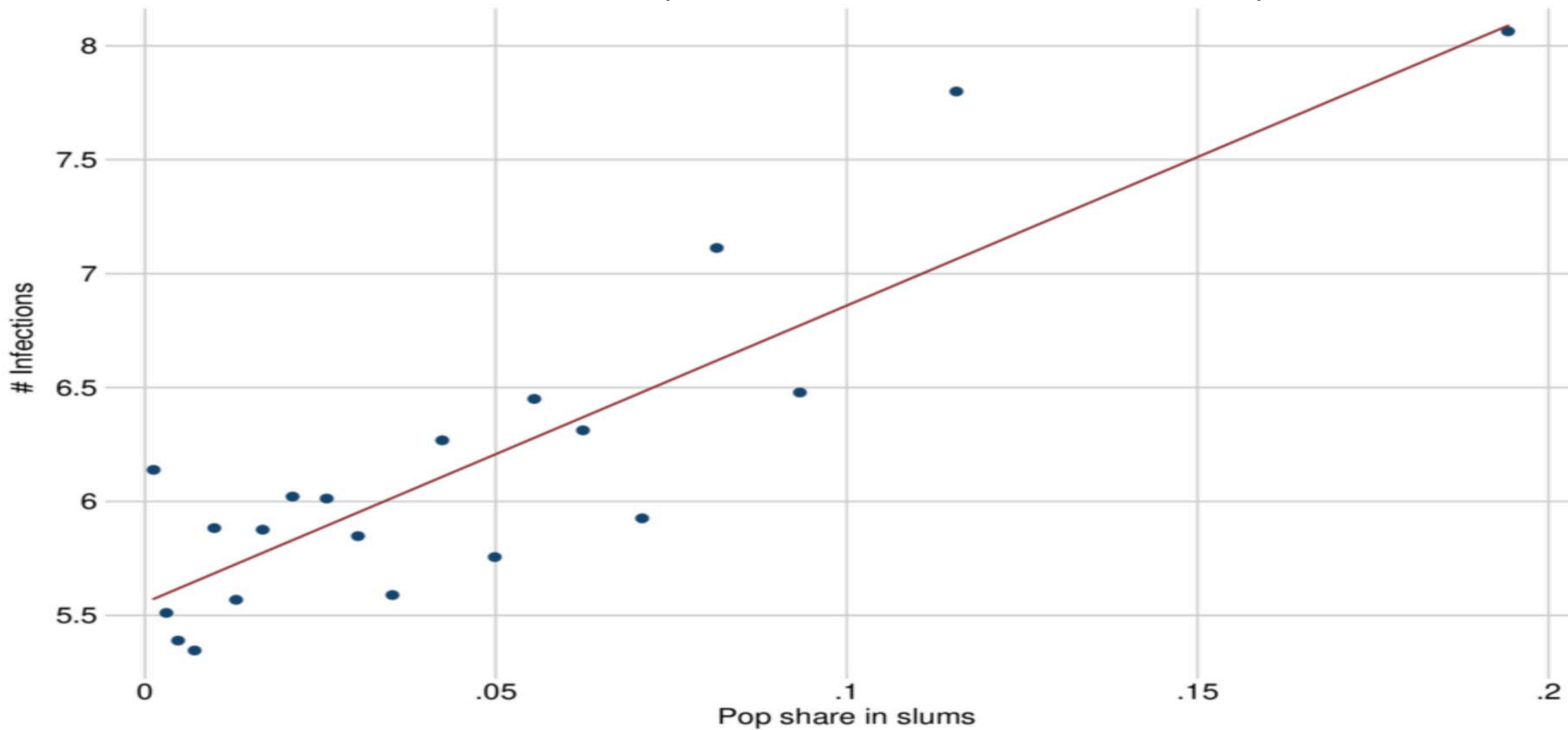




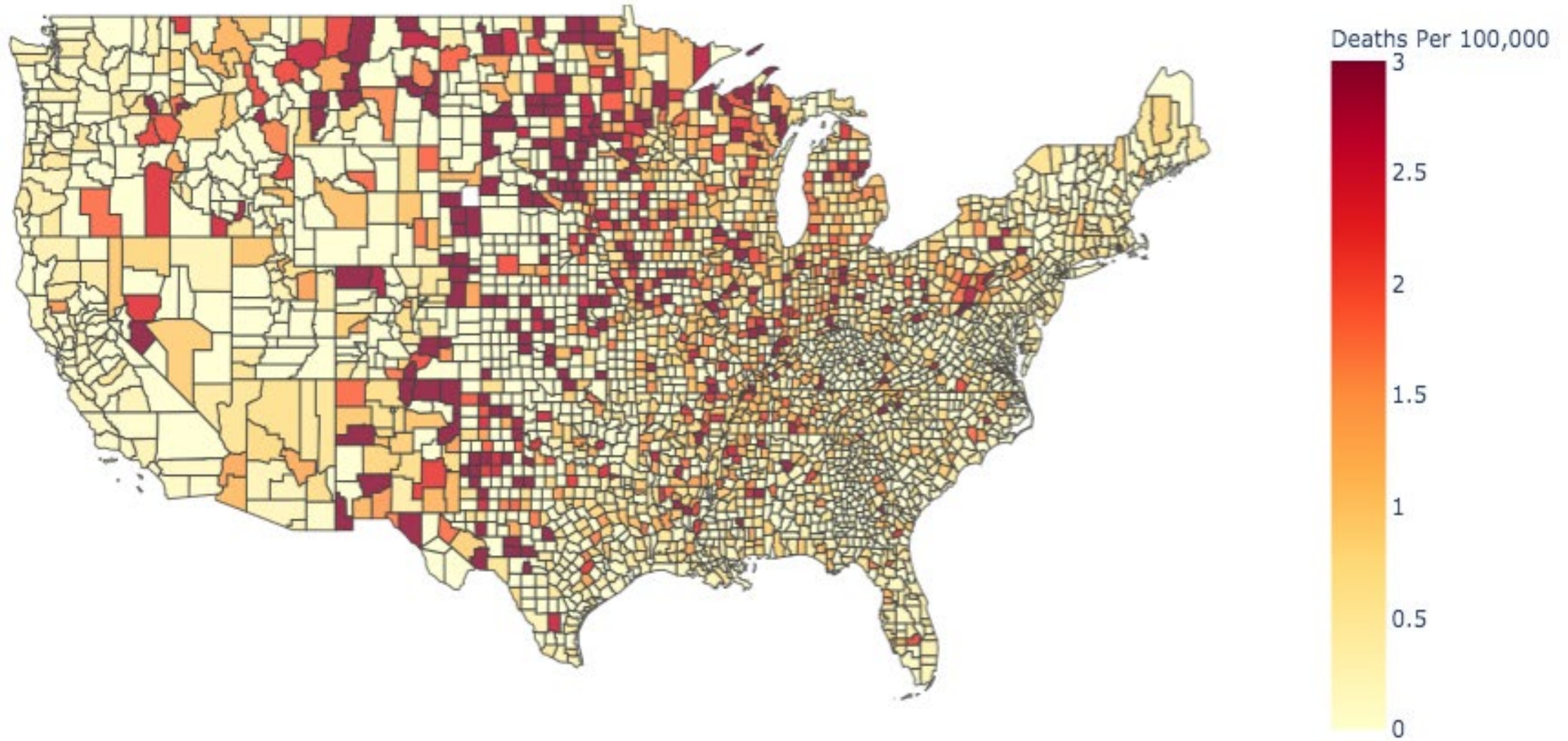
Brazil Results (w.Chauvin and Kestelman)

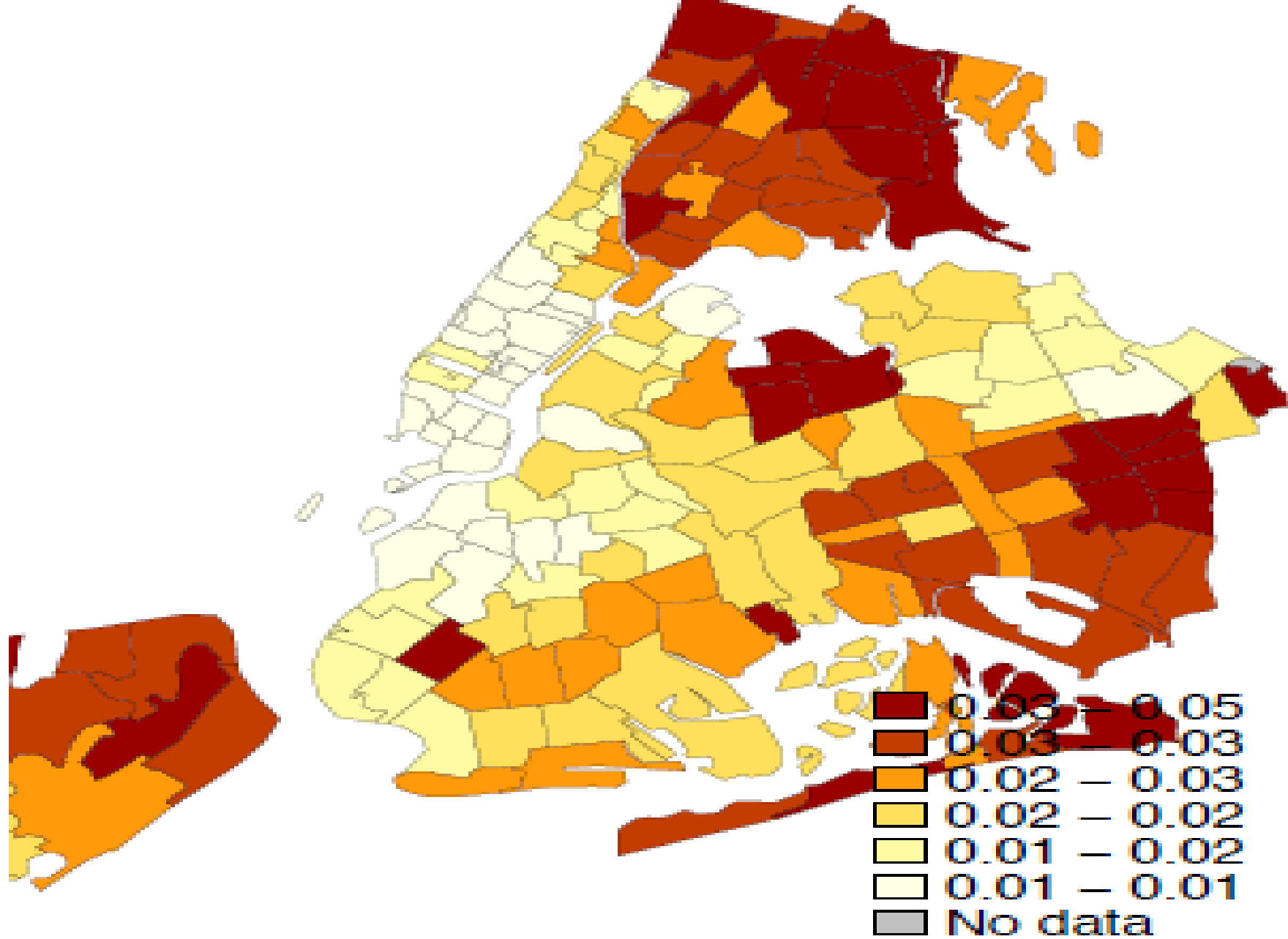


Results from India (Asher and Novosad)

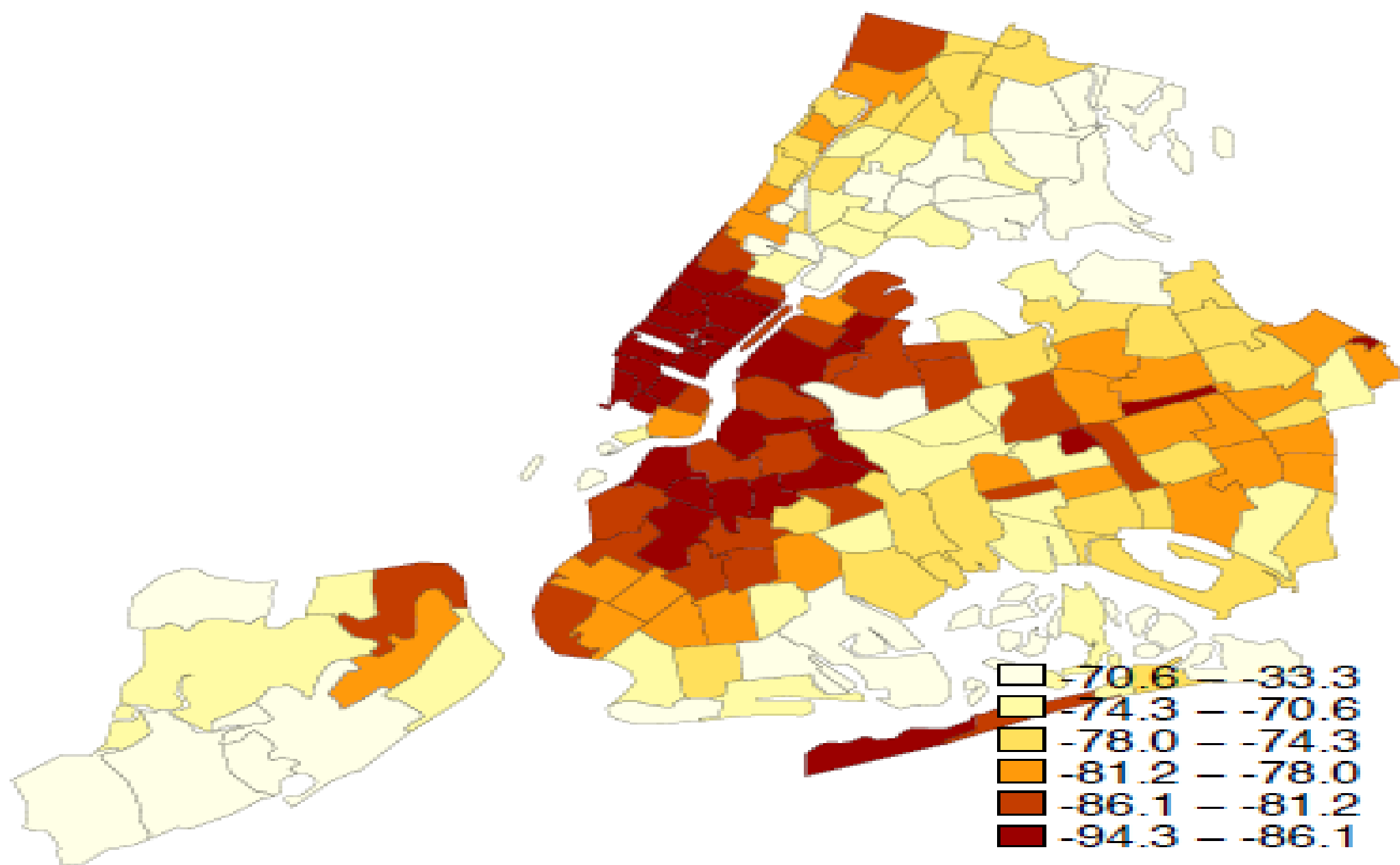


11/30/20 Daily New Deaths (7-Day Average) Per 100,000



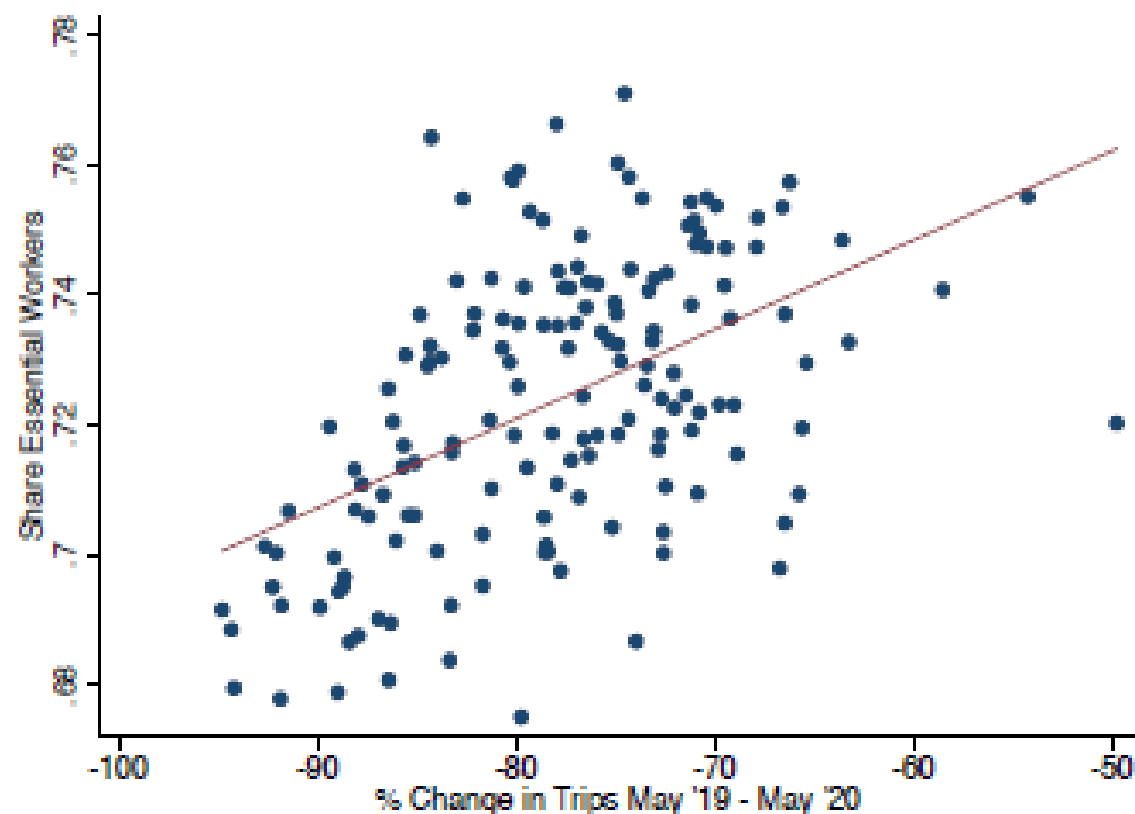


(b) Cases per Person

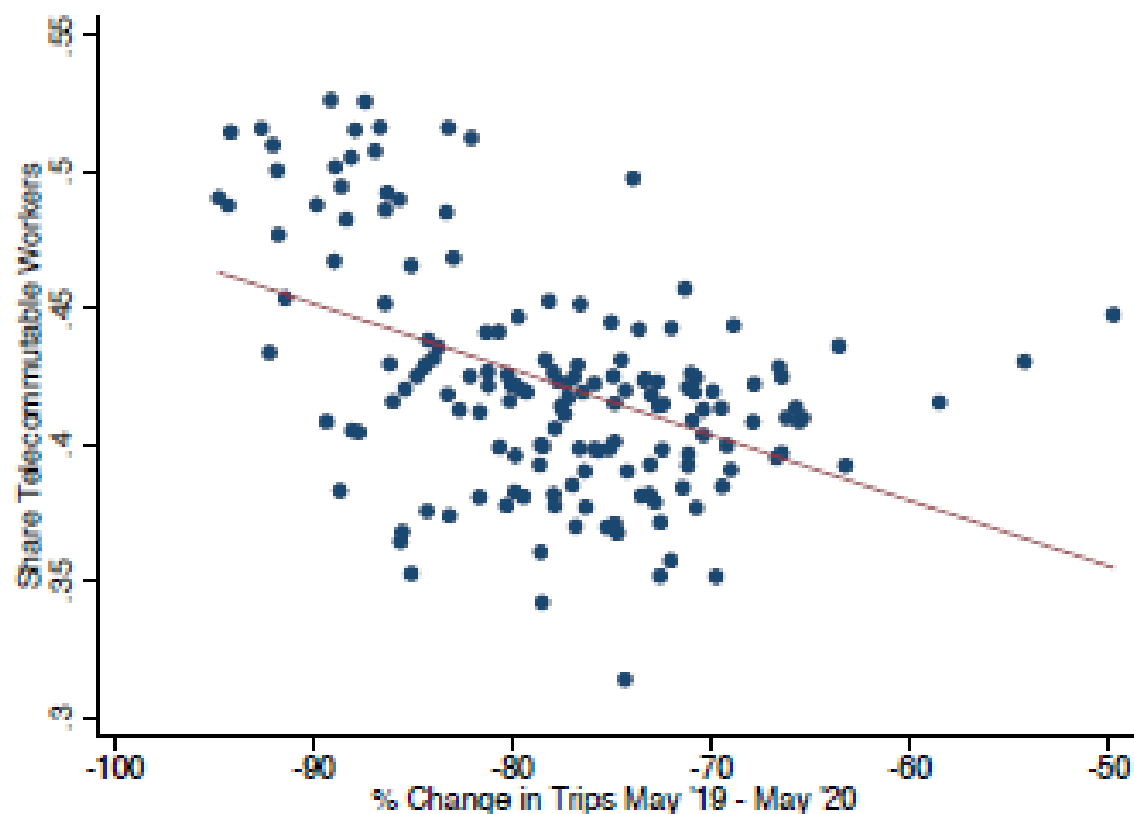


(a) Change in Trips, by Residential Zip code (SafeGraph)

Travel Change and Instruments in NYC



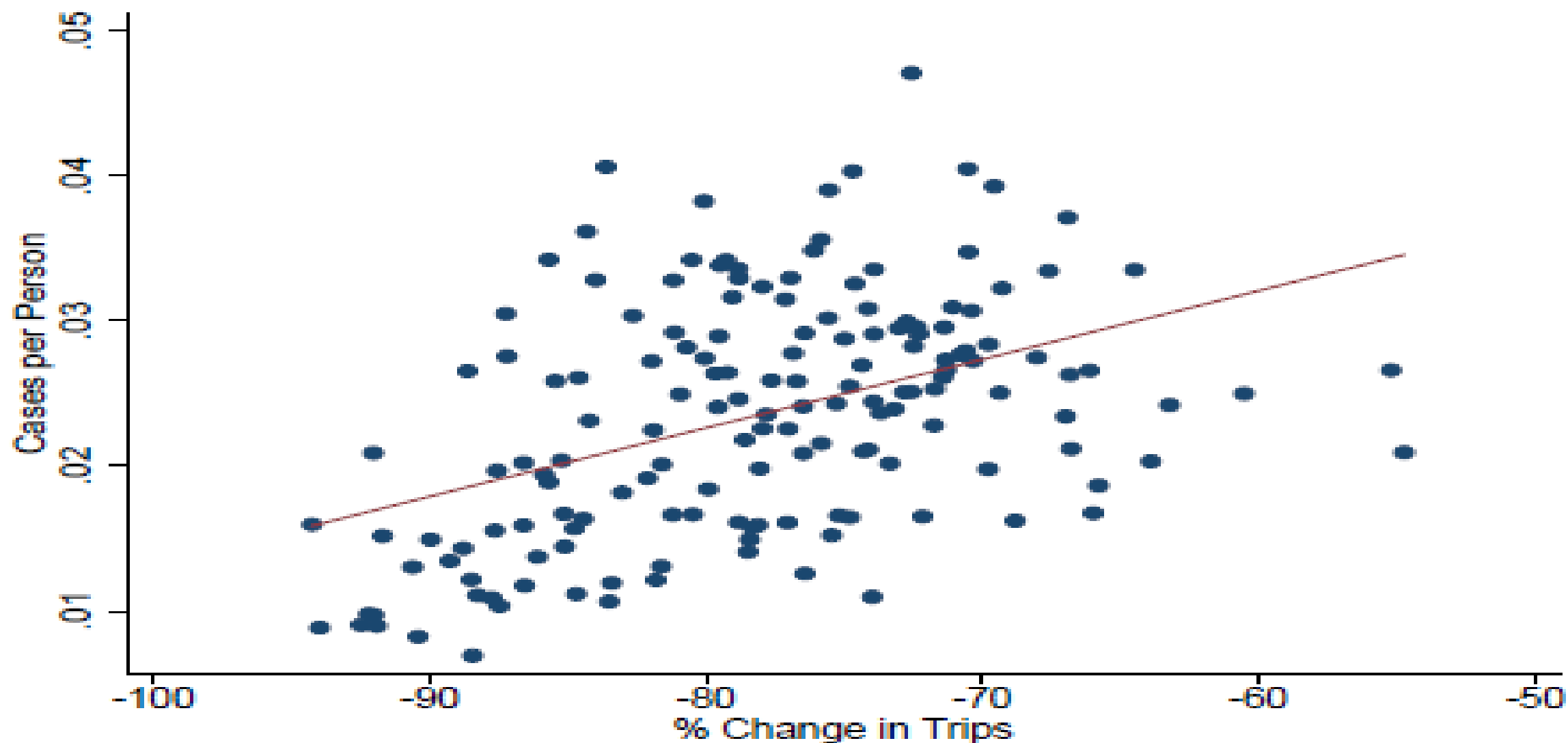
(a) $\% \Delta$ in Trips vs. $ShareEssential_i$



(b) $\% \Delta$ in Trips vs. $ShareTelework_i$

Source: $\% \Delta$ Change in trips from SafeGraph Weekly Patterns Data, using visitors traveling from home. $\% \Delta$ 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.

Figure A1: Correlation between Travel Change and COVID-19 Cases per Person in NYC



Source: Cases per person from NYC Health Department, available at <https://www1.nyc.gov/site/doh/covid/covid-19-data.page>. % 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.

Table 1: Multiple City Demographics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	$\ln(Cases_i)$	$\ln(Cases_i)$	$\ln(Cases_i)$	$\ln(Cases_i)$	$\ln(Cases_i)$	$\ln(Cases_i)$	$\ln(Cases_i)$
	OLS	OLS	OLS	OLS	OLS	IV	IV
$\% \Delta Trips_i$	0.019*** (0.002)	0.015*** (0.002)	0.019*** (0.002)	0.008*** (0.002)	0.007*** (0.002)	0.051*** (0.005)	0.025*** (0.009)
$\% AfAm_i$		0.573*** (0.073)			0.142* (0.081)		0.134 (0.086)
$\ln(Age_i)$			-0.780*** (0.215)		0.289 (0.232)		-0.131 (0.302)
$\ln(Inc_i)$				-0.623*** (0.053)	-0.627*** (0.072)		-0.378*** (0.137)
R-Sq.	0.531	0.571	0.549	0.648	0.652		
Root MSE						0.626	0.469
Obs.	448	448	448	448	448	448	448
F-Stat.						83.82	81.12
				Fixed Effects			
CBSA	X	X	X	X	X	X	X

Notes: The dependent variable is total cases per capita in zip code i . All columns control for log of healthcare employment. Columns (1)-(5) implement versions of Equation (1), $\ln(TotalCases_i) = \alpha + \beta \% \Delta Trips_i + City_c + \varepsilon_i$, each column adding additional demographics. Columns (6)-(7) implement versions of Equation (1.2), $\ln(TotalCases_i) = \alpha + \beta \% \Delta \widehat{Trips}_i + City_c + \varepsilon_i$. Equation (1.1) available upon request. Specifications (6) and (7) include both the teleworking and essential share instruments. Robust standard errors included in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3: NYC Panel Results: SafeGraph Trips

	(1) $\ln(New_{it})$ OLS	(2) $\ln(New_{it})$ IV	(3) $\ln(New_{it})$ IV	(4) $\ln(New_{it})$ IV	(5) $\ln(New_{it})$ IV
Panel A: Full Sample					
$\% \Delta Trips_{i,t-2}$	-0.002 (0.002)	0.061*** (0.004)	0.044*** (0.007)	0.046*** (0.006)	0.030*** (0.007)
Root MSE	0.382	0.625	0.554	0.525	0.413
Observations	2045	2045	2045	2045	2045
First Stage F-Stat.		156.820	100.222	66.096	17.374
Panel B: Split Sample (2020w11 - 2020w17 vs. 2020w18 - 2020w23)					
$\% \Delta Trips_{i,t-2} \times 1^{st} Half$	0.000 (0.002)	0.066*** (0.006)	0.047*** (0.007)	0.050*** (0.007)	0.034*** (0.007)
$\% \Delta Trips_{i,t-2} \times 2^{nd} Half$	-0.004* (0.002)	0.059*** (0.005)	0.042*** (0.007)	0.043*** (0.007)	0.026*** (0.008)
Root MSE	0.381	0.636	0.555	0.527	0.415
Observations	2045	2045	2045	2045	2045
First Stage F-Stat.		149.913	85.900	55.961	10.712
Controls					
$\% African American_i$			X	X	
$\ln(Age_i)$			X	X	
$\ln(Inc_i)$			X	X	
Fixed Effects					
Zip_i	X				X
$Borough_i$				X	
$Week_t$	X	X	X	X	X

The Pre-Covid Urban Weaknesses

- Cities bringing productivity but not upward mobility
 - Why are cities good for adults but bad for kids (at least some kids)?
- Successful cities are becoming permanently unaffordable
 - The triumph of insiders over outsiders.
- The Unhappiness over Policing and Incarceration
 - The incomplete triumph of urban safety

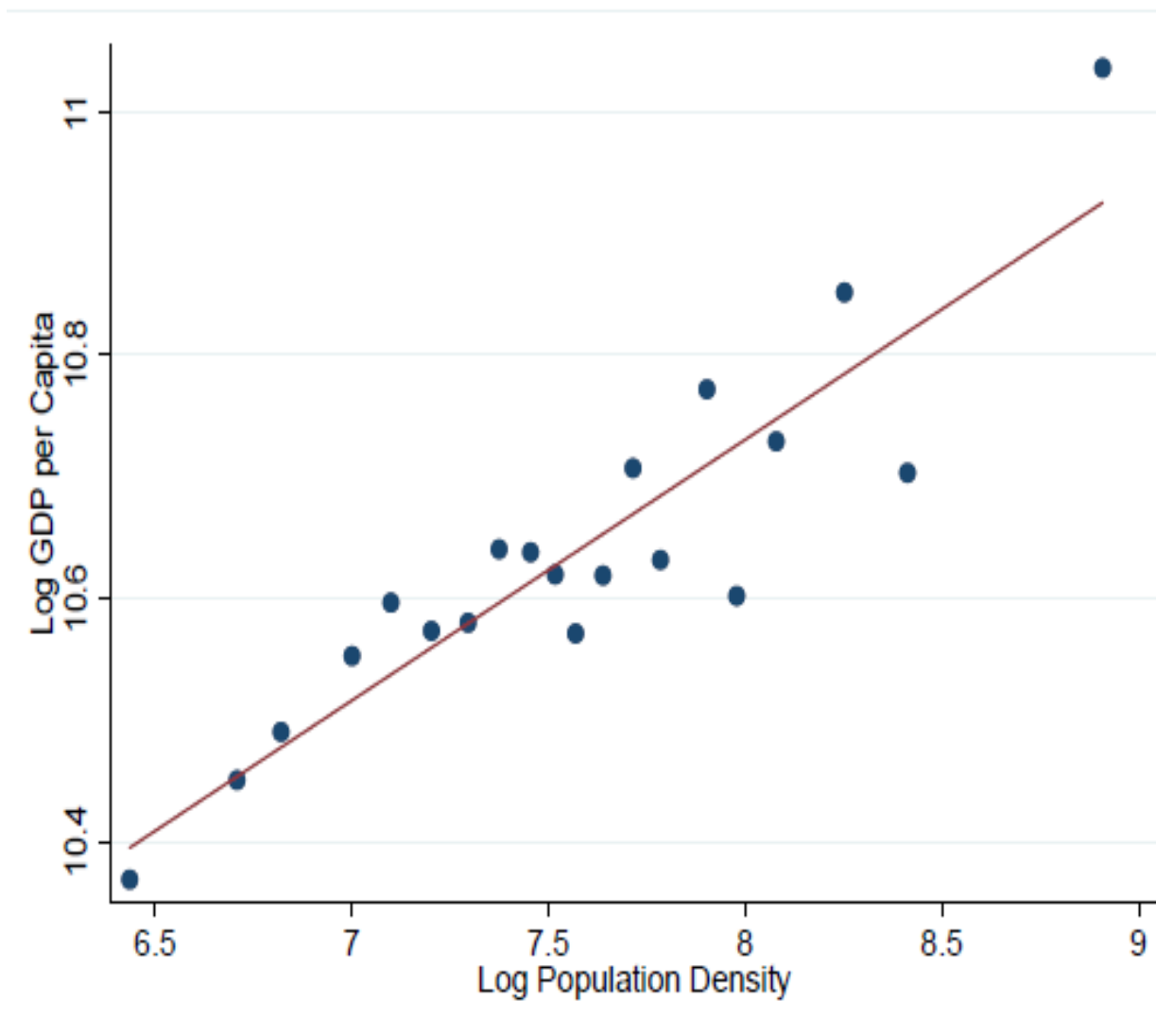


FIGURE 1. RELATIONSHIP BETWEEN DENSITY AND PER CAPITA GDP

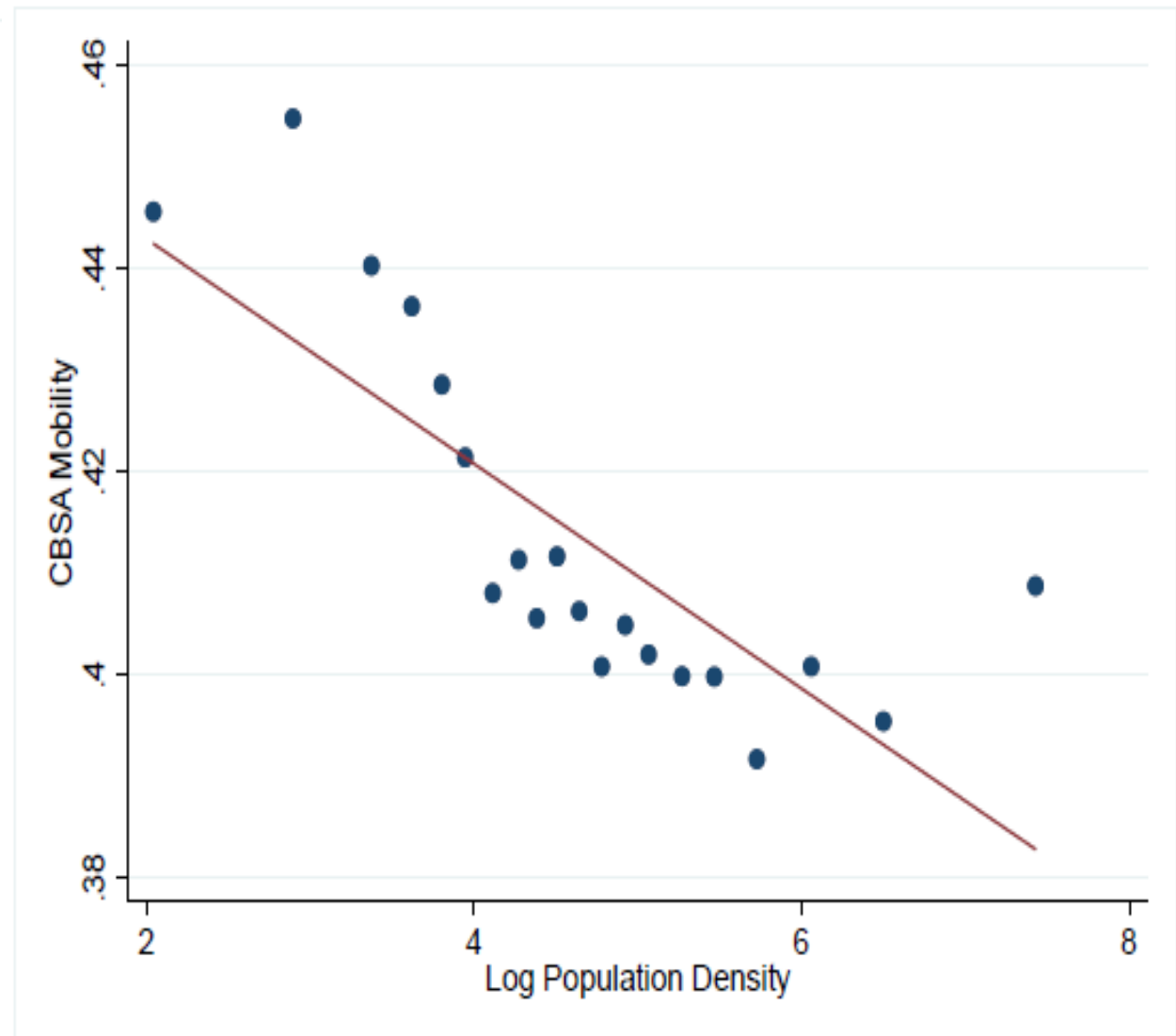


FIGURE 3. RELATIONSHIP BETWEEN DENSITY AND METRO AREA MOBILITY

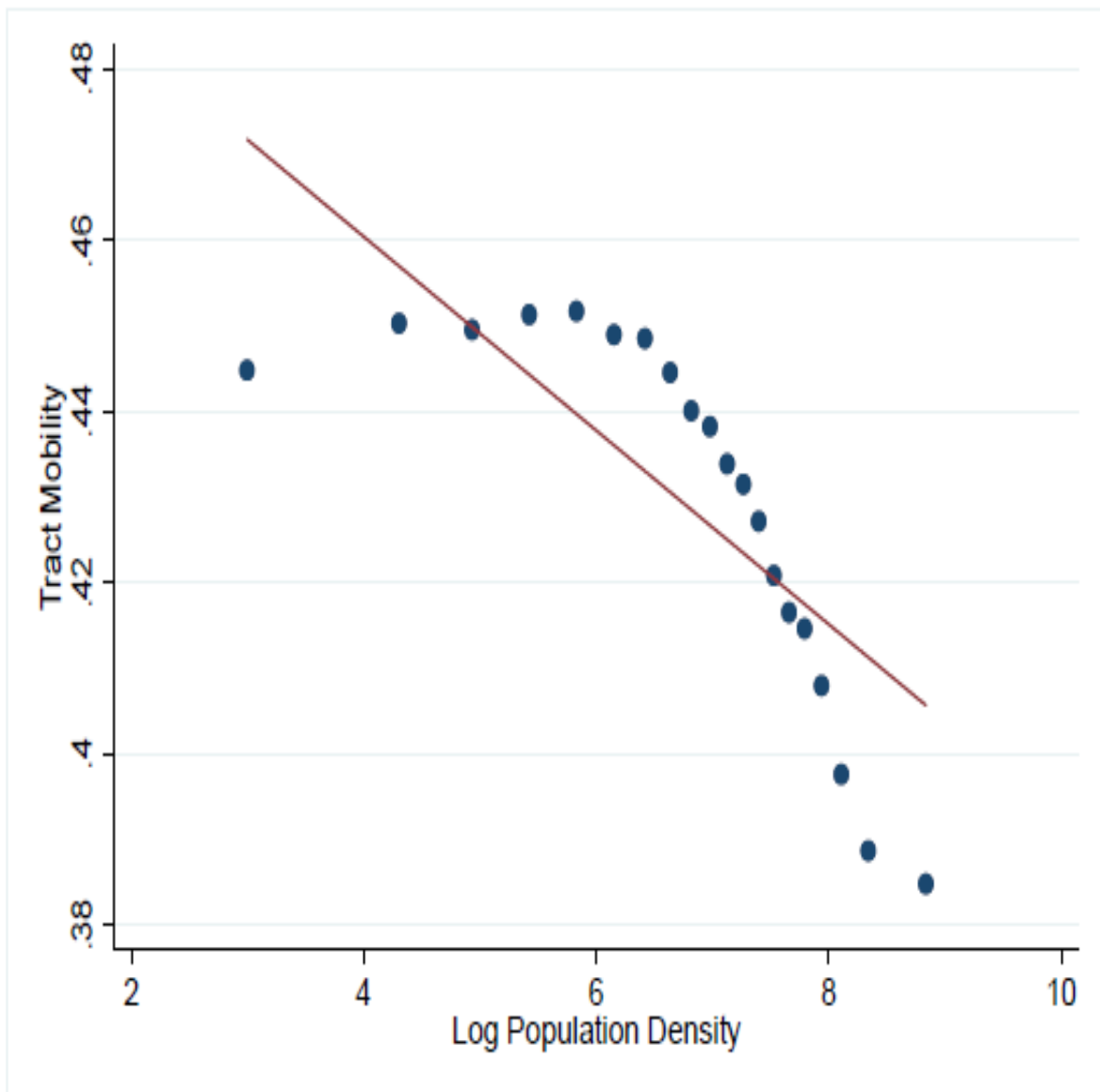
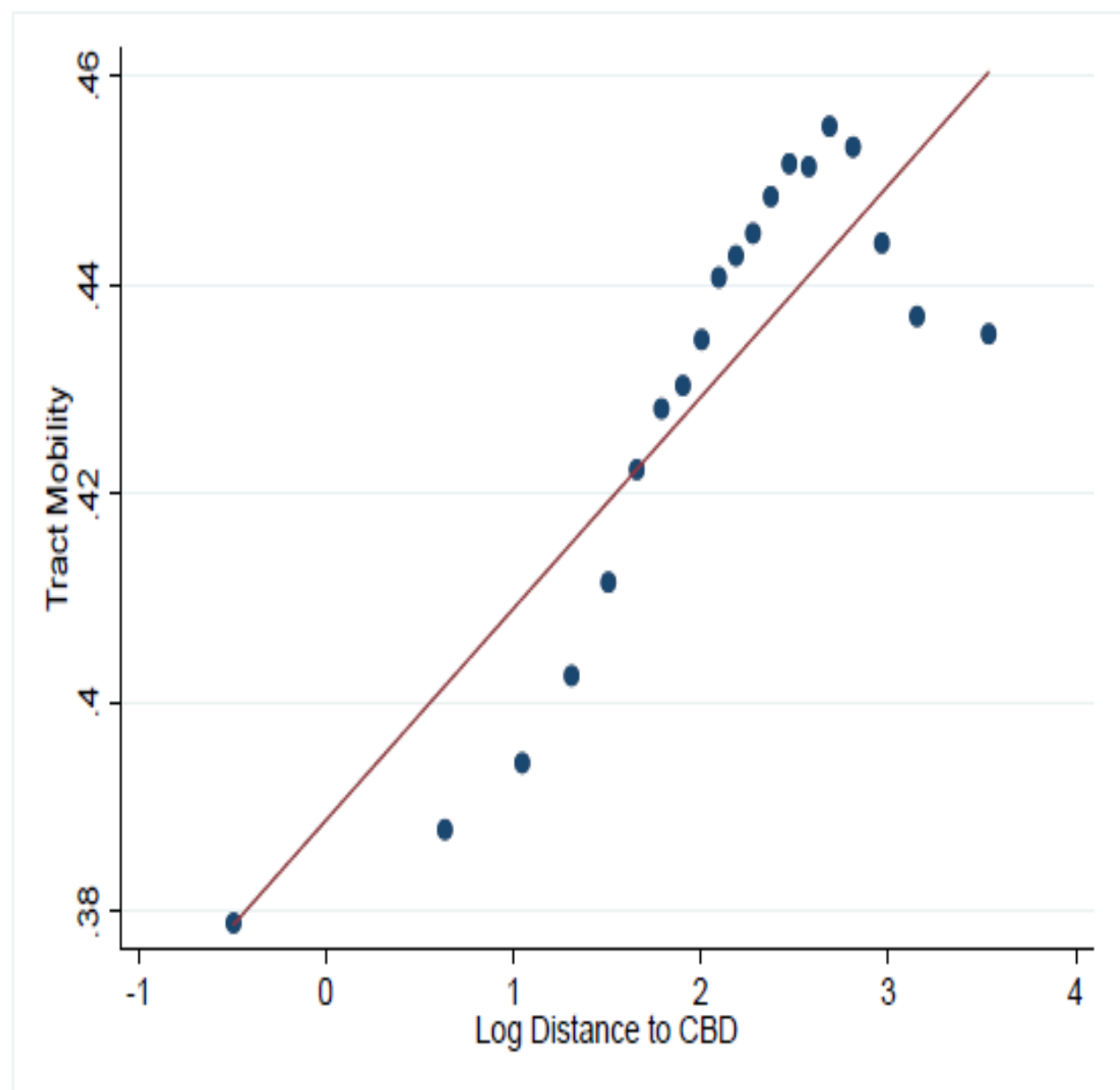


FIGURE 4. RELATIONSHIP BETWEEN DENSITY AND TRACT MOBILITY



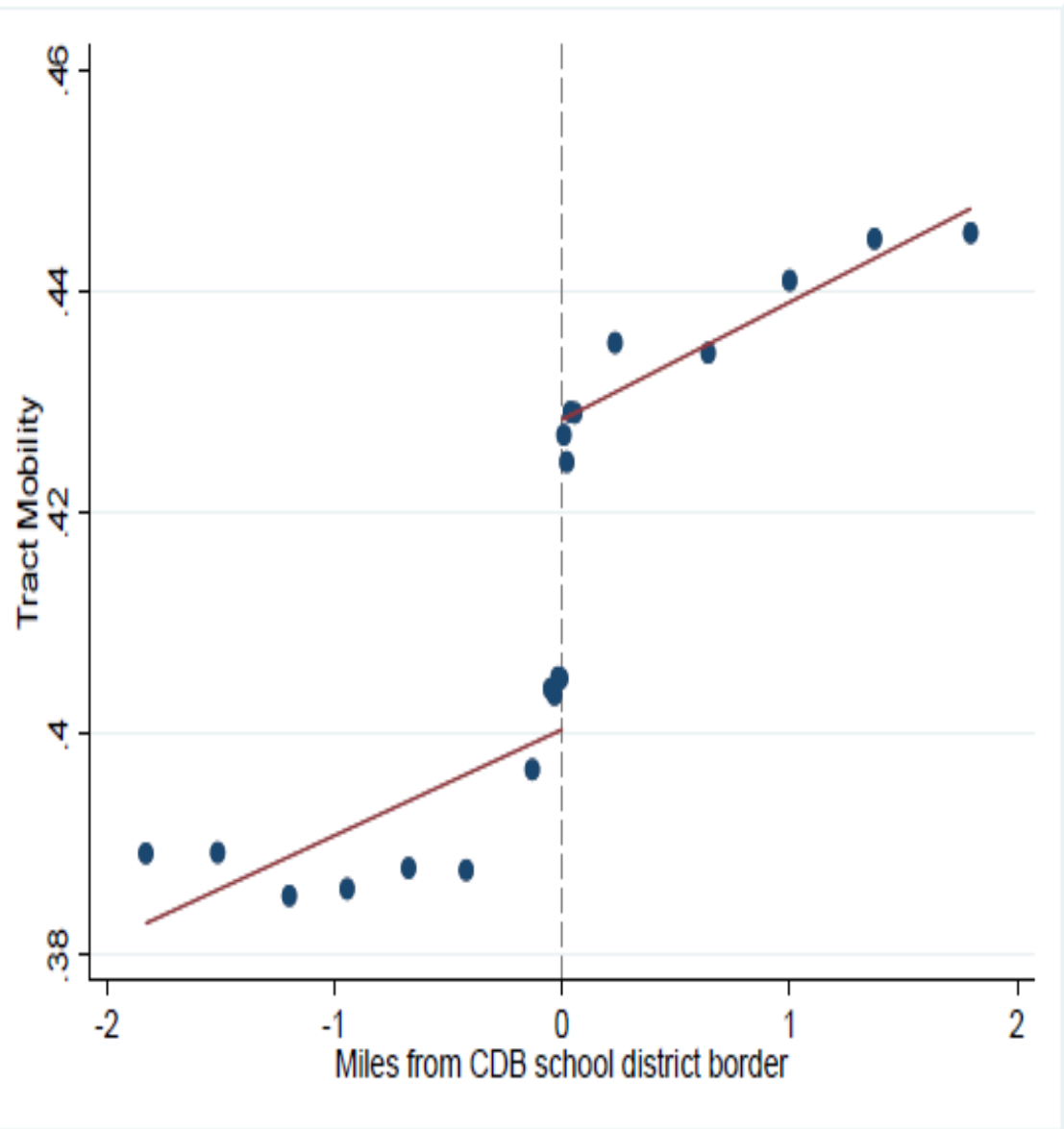
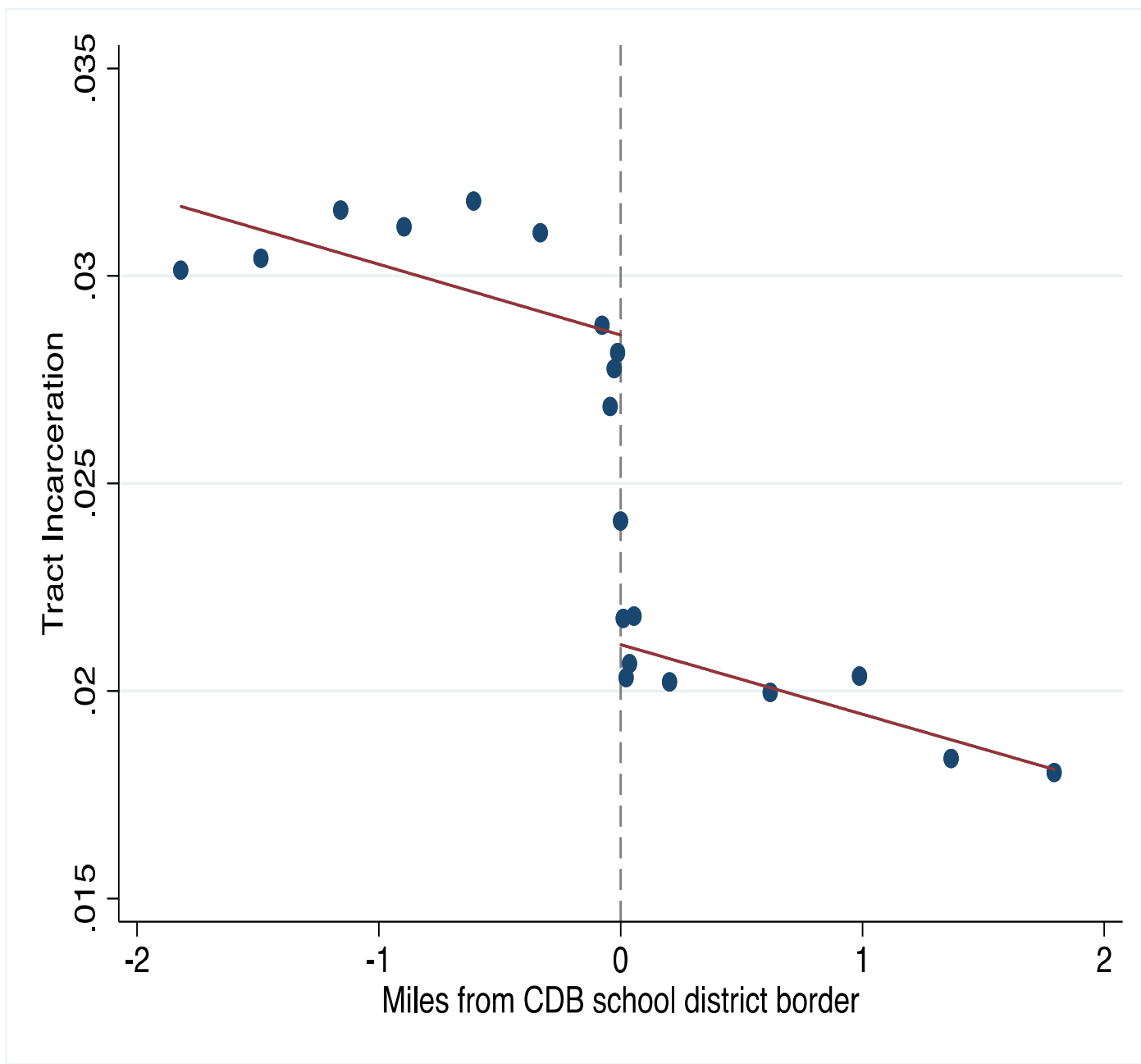
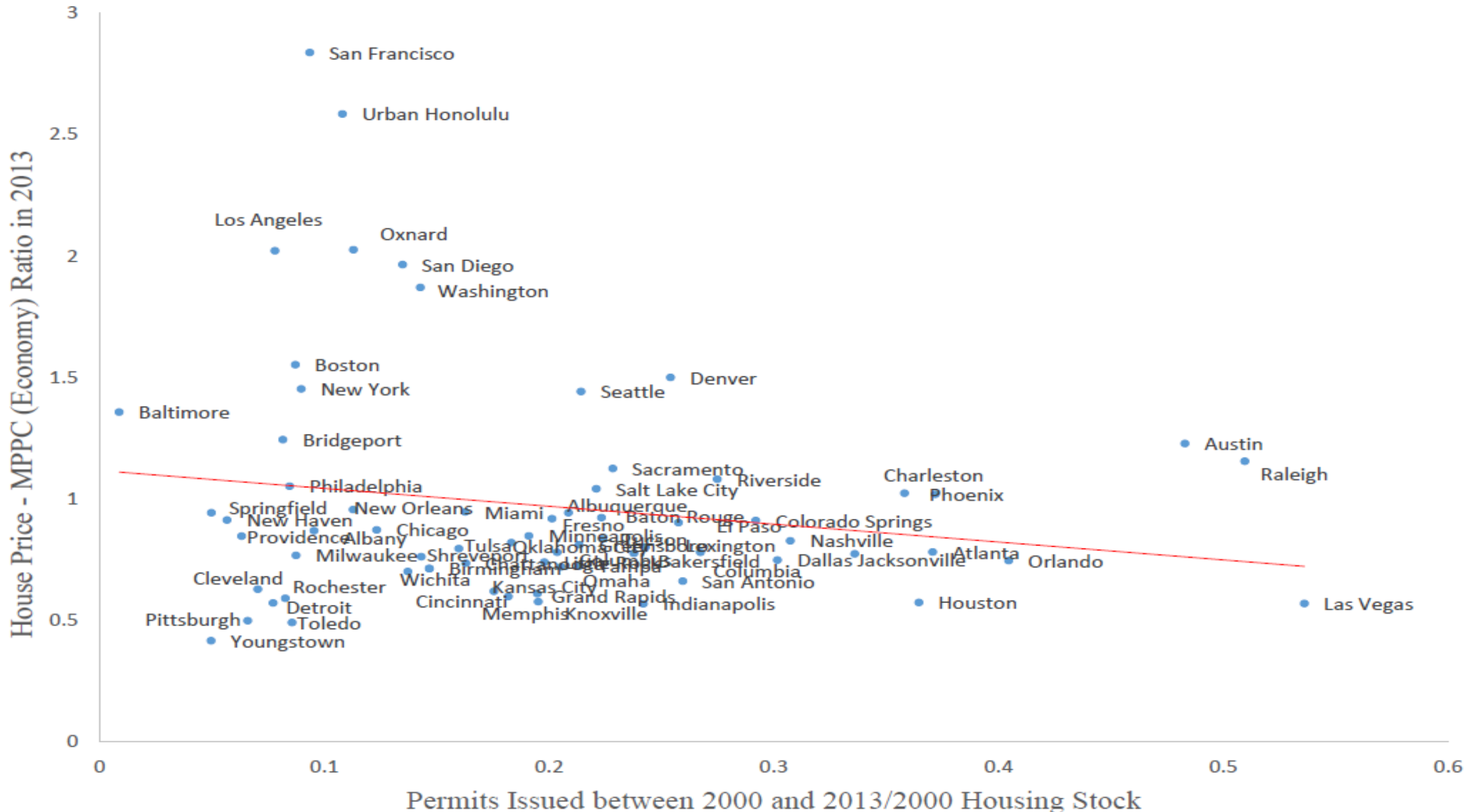
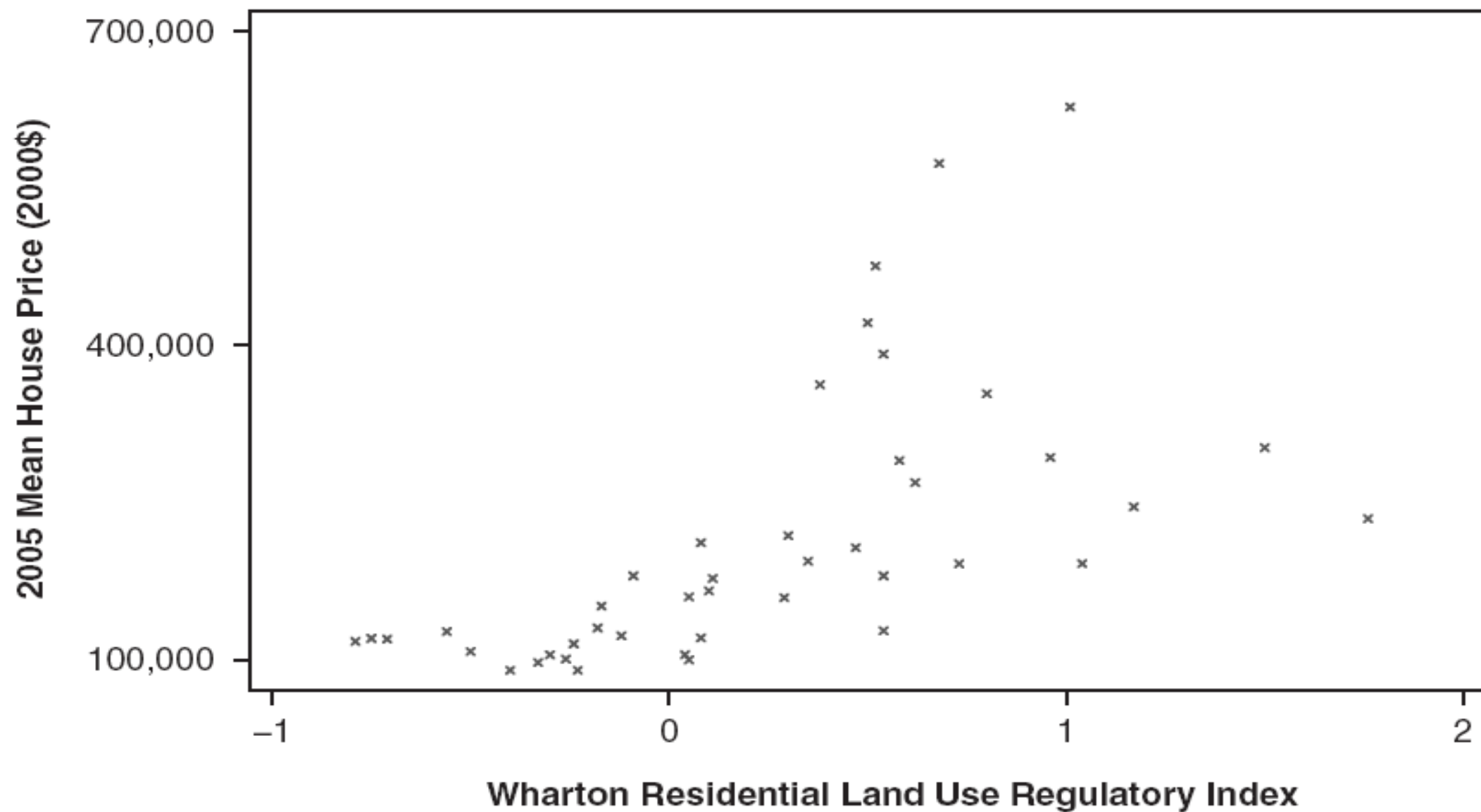


FIGURE 6. MOBILITY AT THE BORDER OF A CENTRAL CITY SCHOOL DISTRICT

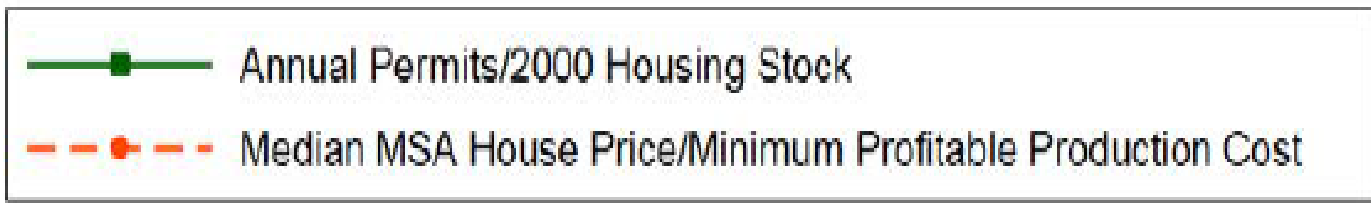
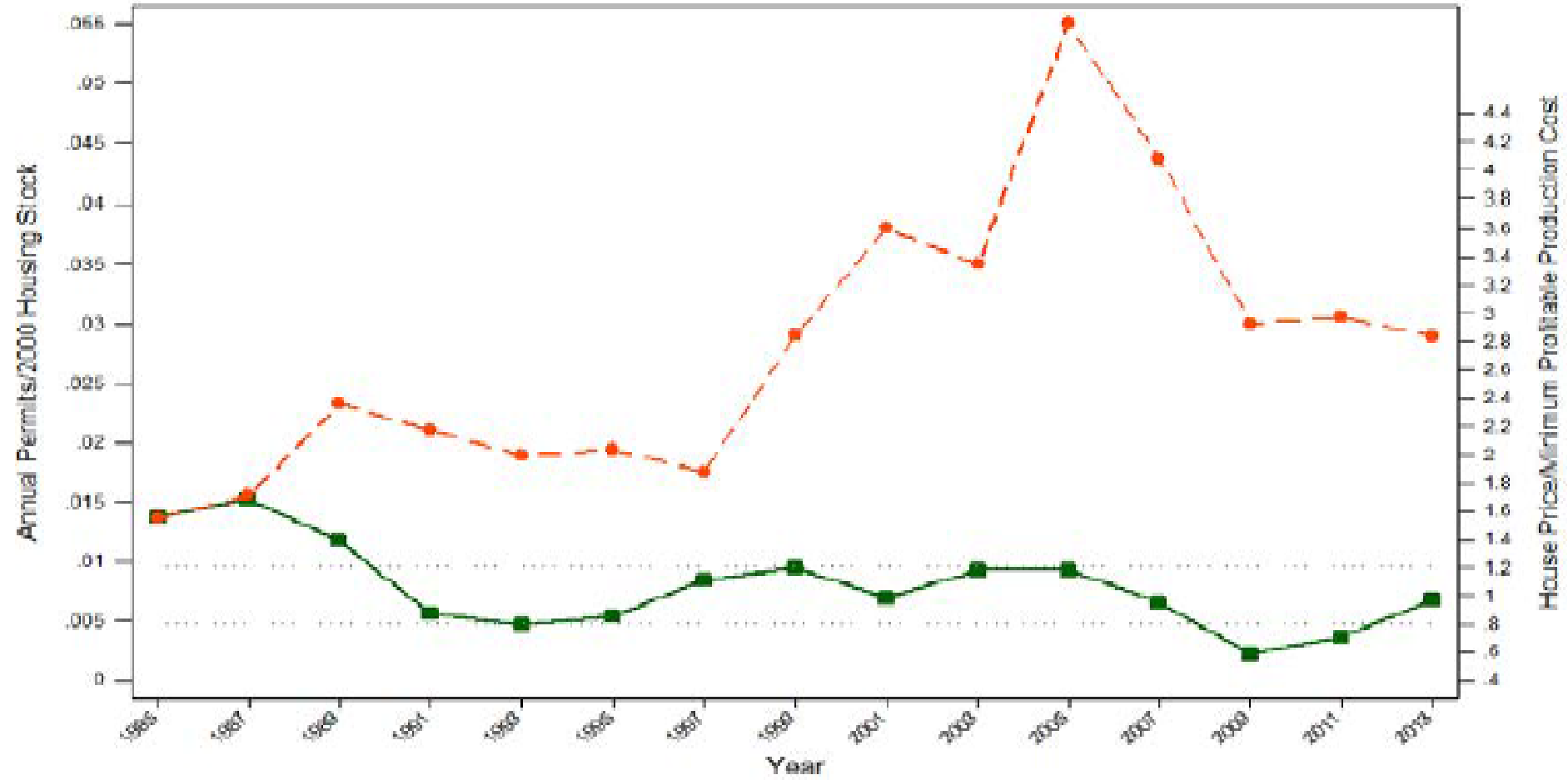




HOME PRICES AND LOCAL LAND-USE REGULATION



Panel C (Growing, Inelastically-Supplied Market): San Francisco-Oakland-Hayward, CA



Panel B (Growing, Elastically-Supplied Market): Atlanta-Sandy Springs-Roswell, GA

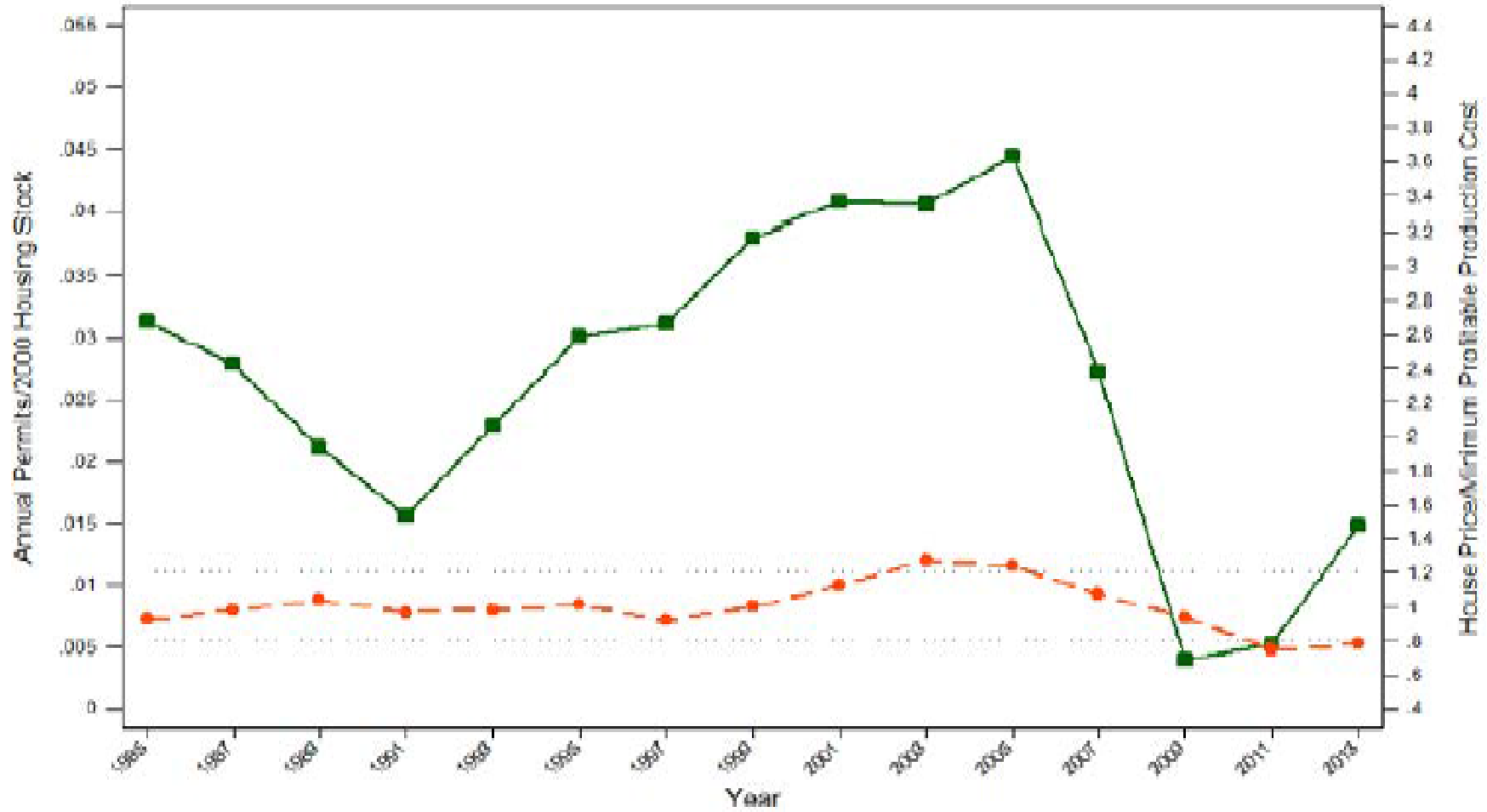
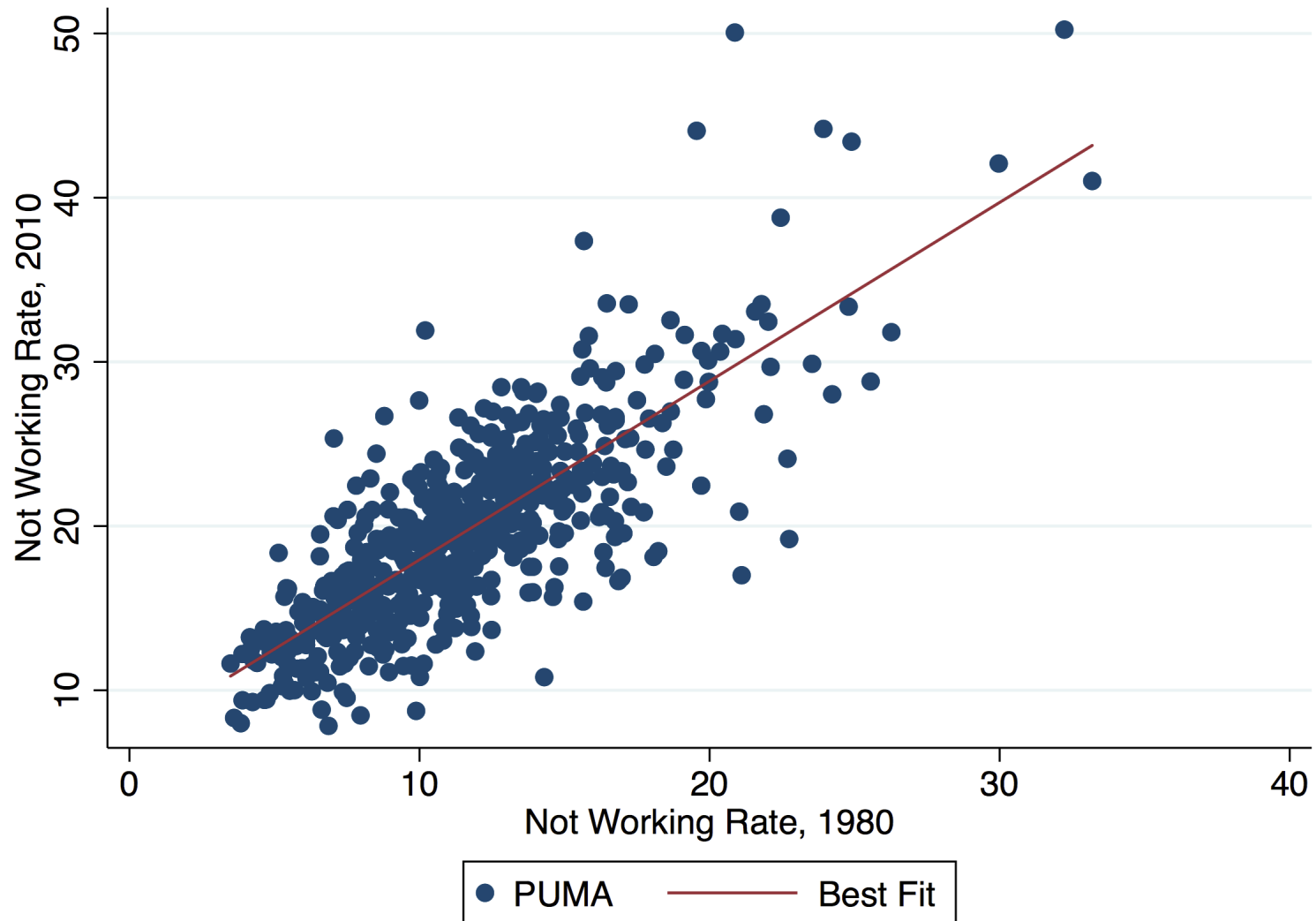


Table 3: Housing Net Worth – 30 Year Changes (\$2013)				
	1983		2013	
Percentile	18-24 year olds	45-54 year olds	18-24 year olds	45-54 year olds
50	\$0	\$87,120	\$0	\$30,000
75	\$0	\$152,159	\$0	\$109,000
90	\$24,803	\$248,818	\$5,500	\$250,000
95	\$47,488	\$353,190	\$43,000	\$400,000
99	\$141,808	\$862,359	\$95,000	\$1,000,000
Percentile	25-34 year olds	55-64 year olds	25-34 year olds	55-64 year olds
50	\$0	\$94,184	\$0	\$60,000
75	\$45,352	\$161,886	\$21,000	\$167,000
90	\$91,827	\$255,361	\$74,000	\$350,000
95	\$123,135	\$353,190	\$140,000	\$543,000
99	\$230,751	\$760,380	\$256,000	\$1,500,000
Percentile	35-44 year olds	65-74 year olds	35-44 year olds	65-74 year olds
50	\$55,799	\$82,411	\$6,000	\$100,000
75	\$118,660	\$150,136	\$58,200	\$225,000
90	\$180,763	\$279,972	\$168,000	\$440,000
95	\$247,349	\$426,936	\$300,000	\$701,000
99	\$531,198	\$941,840	\$1,025,000	\$2,000,000

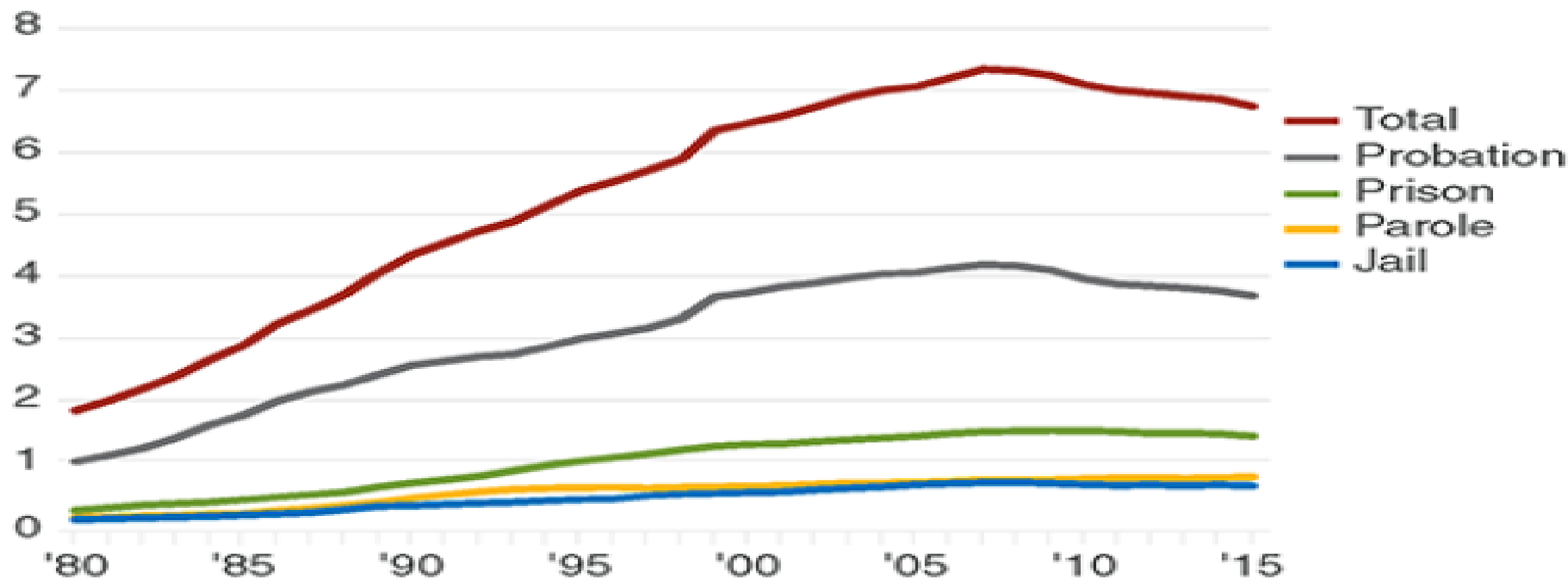
Notes: Data compiled from the 1983 and 2013 *Survey of Consumer Finances* using publicly available samples.

Persistence of not working rates



Total adult correctional population, 1980–2015

Number (in millions)



Source: Bureau of Justice Statistics, Annual Survey of Jails, Annual Survey of Parole, Annual Survey of Probation, Census of Jail Inmates, and National Prisoner Statistics, 1980–2015.

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



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	.

Will we ever go back to the office?

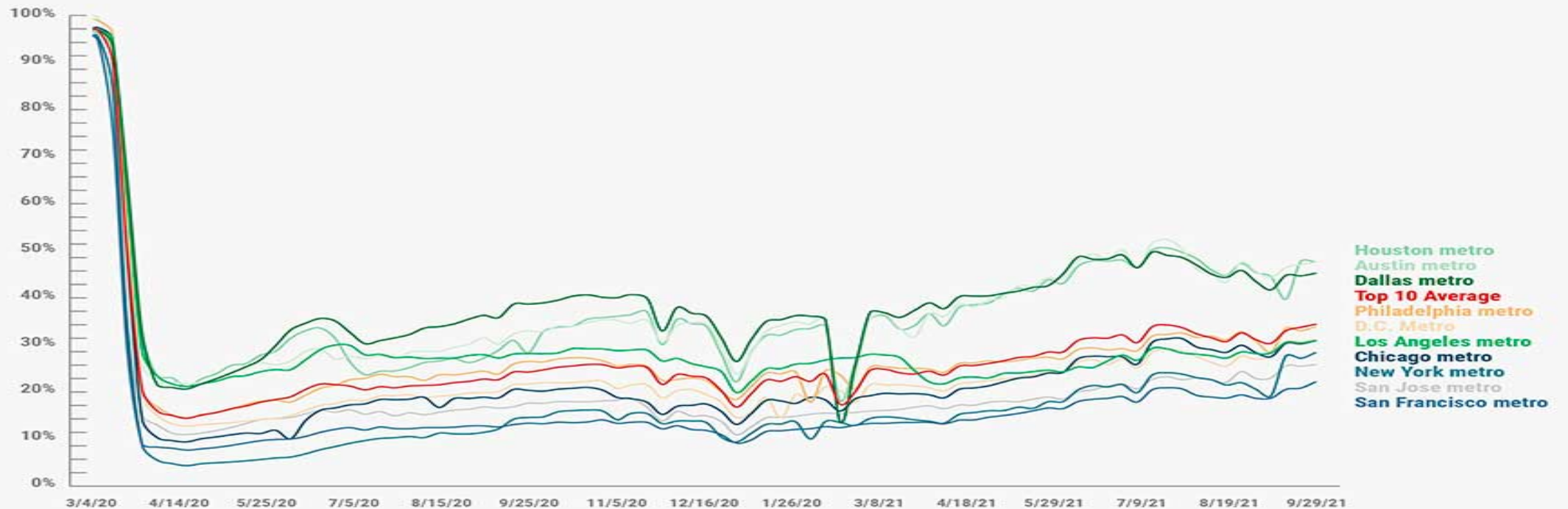


KASTLE BACK TO WORK BAROMETER

Weekly Occupancy Report from Kastle Access Control System Data

10.4.21

OCCUPANCY OVER TIME - MARCH 4, 2020 TO SEPTEMBER 29, 2021



*On March 22, 2021, Kastle moved from daily to weekly data reporting to provide a more robust and comprehensive picture of office occupancy. We have also recalculated data back to the start of the time series for consistency. This has only a marginal impact on most cities and the national average.



The Age of Centrifugal Cars (and Radios and TVs)



Killed Urban Industry, Like NYC Garments



So, why didn't these...



Image by ChtiTux



Image by Danamania

...Kill finance and urban information industries?



Image by Runner1928

Density and Income in Manhattan

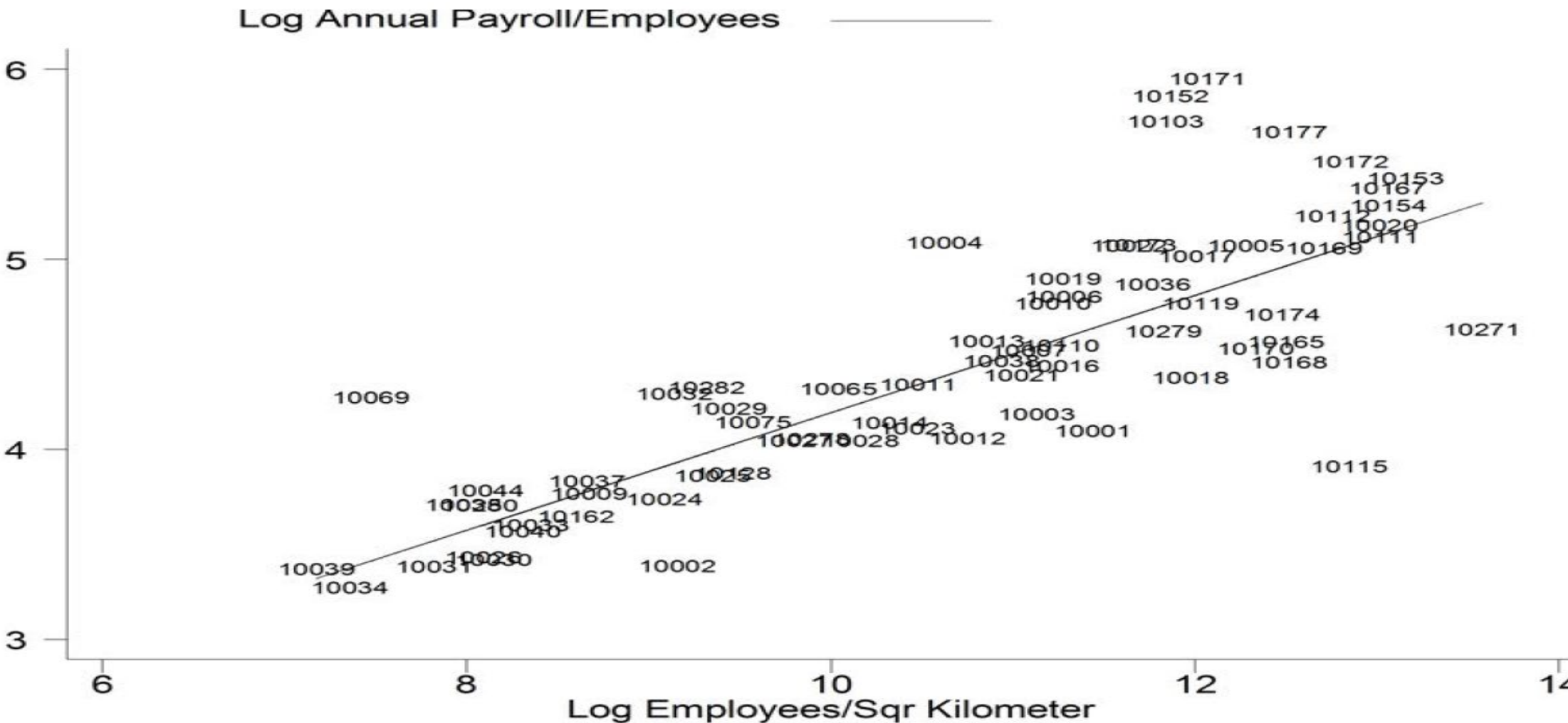
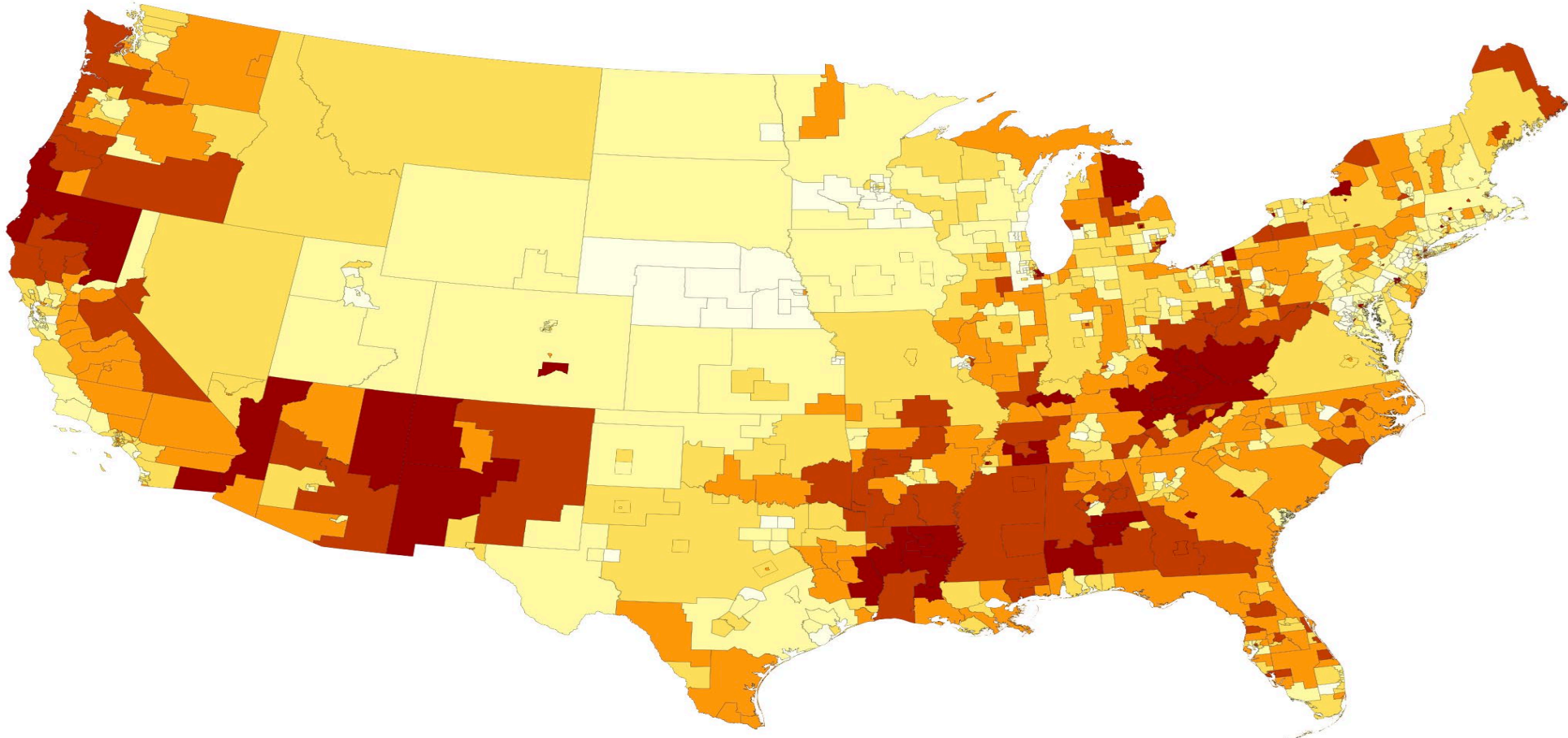
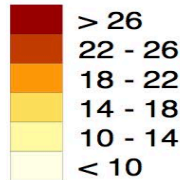


Figure 1: Per Capita Payroll and Density Across New York City Zip Codes

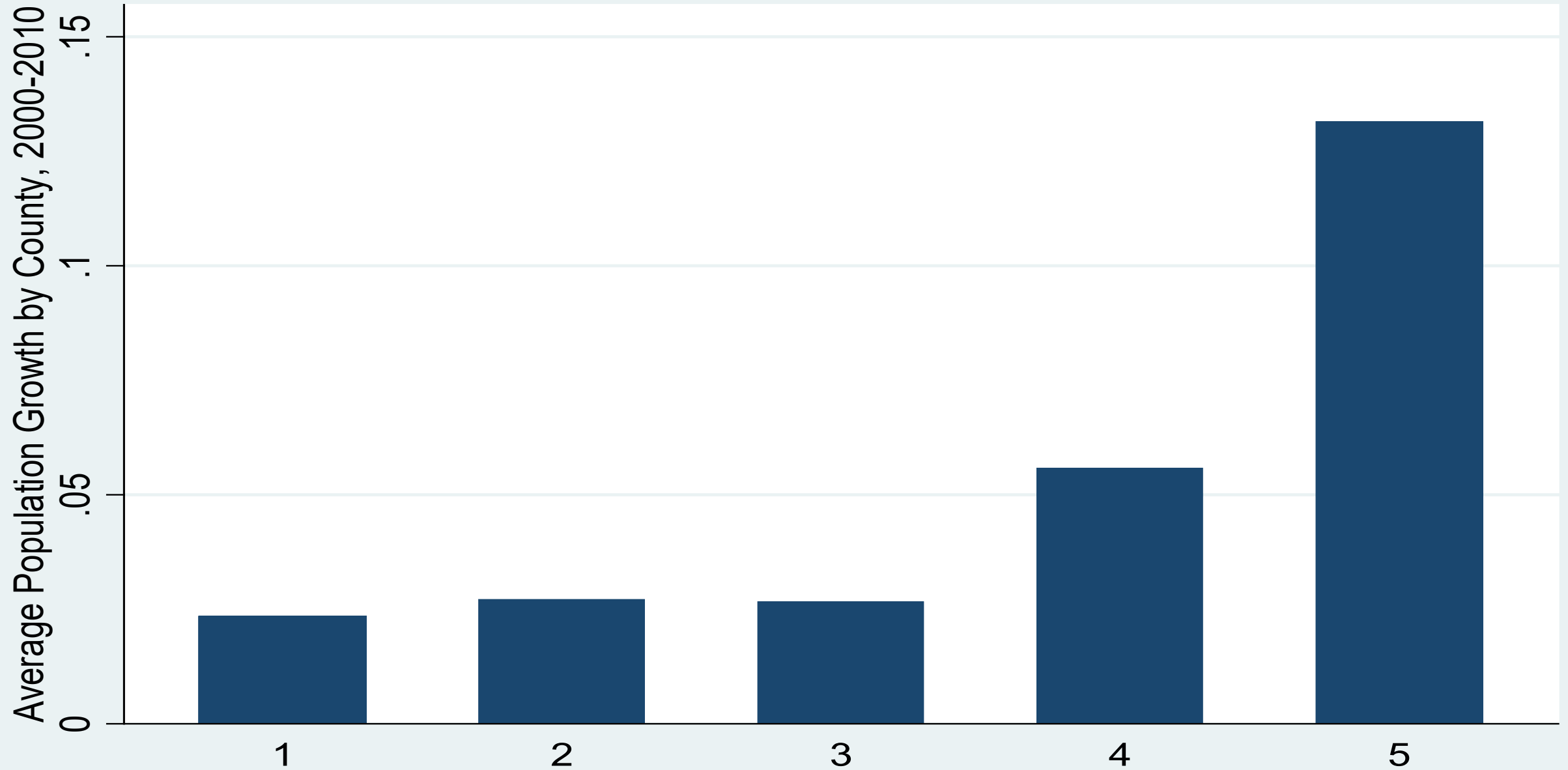
Geography of not working: Prime men 2015



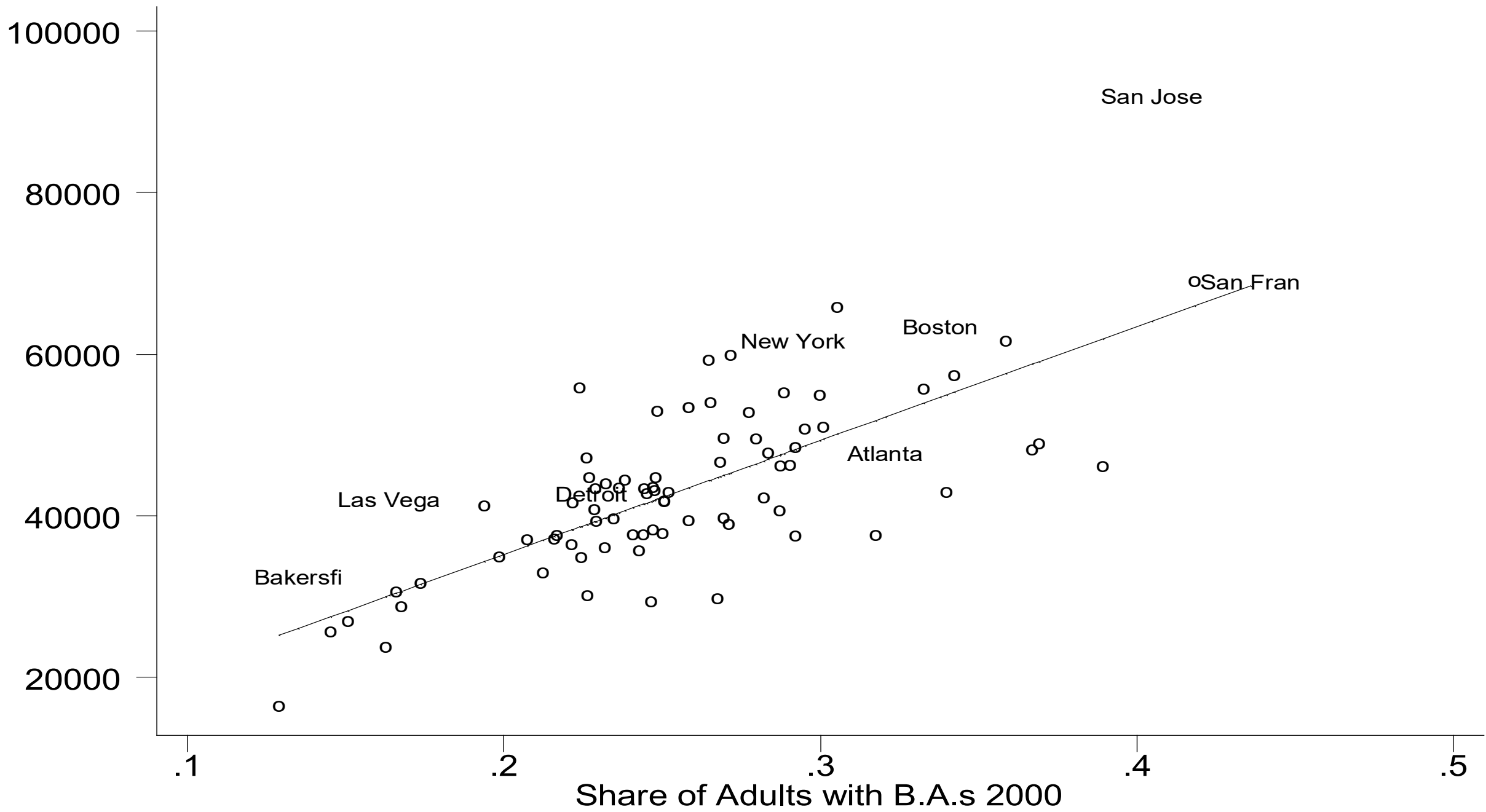
Not Working Rate, percent



Average Population Growth by Share with BA in 2000 (Quintiles)

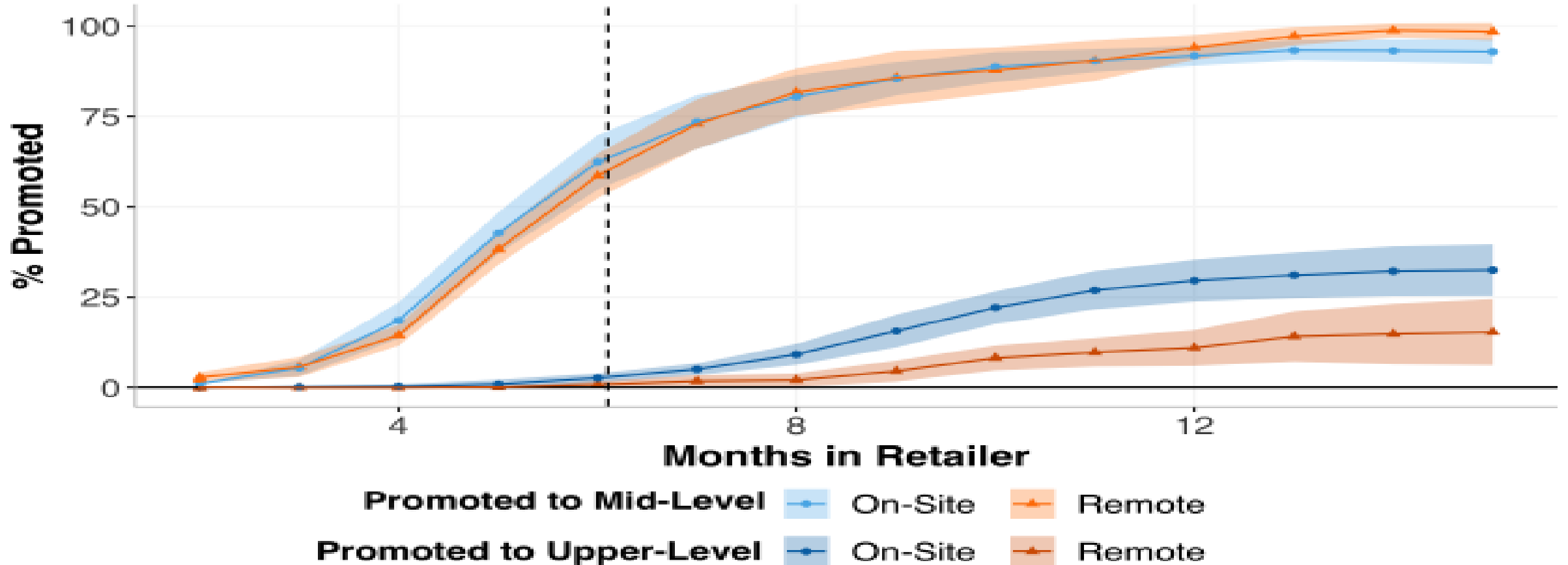


Per Capita GDP 2010



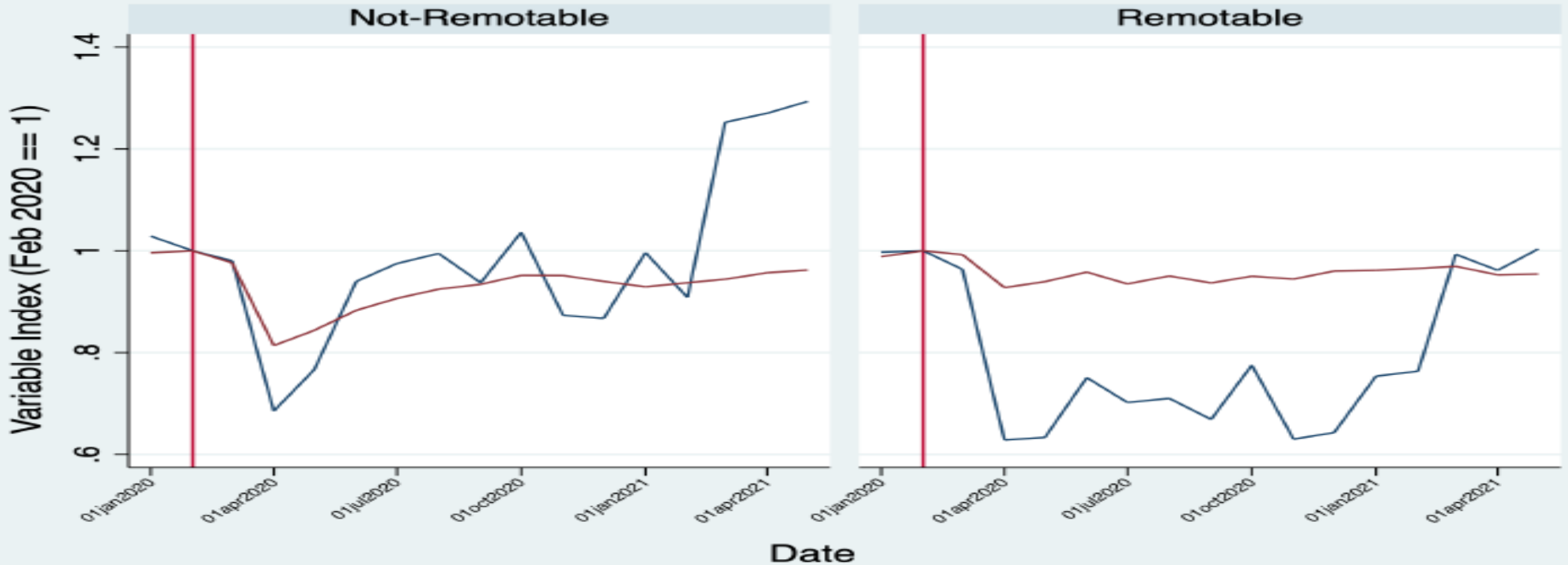
Emmanuel and Harrington: Going Remote

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



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

Zoom Means More Competition for Global Talent



Image by perzon seo

Everything Depends on the Medical Response

- # 1: If the shock doesn't end quickly and if pandemics reappear, then the costs for cities and all the economy are enormous.
- # 2: If this ends quickly, 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.

Data from JLL

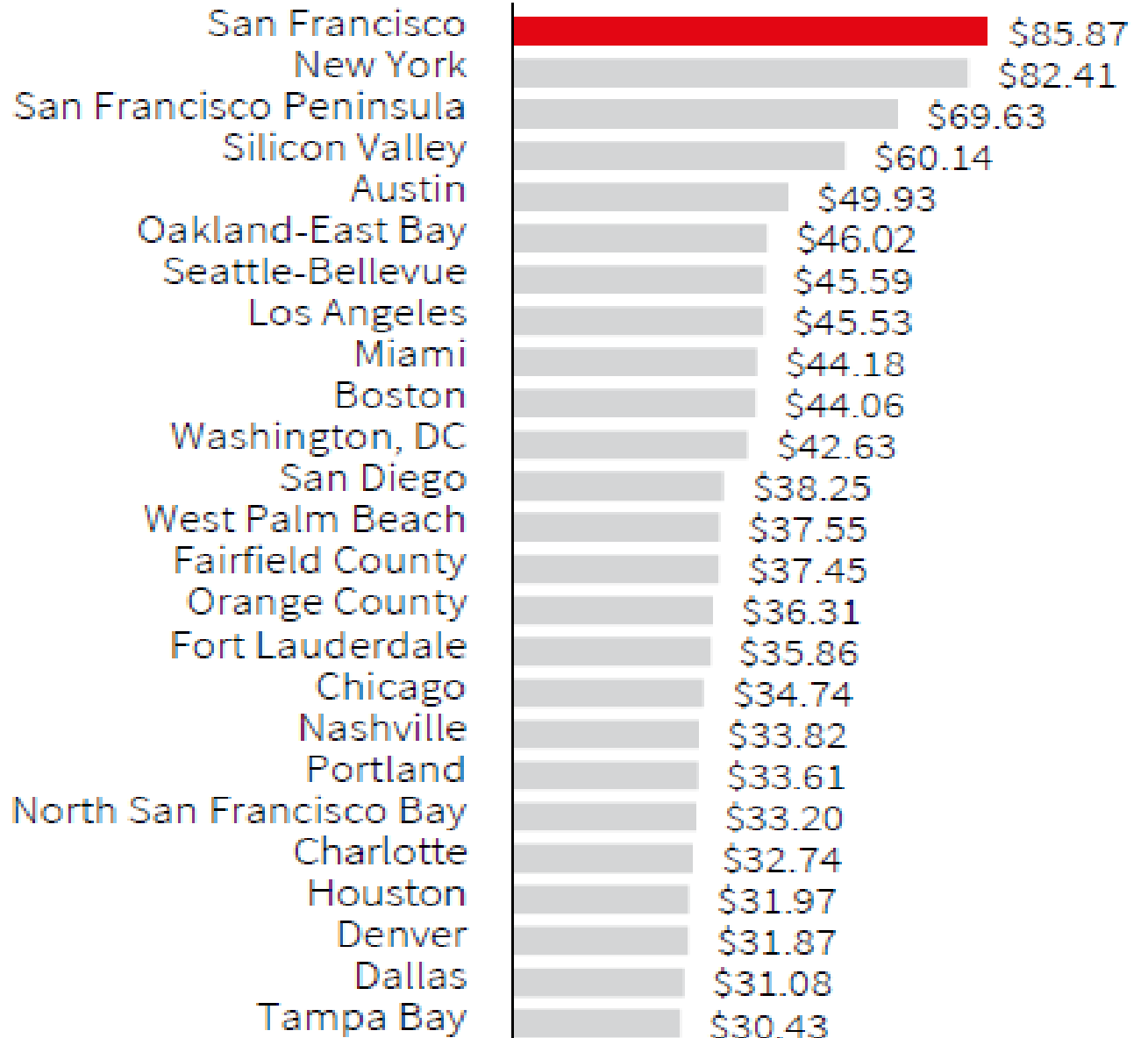
These high end markets are unlikely to see large scale vacancies, even with substantial price falls

The margin of error between current price and operating cost is too large.

Some Class C may convert to residential

Marketed rents

\$ per square foot



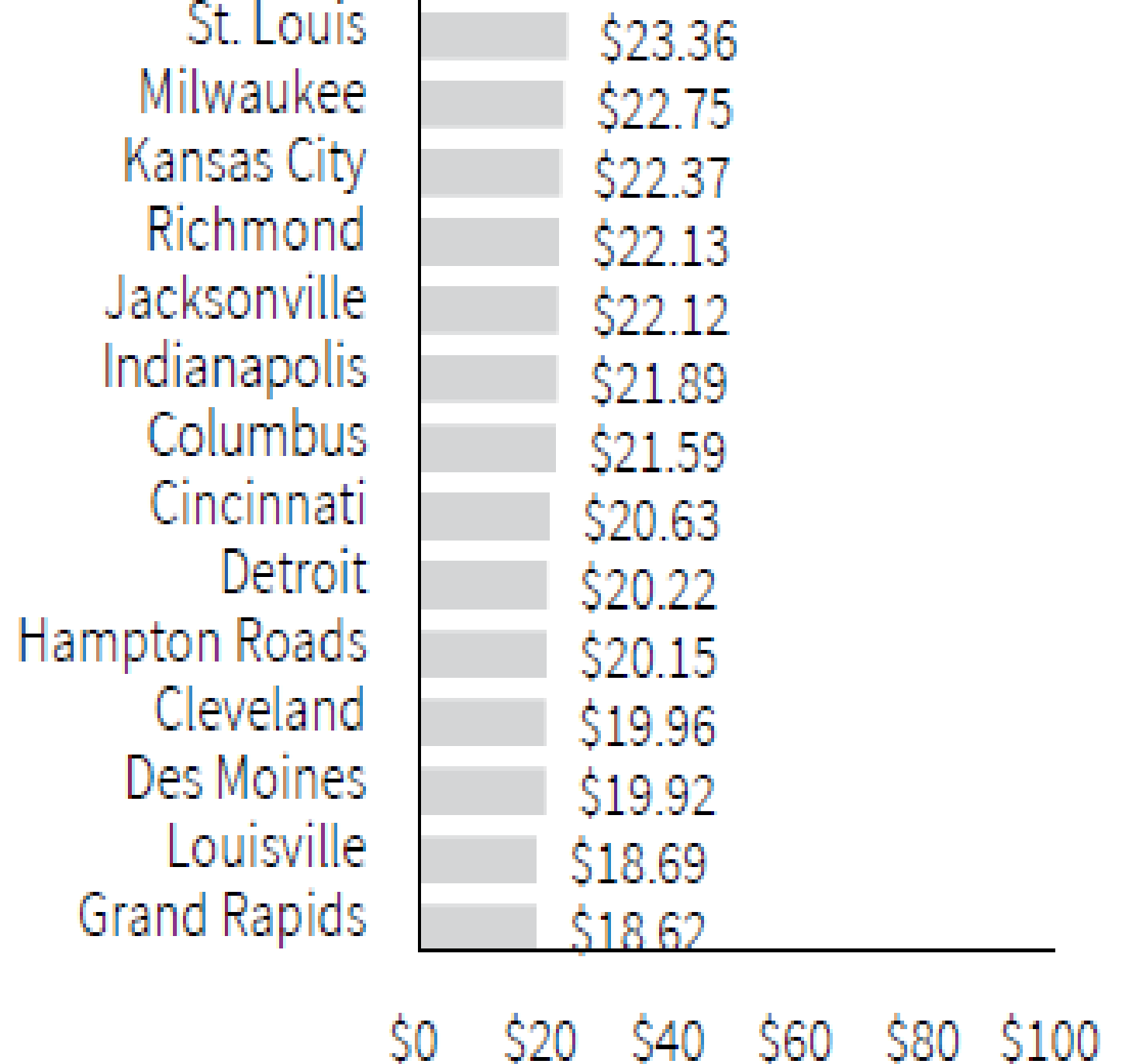
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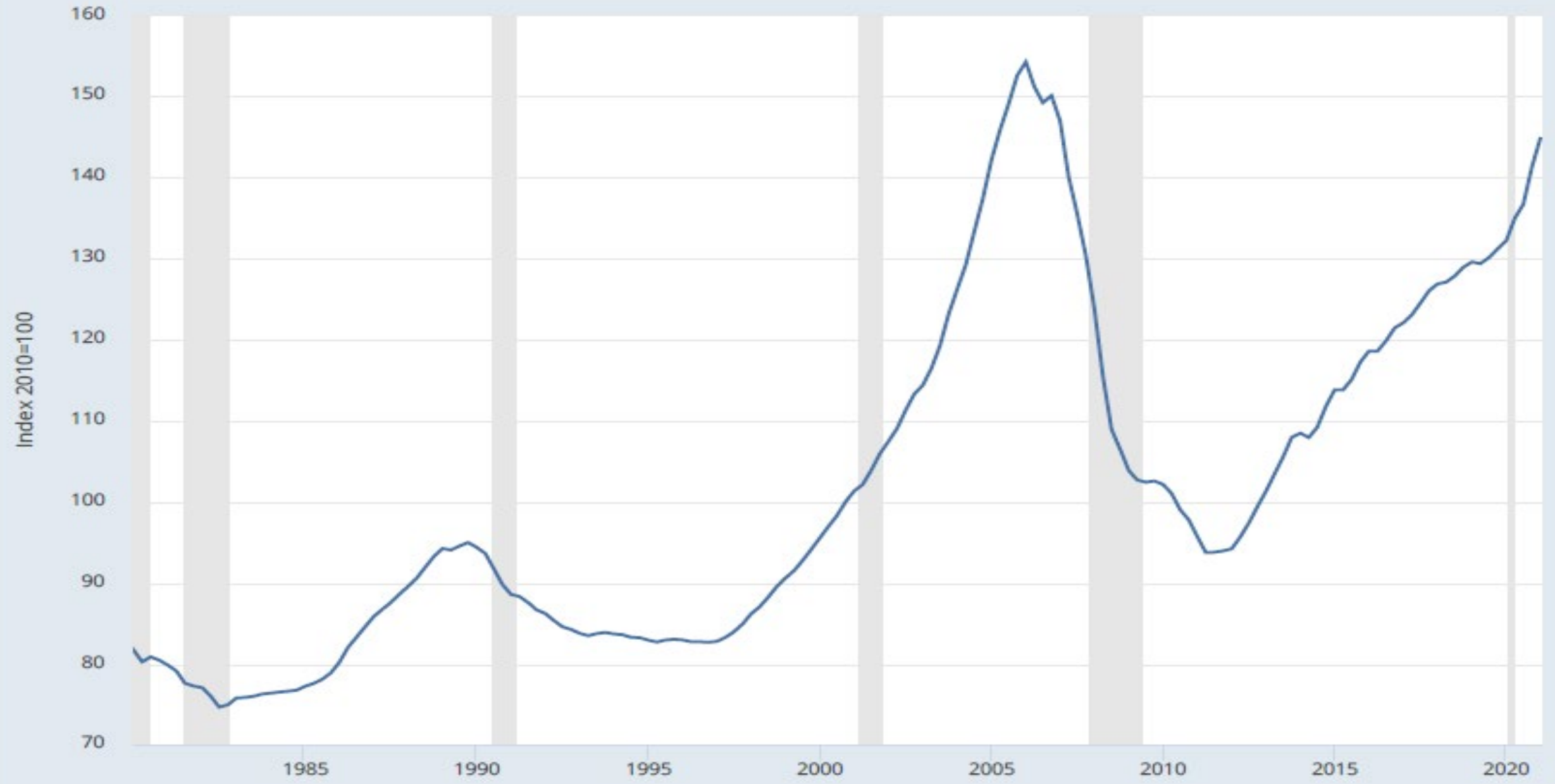
These lower end markets have a much smaller margin of error.

And less demand for residential conversion.

This should mean that vacancies are far more plausible.

That will create negative local spillovers.







Shaded areas indicate U.S. recessions.

Sources: Census; HUD

fred.stlouisfed.org