

The Urban Triad and Infrastructure



The Economic Magic of Human Interaction by חדוה שנדרוביץ

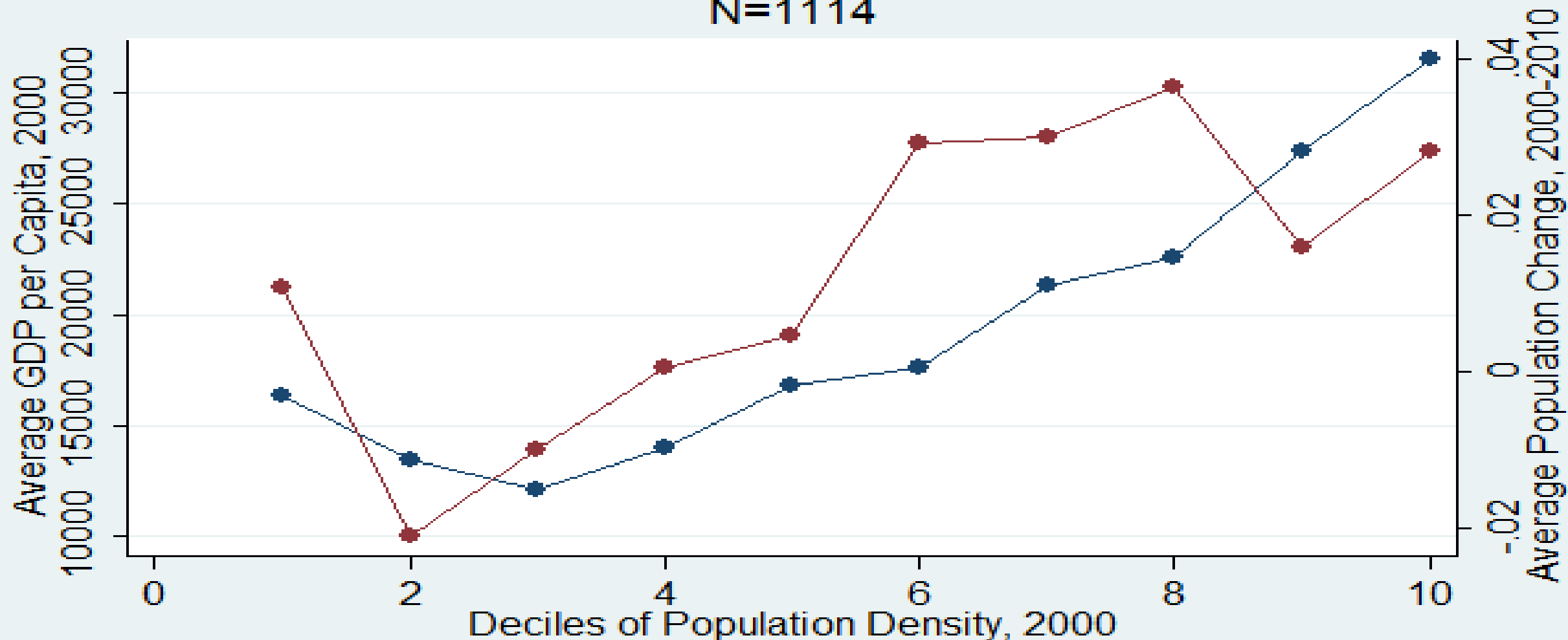


Government battling the Demons of Density

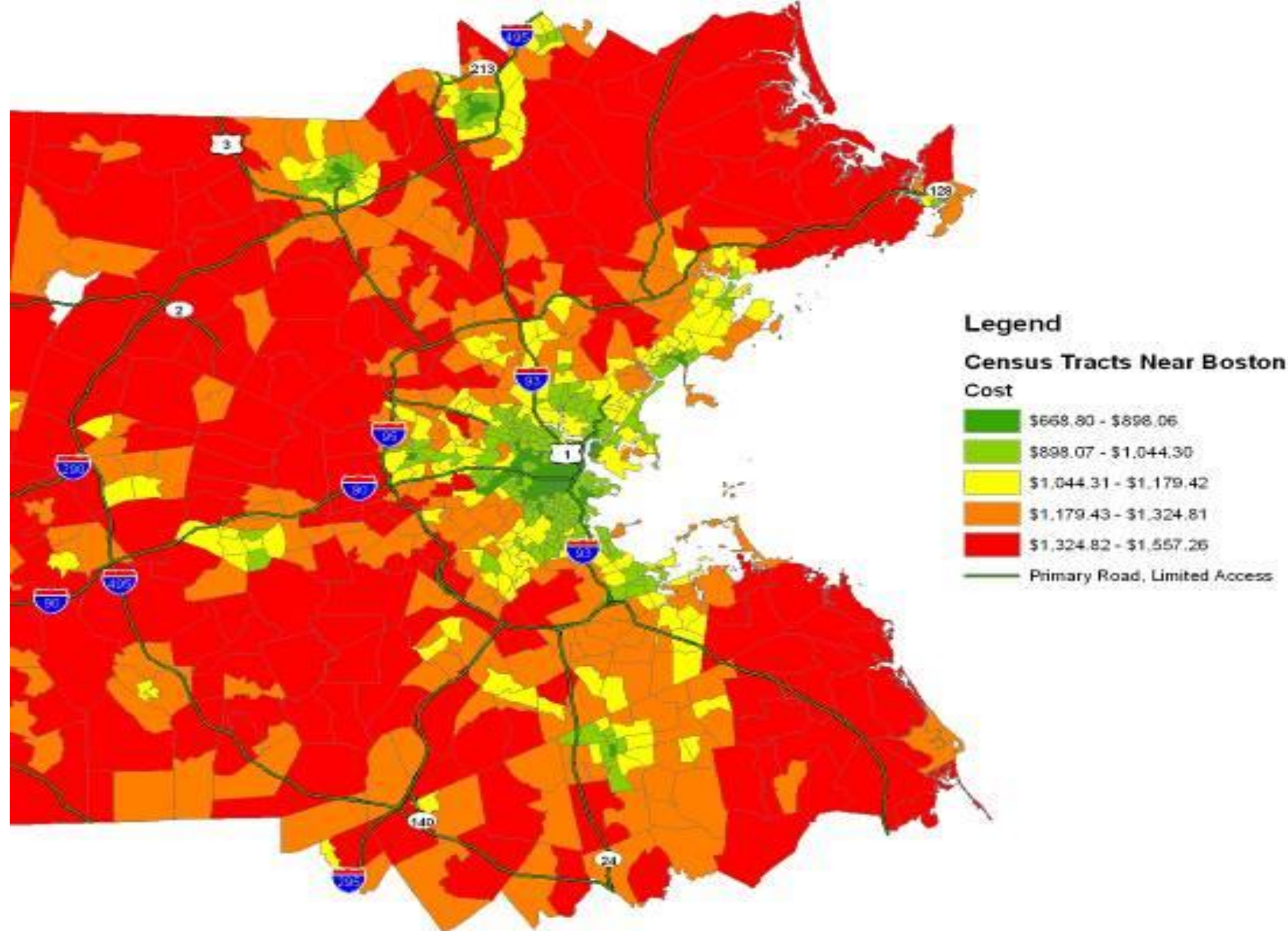


The Physical City by rulto

EUROPE, NUTS3 N=1114



Source: Eurostat





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.

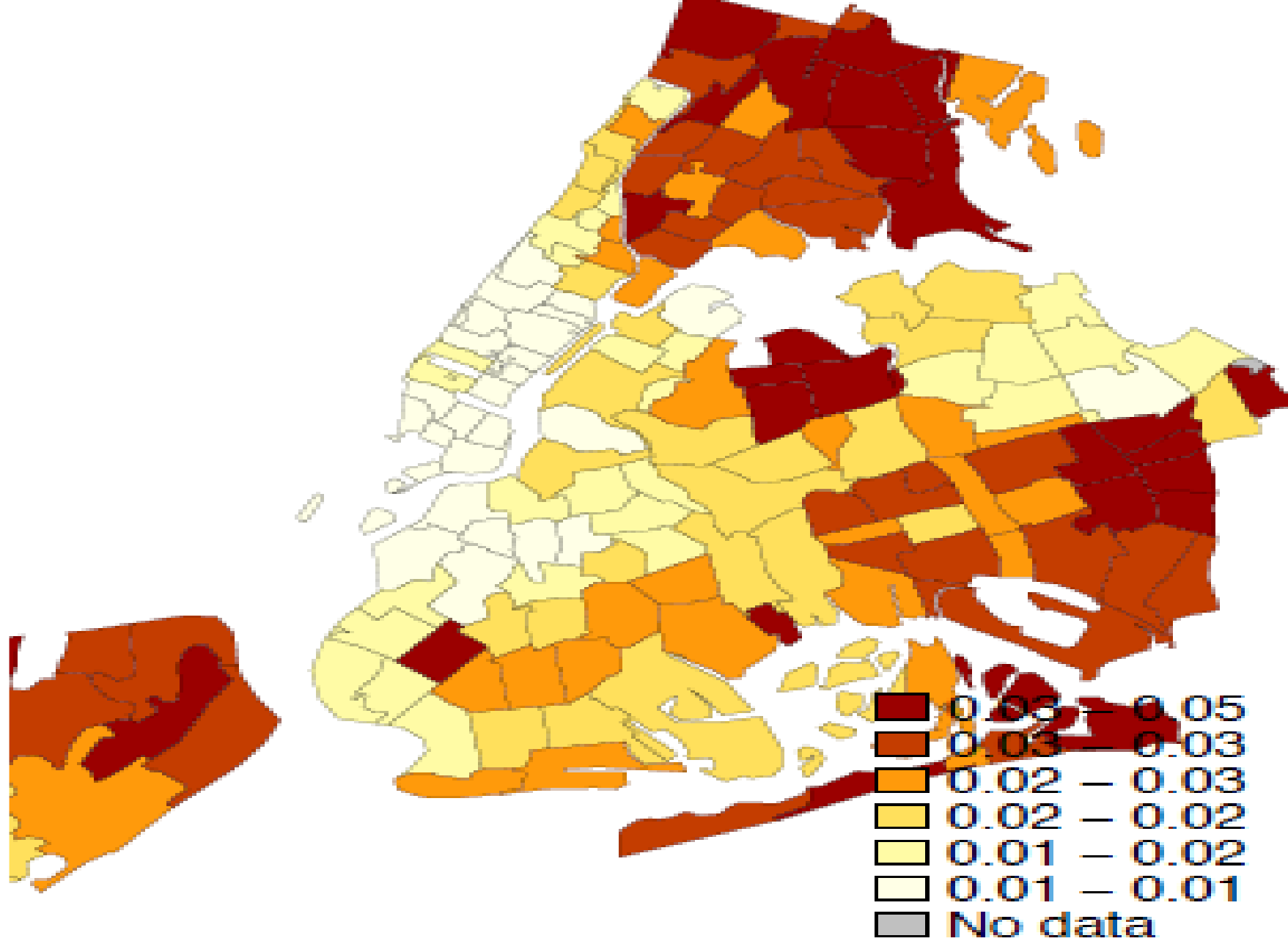


New York City's Department of Health shows the timeline of the city's mortality rate, which sharply dropped with the provision of clean water in the nineteenth century.

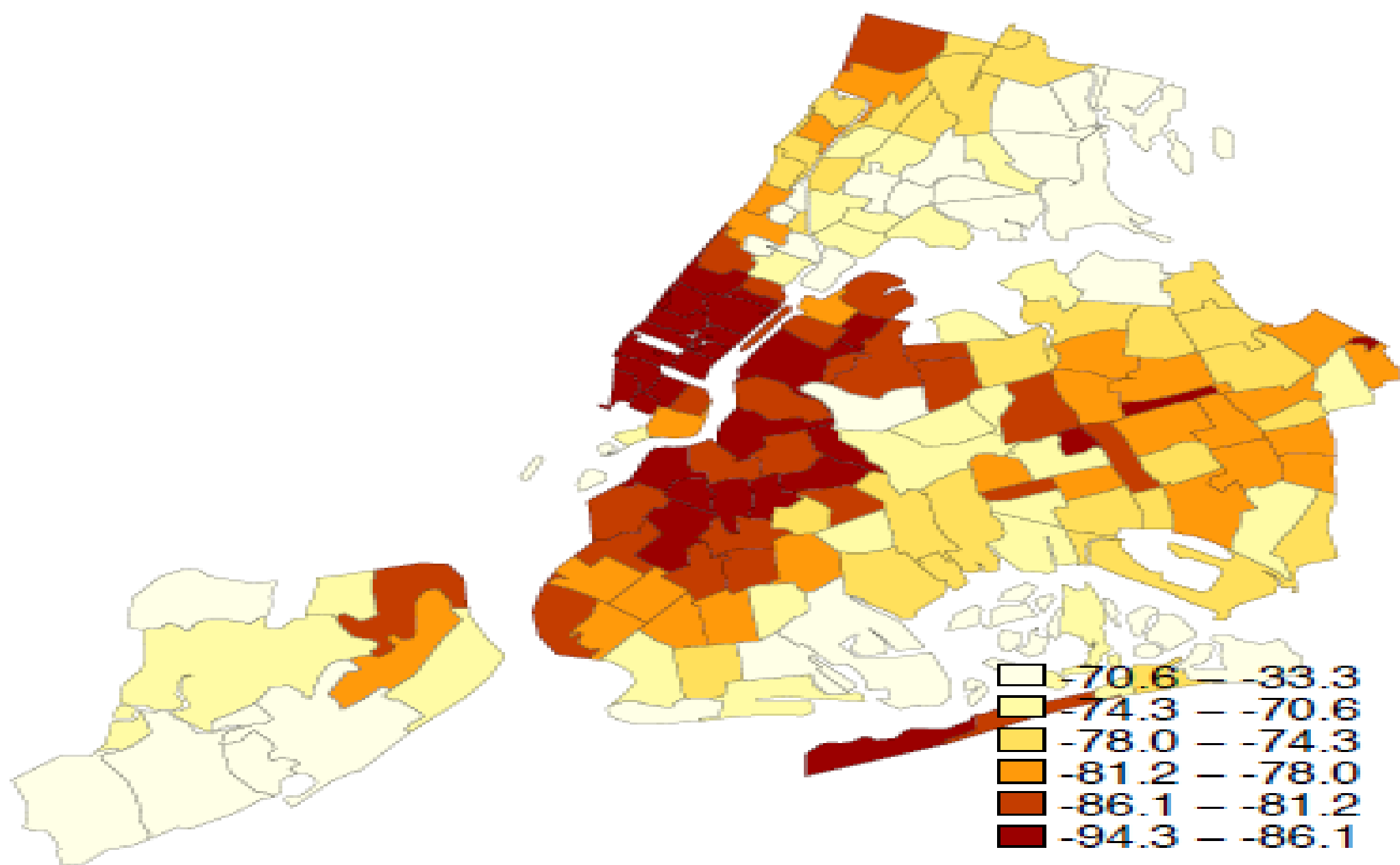
New York City Department of Health and Mental Hygiene

Incentives and Institutions: Singapore





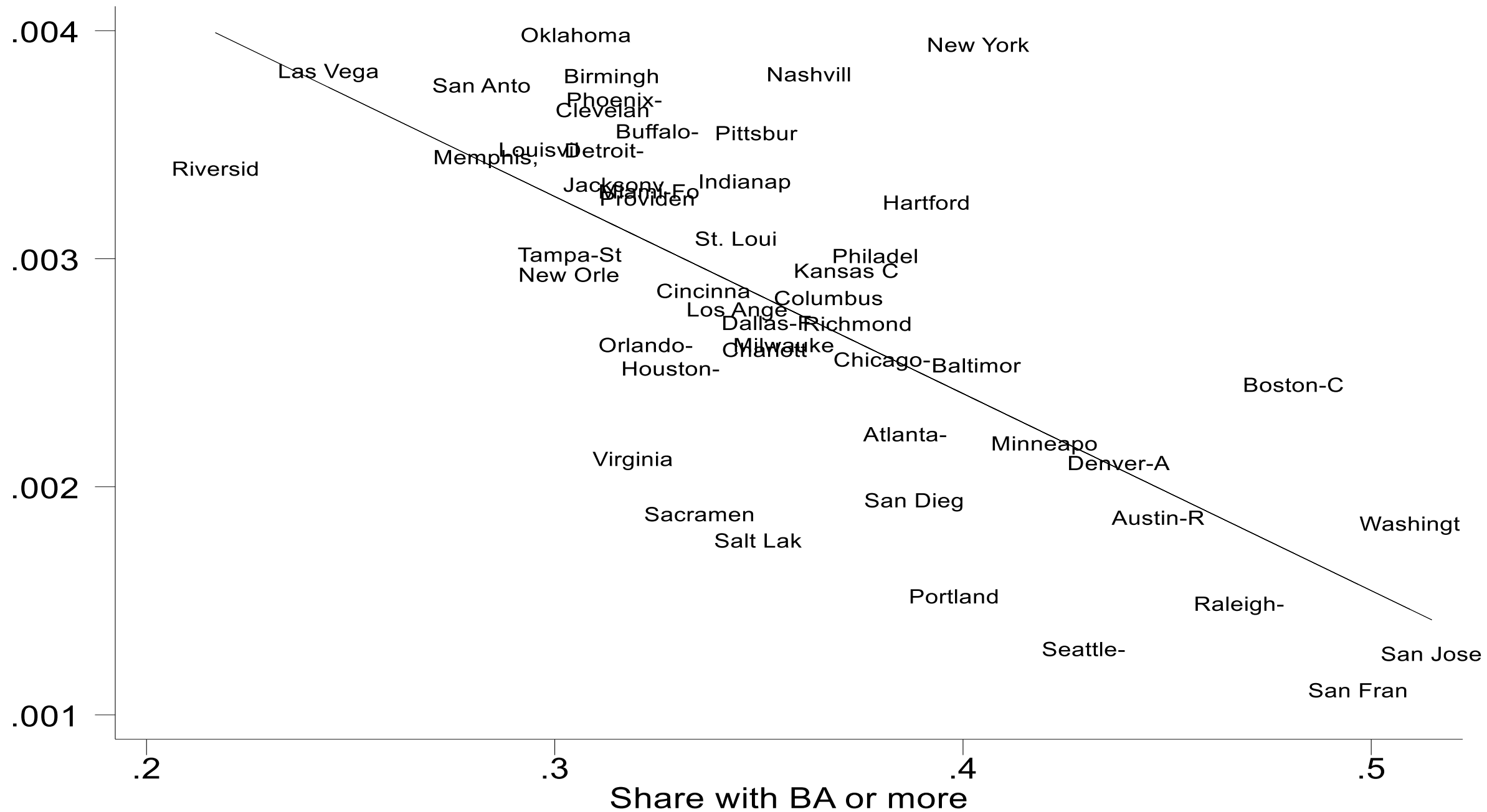
(b) Cases per Person



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

Total Death Rate COVID-19

Fitted values



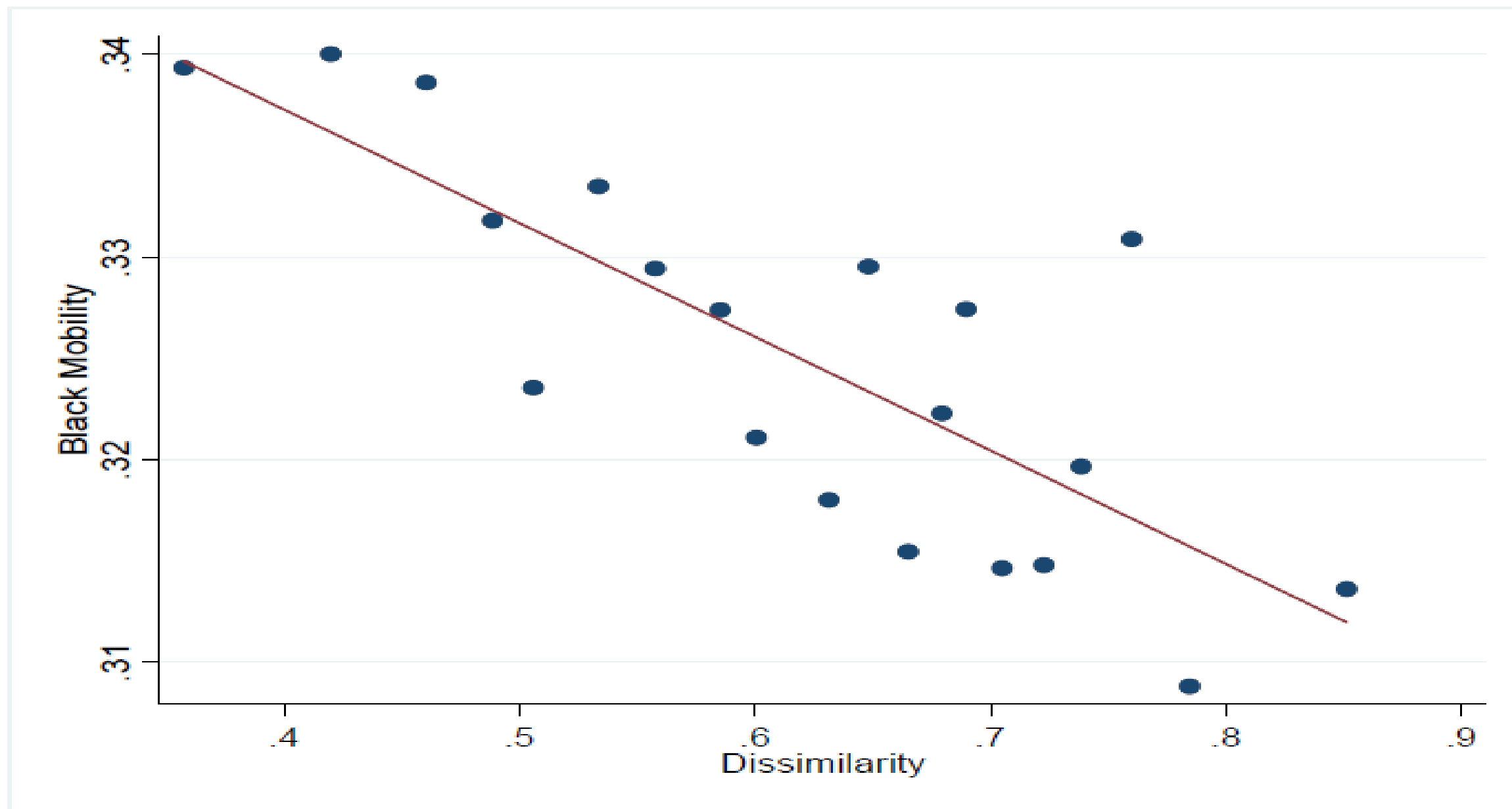
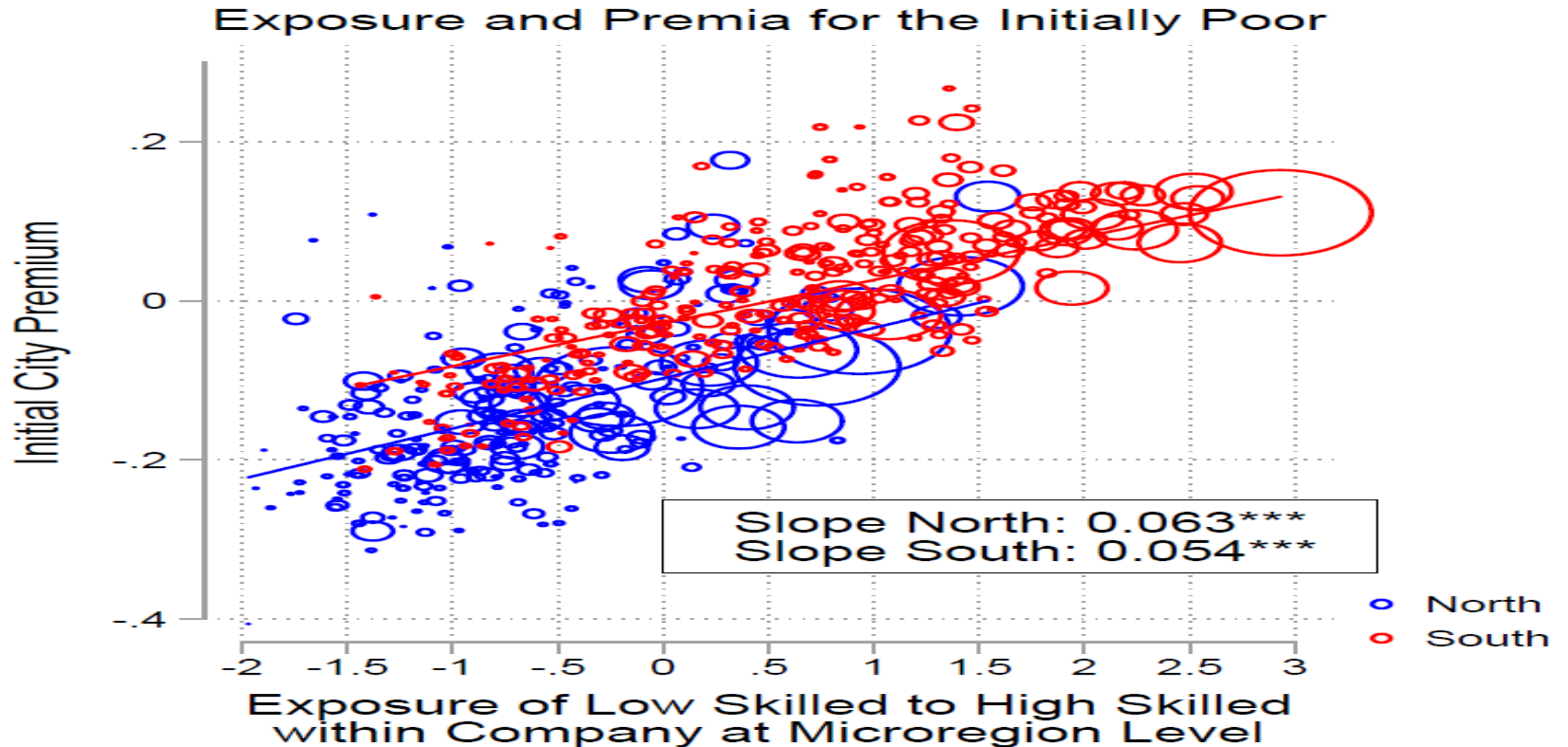
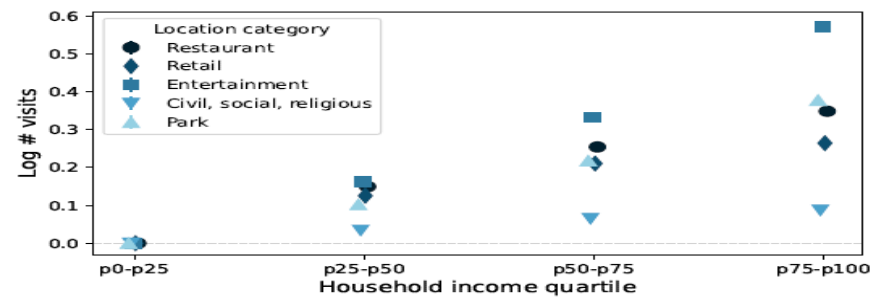


FIGURE 8. RELATIONSHIP BETWEEN SEGREGATION AND BLACK MOBILITY

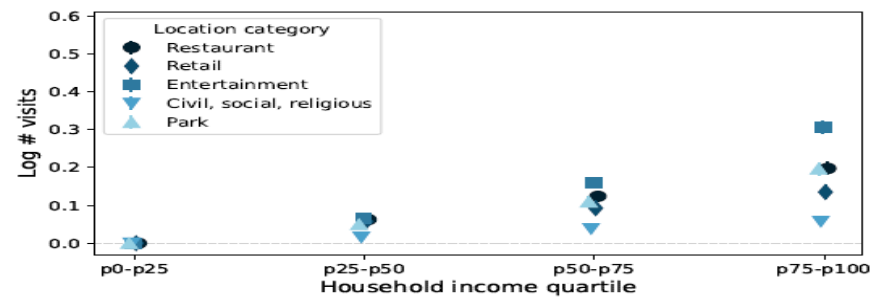
Integration and Upward Mobility in Brazil



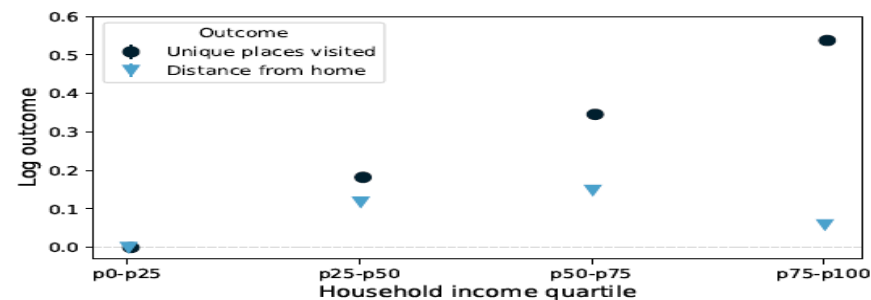
(a) Visits to amenities (City FEs)



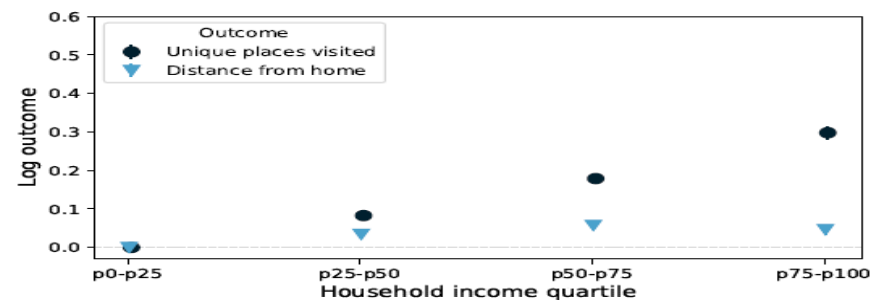
(b) Visits to amenities (Tract FEs)



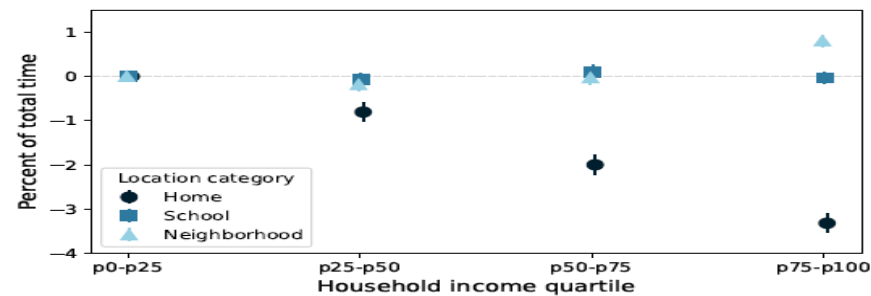
(c) Roaming ranges (City FEs)



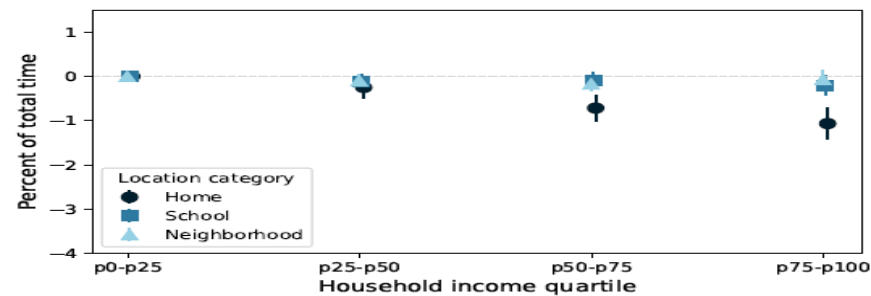
(d) Roaming ranges (Tract FEs)



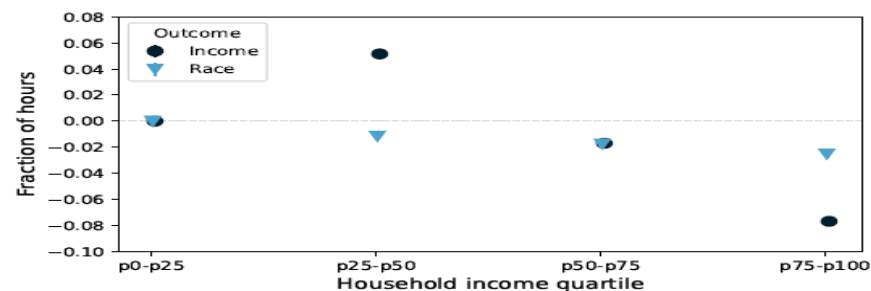
(e) Time at primary locations (City FEs)



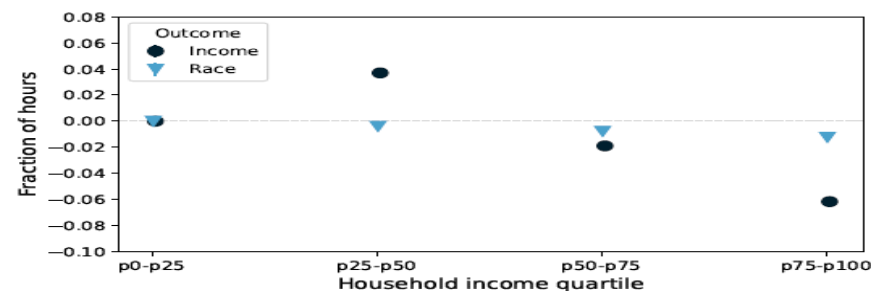
(f) Time at primary locations (Tract FEs)



(g) Exposure to diversity (City FEs)

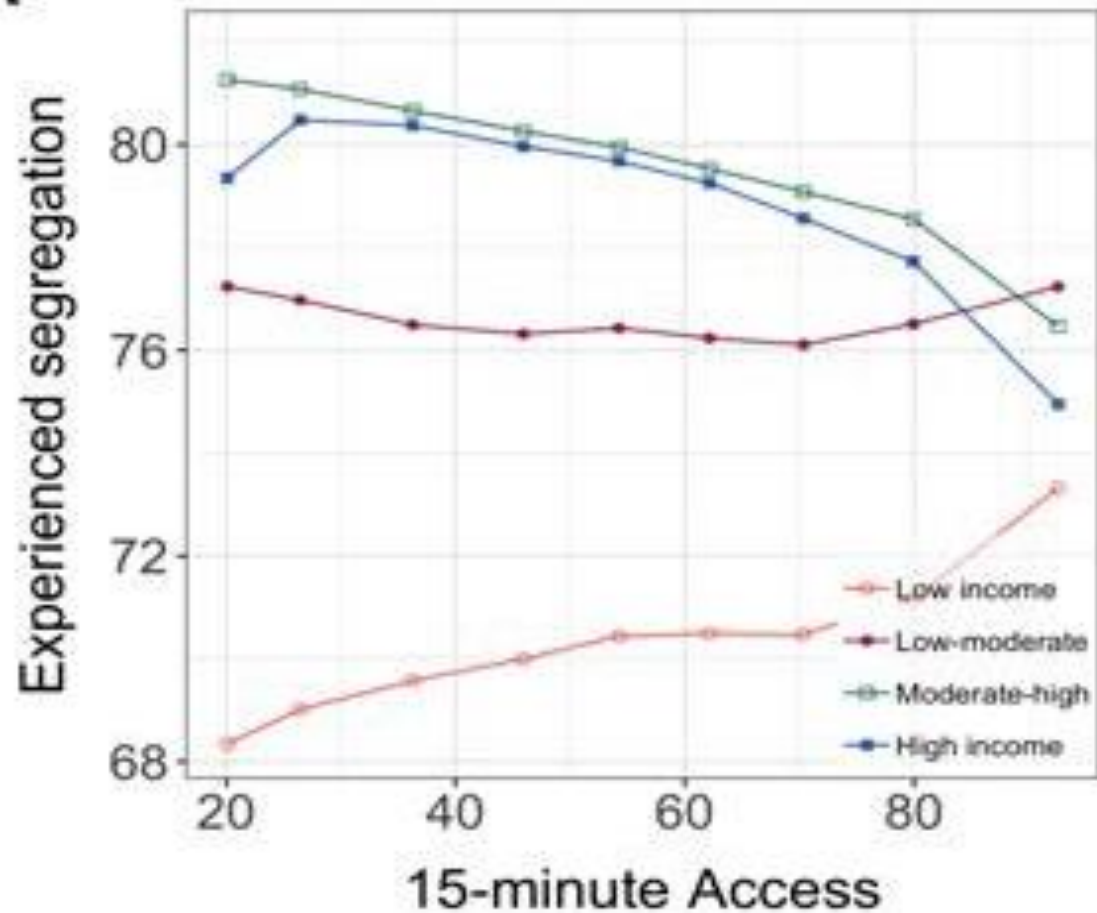


(h) Exposure to diversity (Tract FEs)

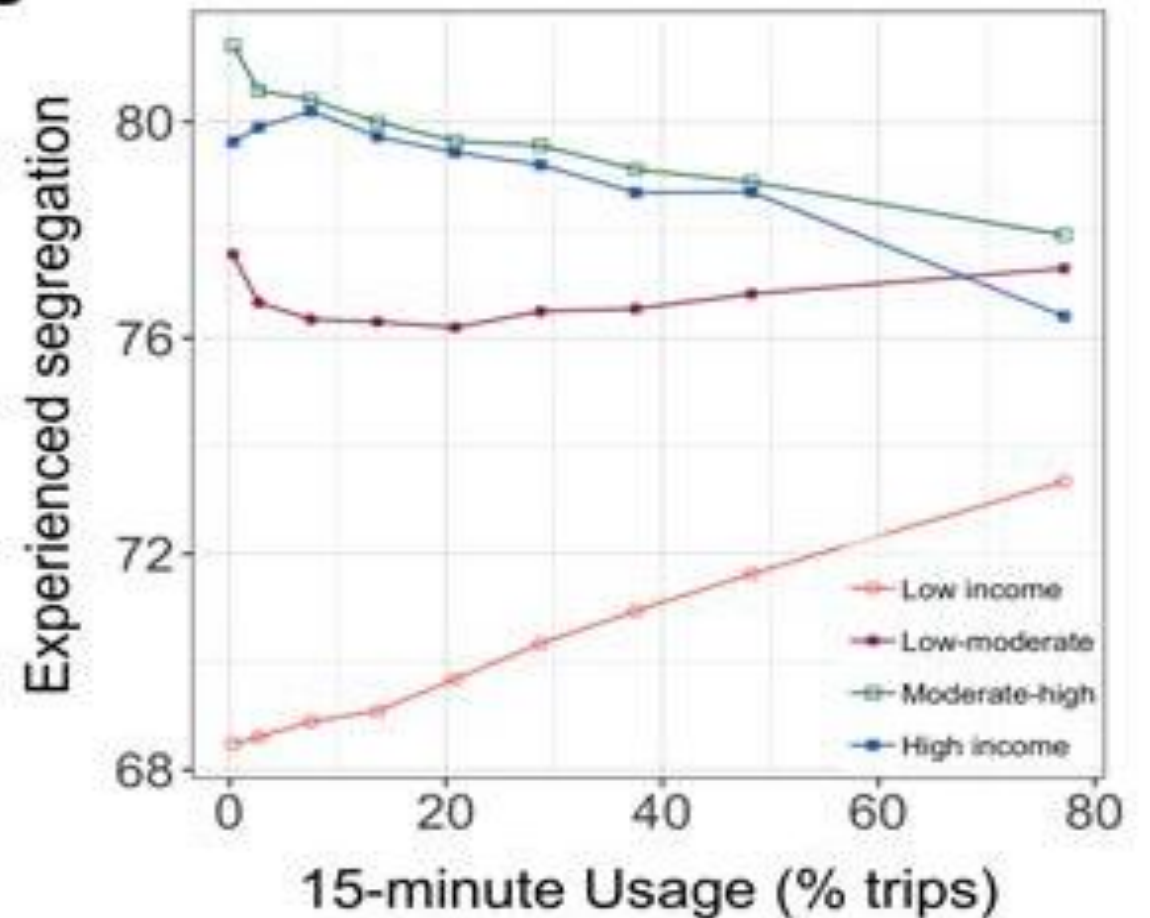


The Downside of 15-Minute Cities (Abbiasov, Ratti, and many others)

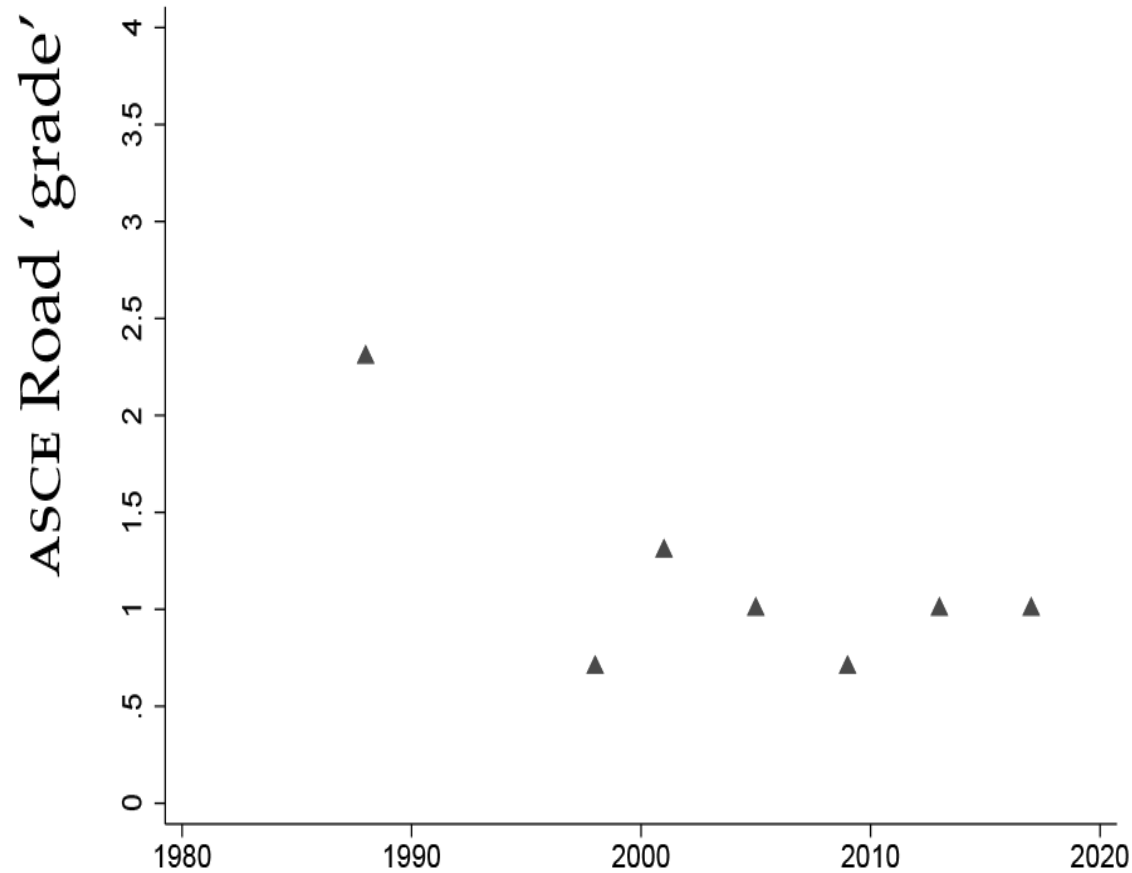
A



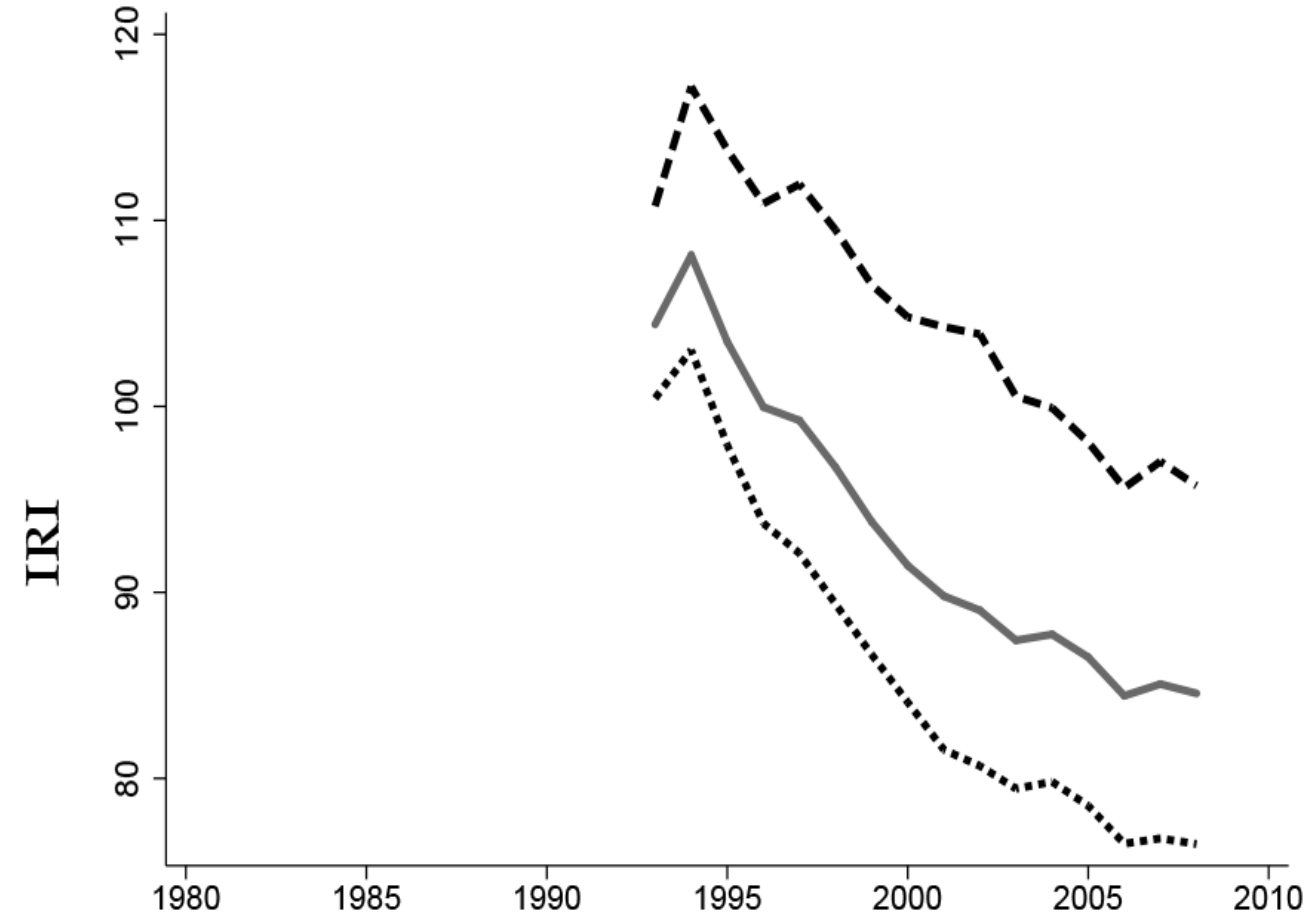
B



Highway Roughness in the US and Civil Engineers' Grades (Duranton, Nagbal and Turner, 2021)



(f) ASCE Highway Grades



(d) International Roughness Index

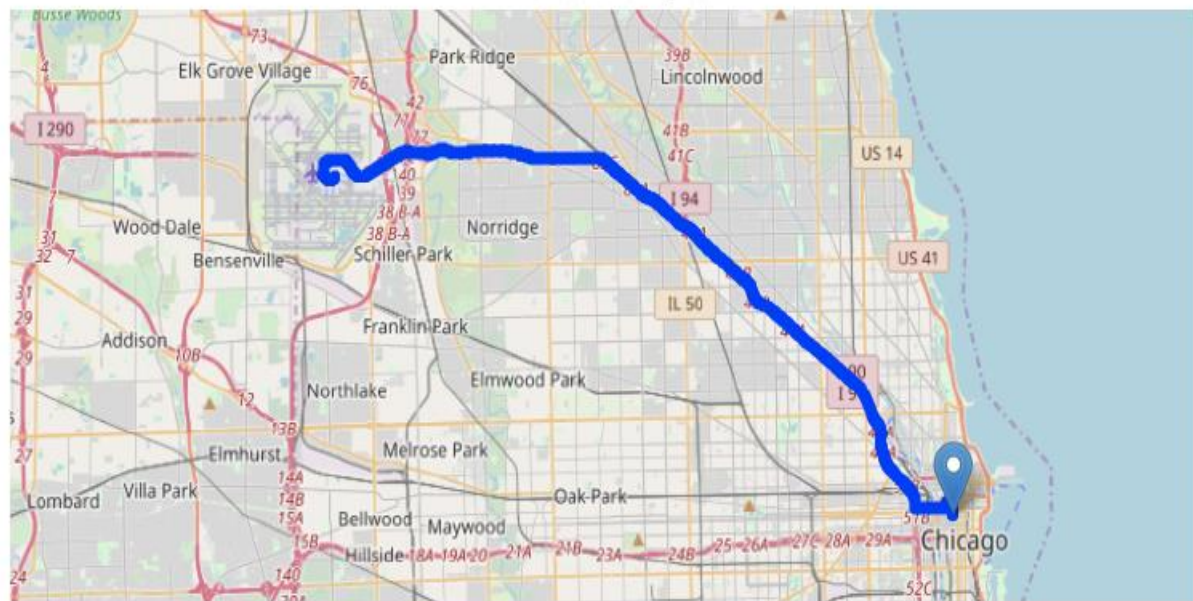
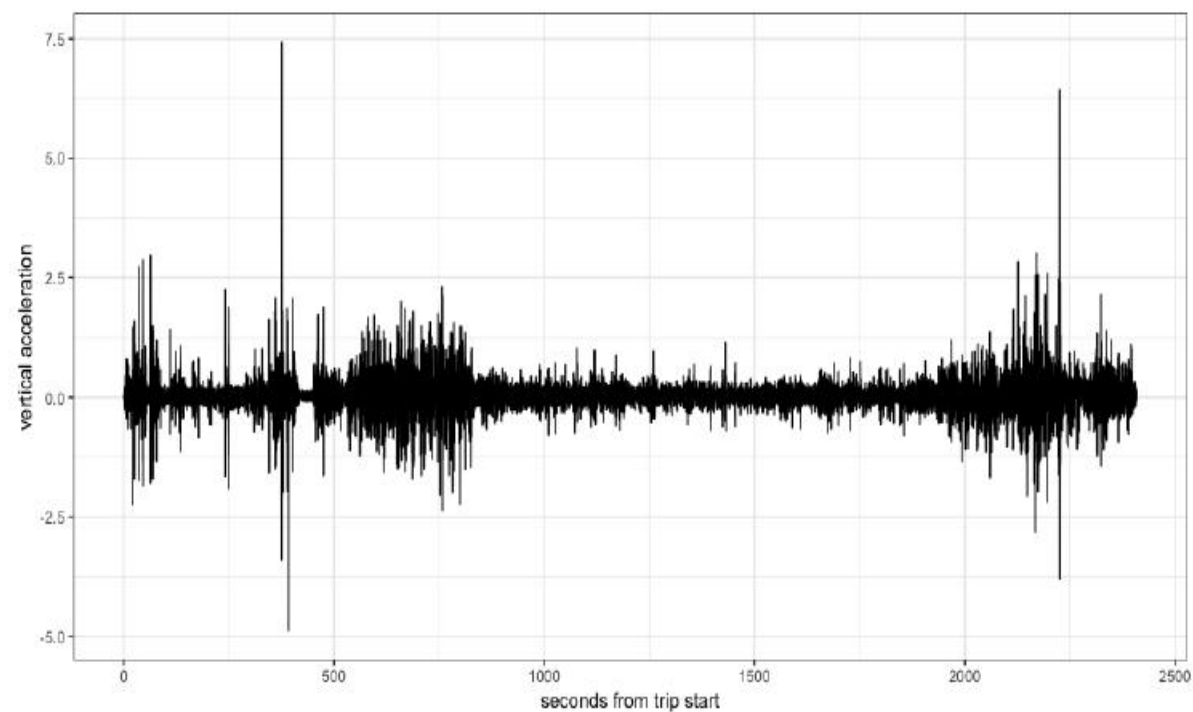


Figure 1: Uber Data Has Signal: Different Types of Roads

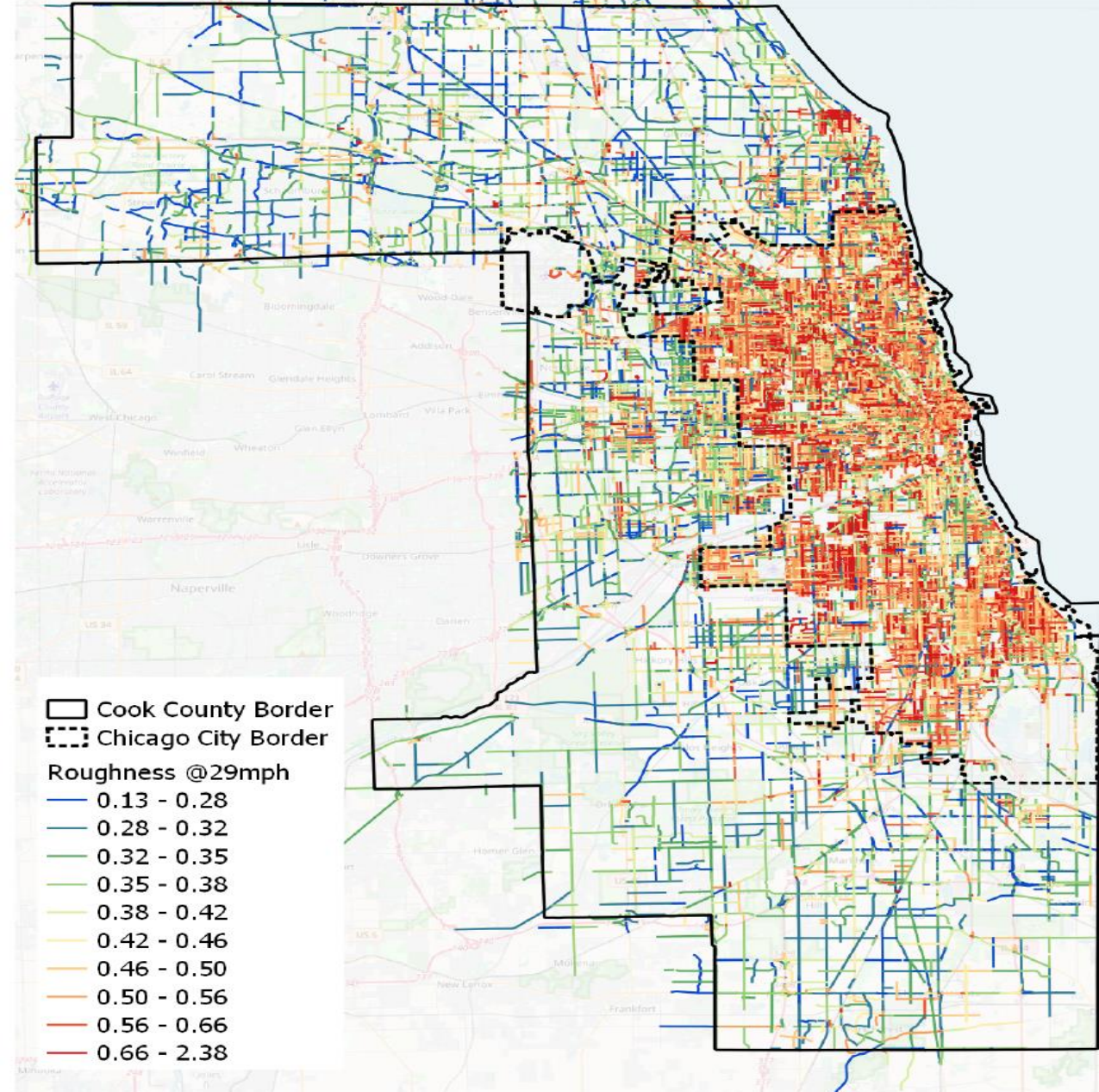
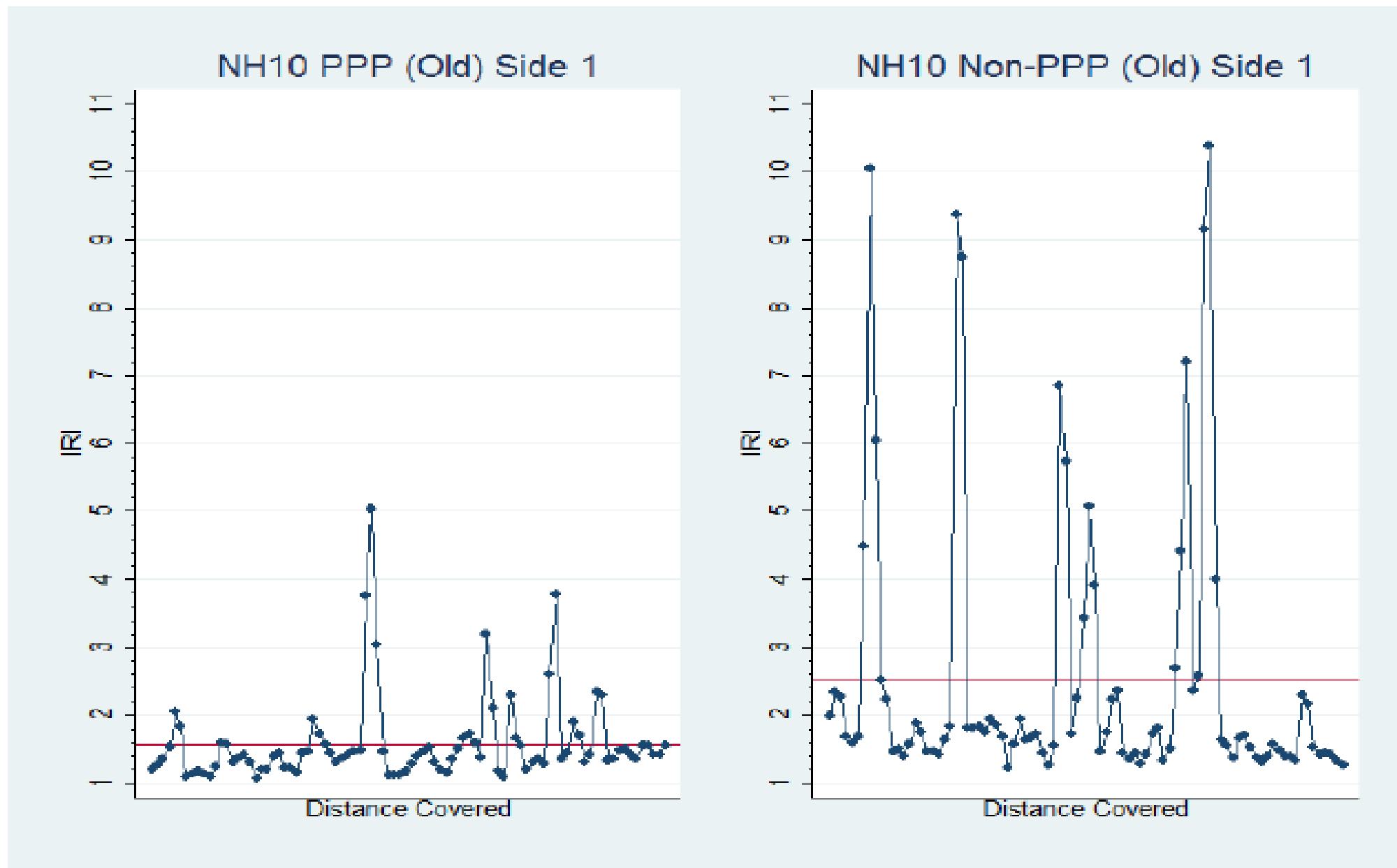


Figure 3: Predicted Roughness at 29 mph in Cook County, IL

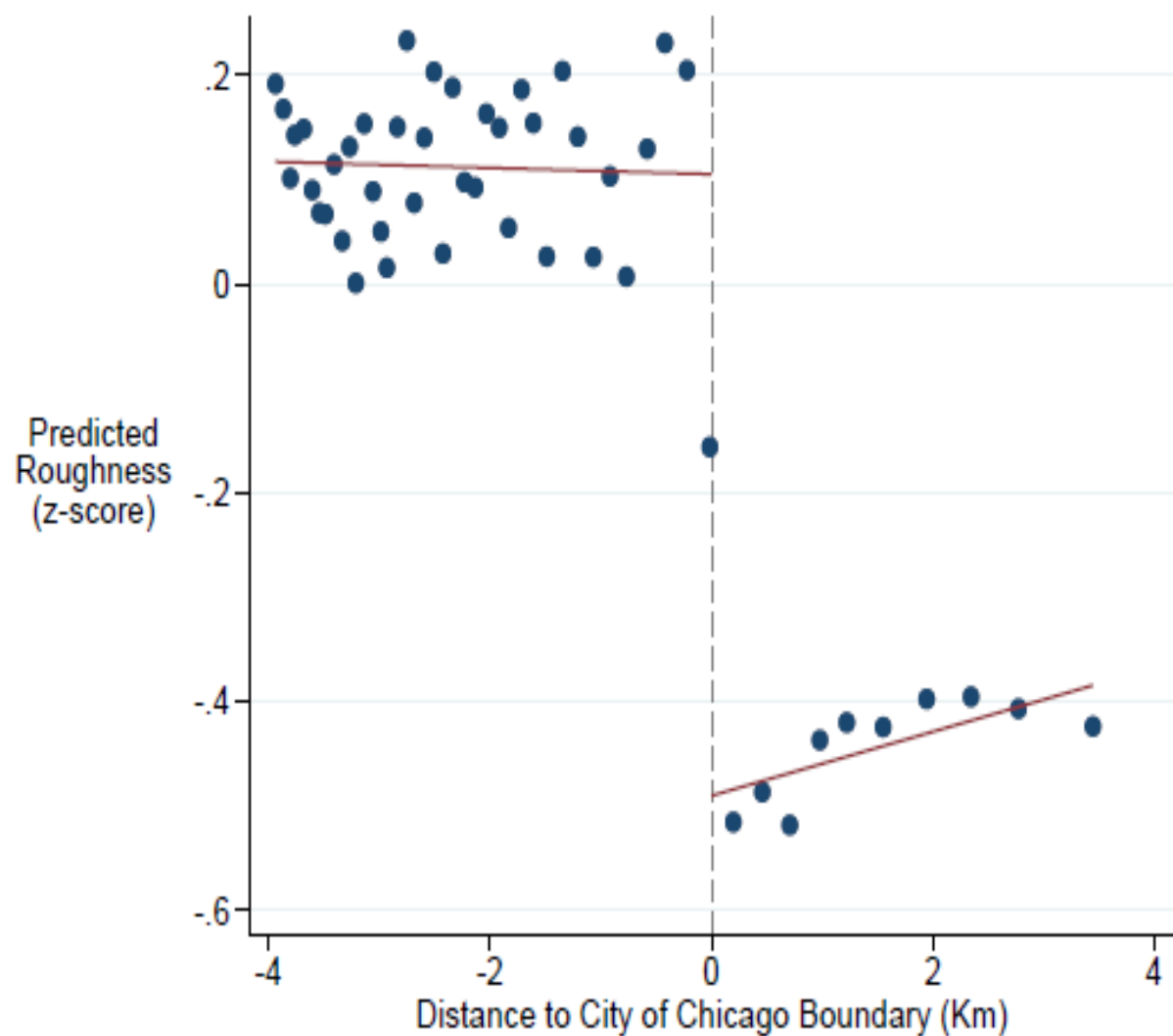
Public Private Partnerships Vs. Traditional Contracts for Highways
Comparison of Cost and Quality of Roads

Ram Singh[‡]

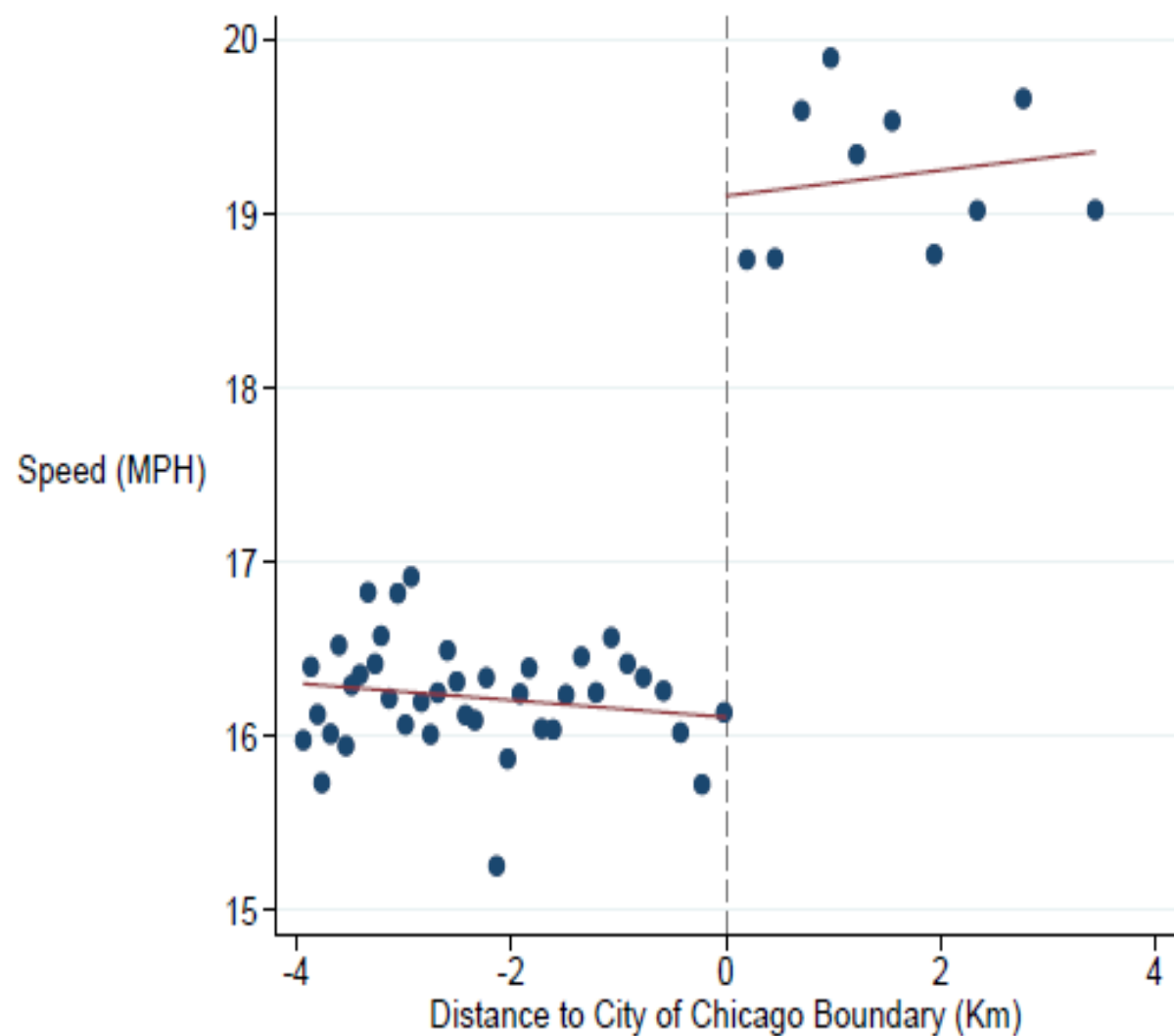
Technique We test the hypothesis using an engineering measure of road quality. The measure used is called International Roughness Index (IRI). It is a widely used engineering measure of the roughness and quality of roads. The index takes the vibrations experienced by a vehicle as proxy for road roughness. The roughness depends on the extent of pot-holes, road-profile (bumps) and the unraveling of bitumen, which, in turn, depend on the quality of construction. The literature on road engineering establishes a direct link between quality of construction and the road roughness. The greater is the roughness, the poorer is the quality.¹⁸ Roughness affects the level of wear and tear caused to the vehicles.



These plots show that the compared to PPP, the non-PPP neighbour has a significantly higher level of average roughness as well as much larger variance.

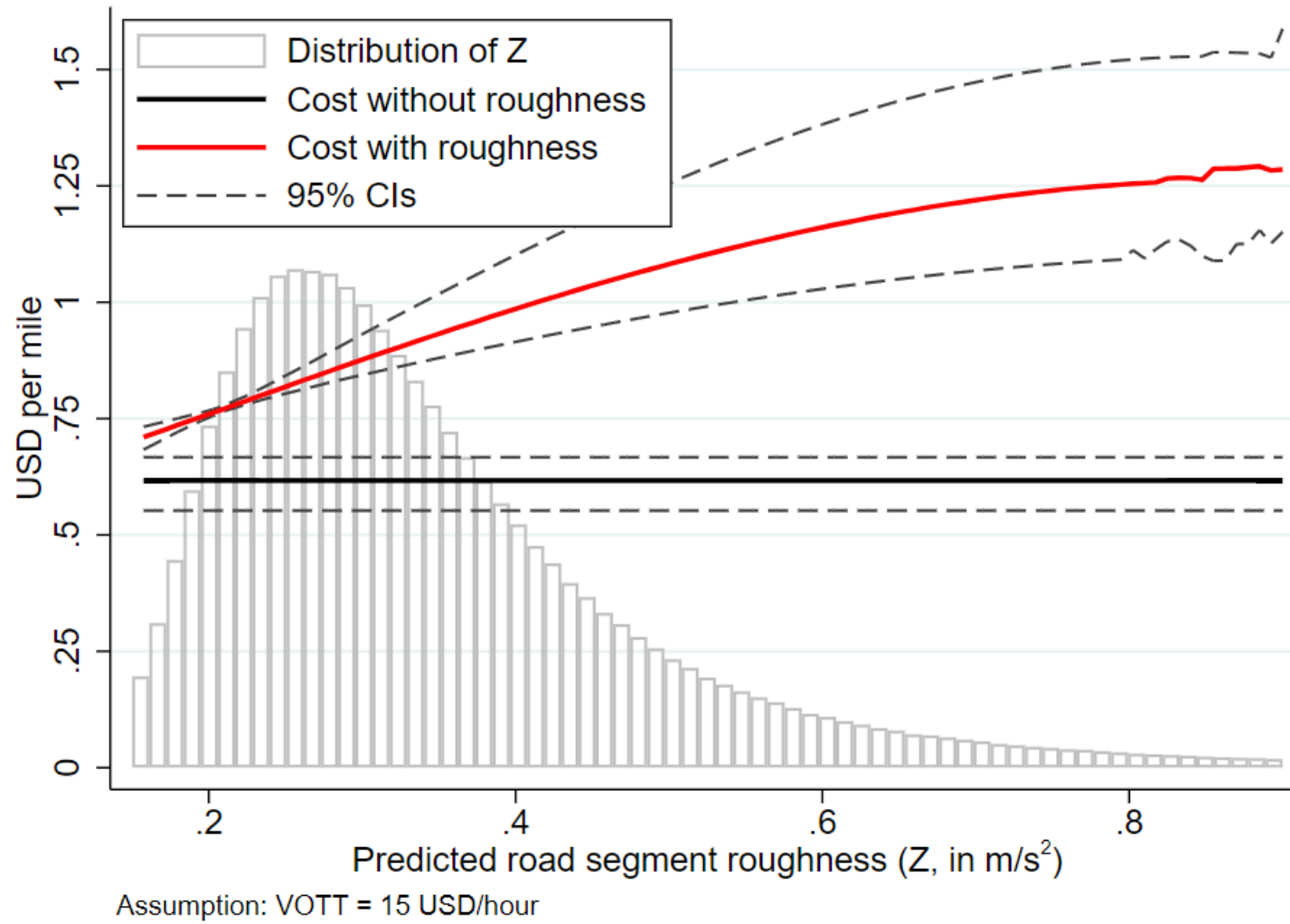


Panel (A) Predicted Roughness



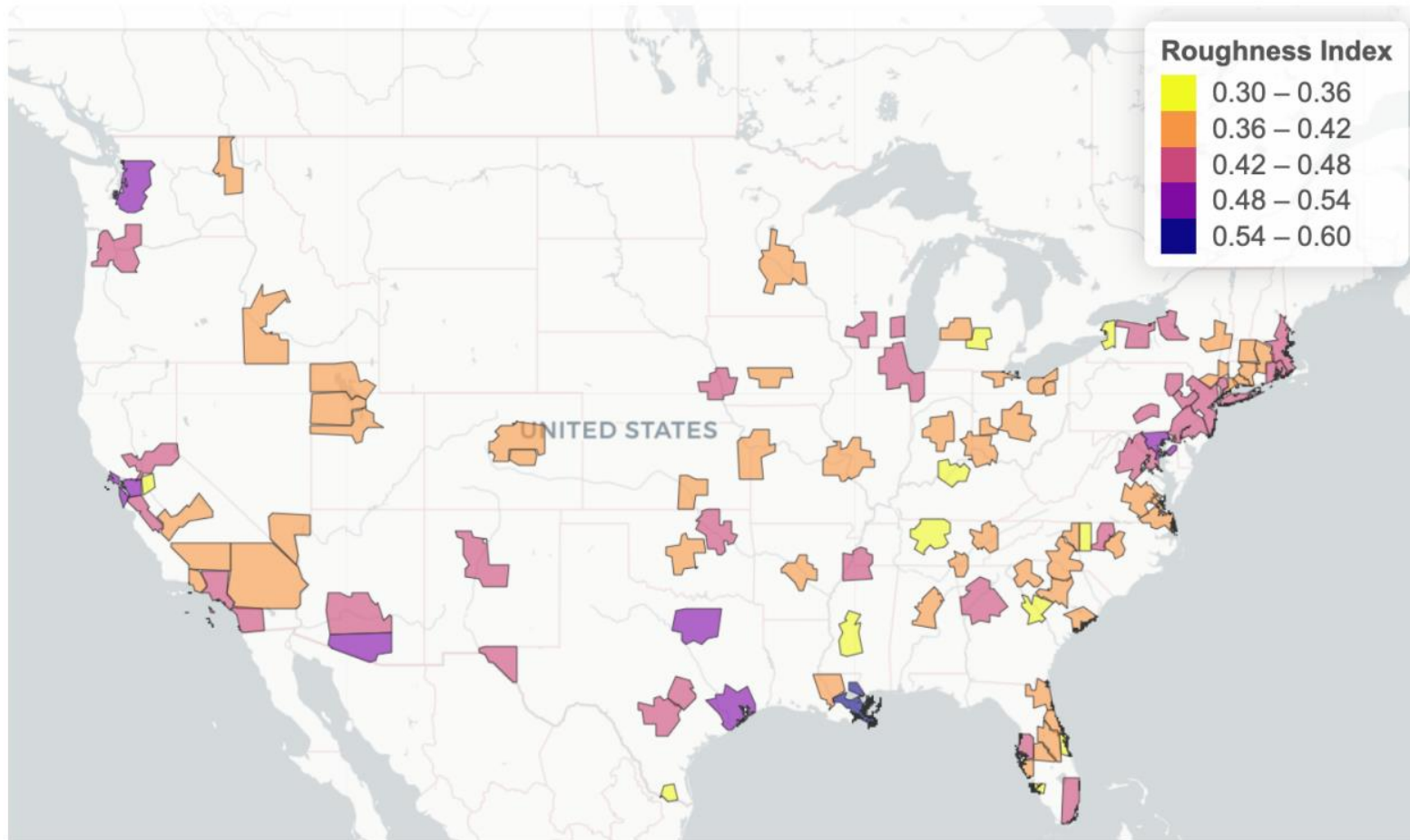
Panel (B) Speed

Figure 9: Predicted Roughness and Speed around the Chicago border

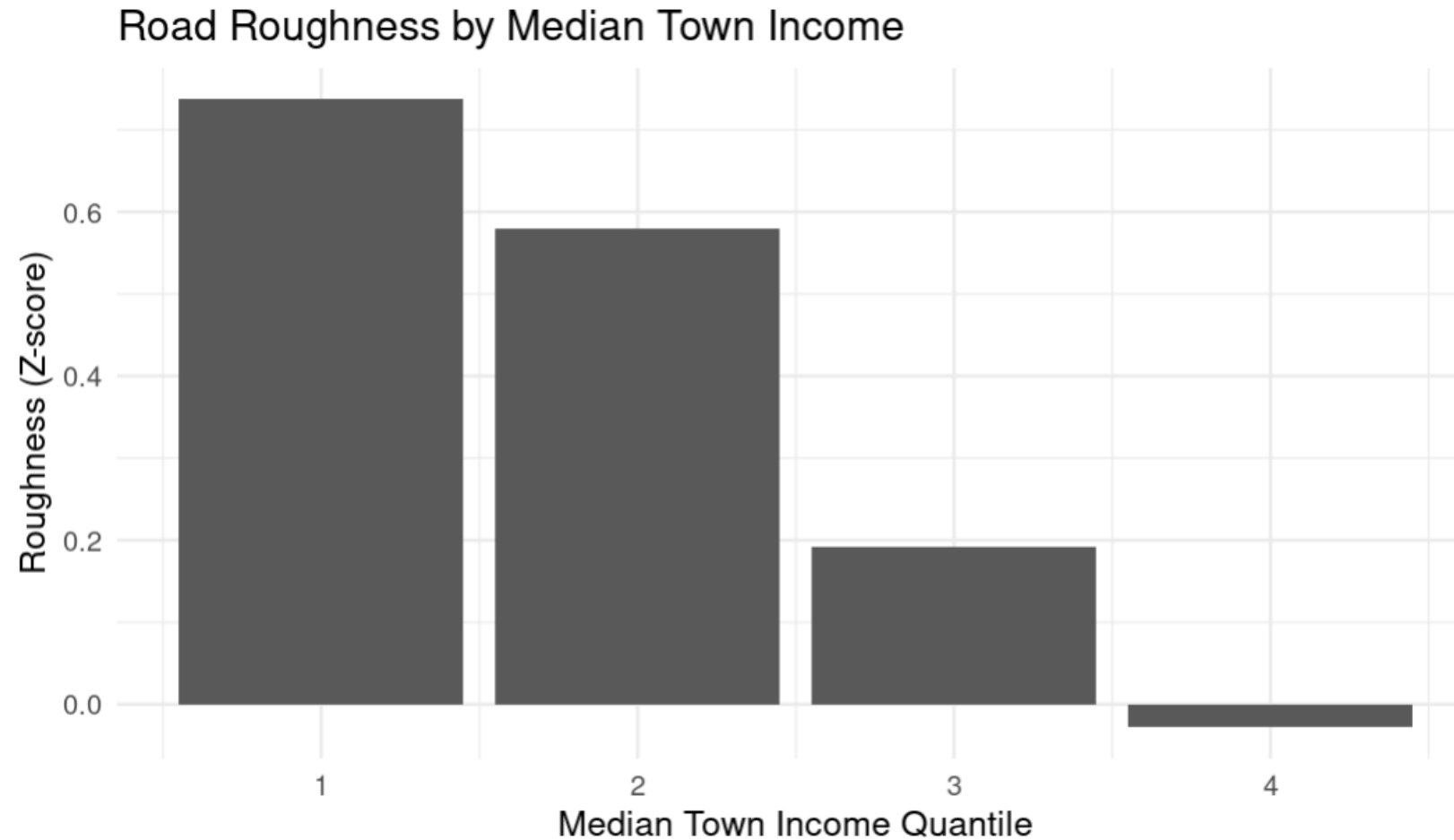


- We get a similar but slightly larger estimate using the road resurfacing data

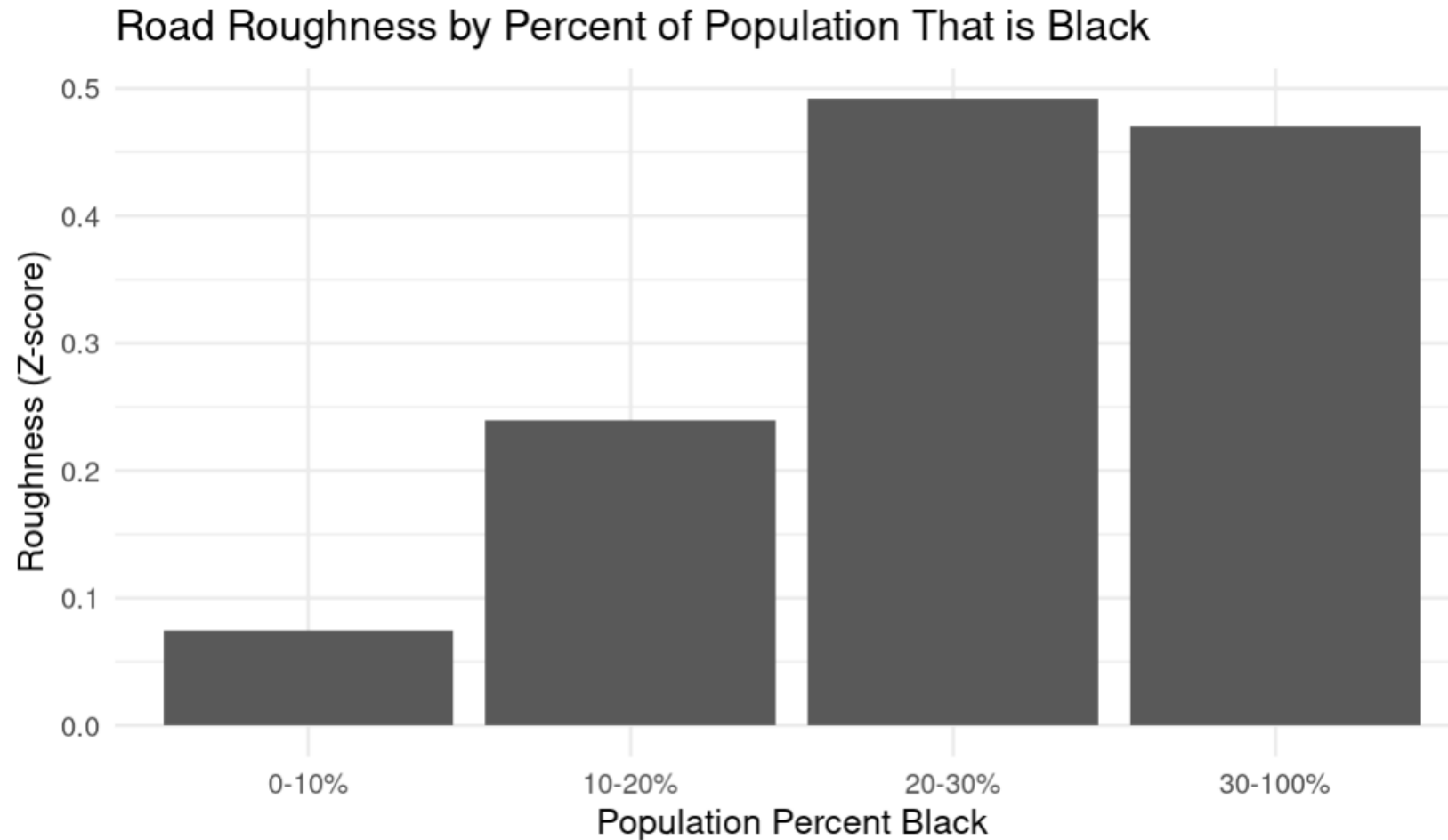
Figure C.5: Map of Road Roughness For US MSAs



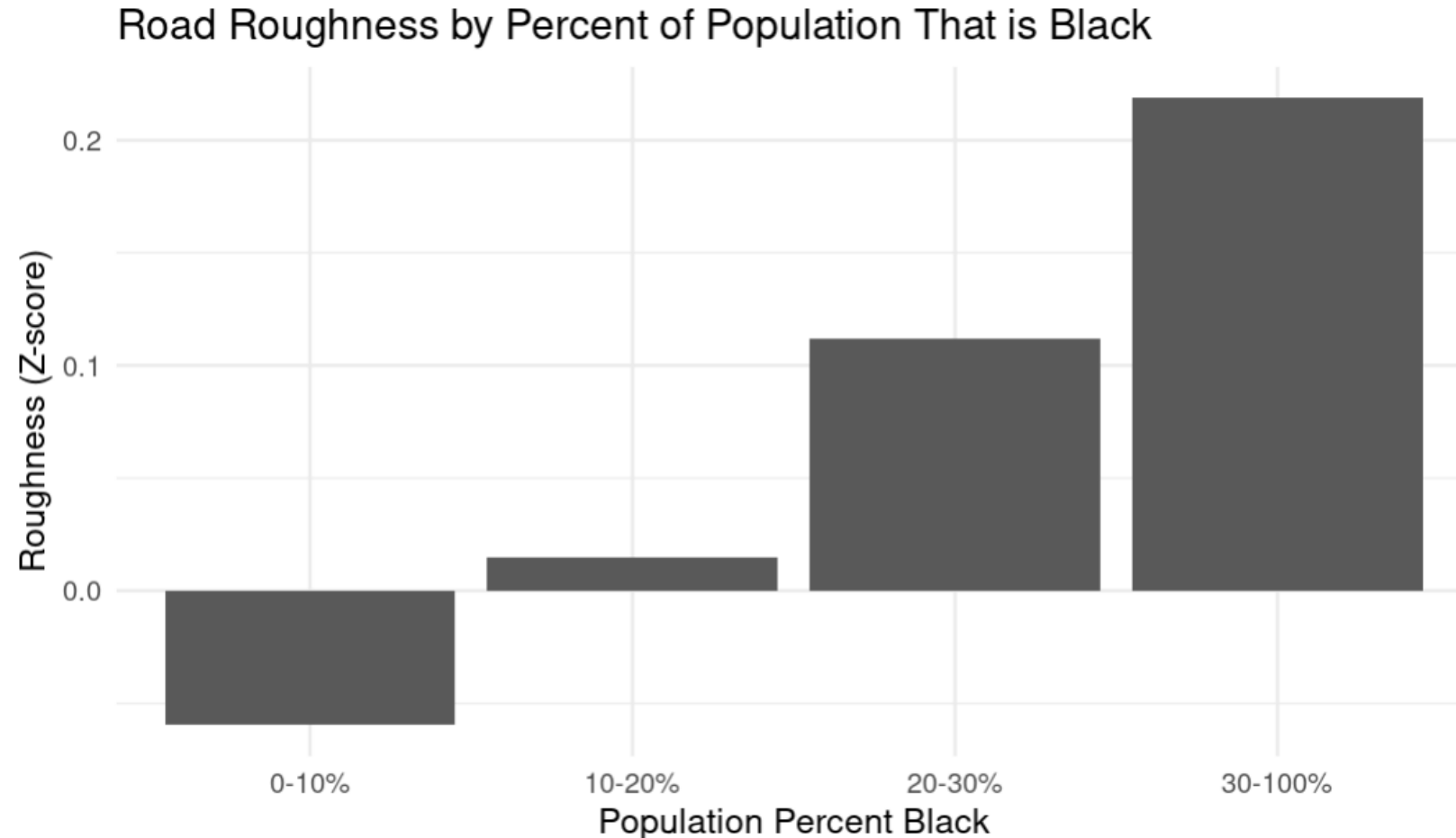
Income and Roughness in Greater NYC



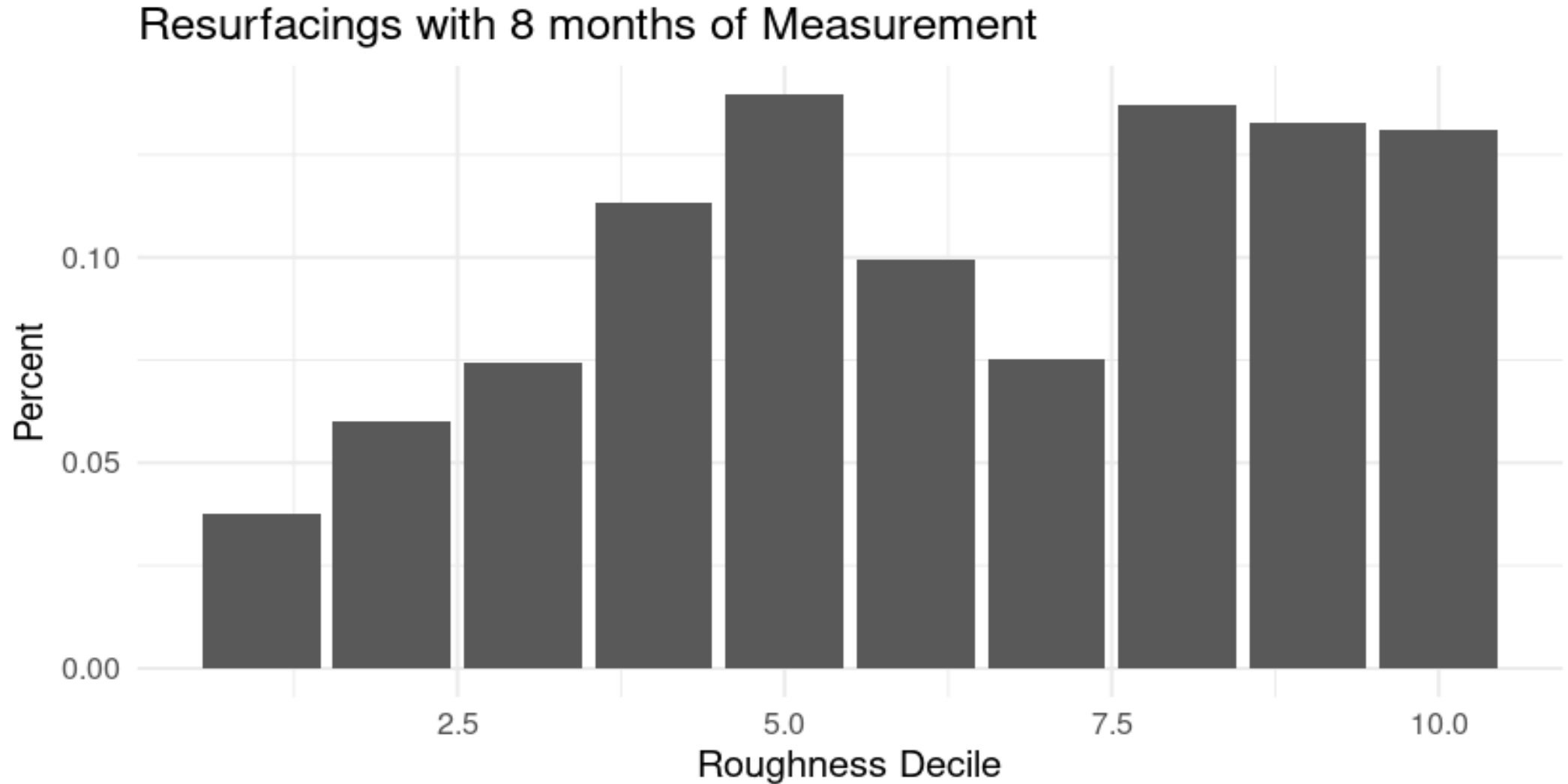
Race and Roughness: NYC Metro (232 towns)



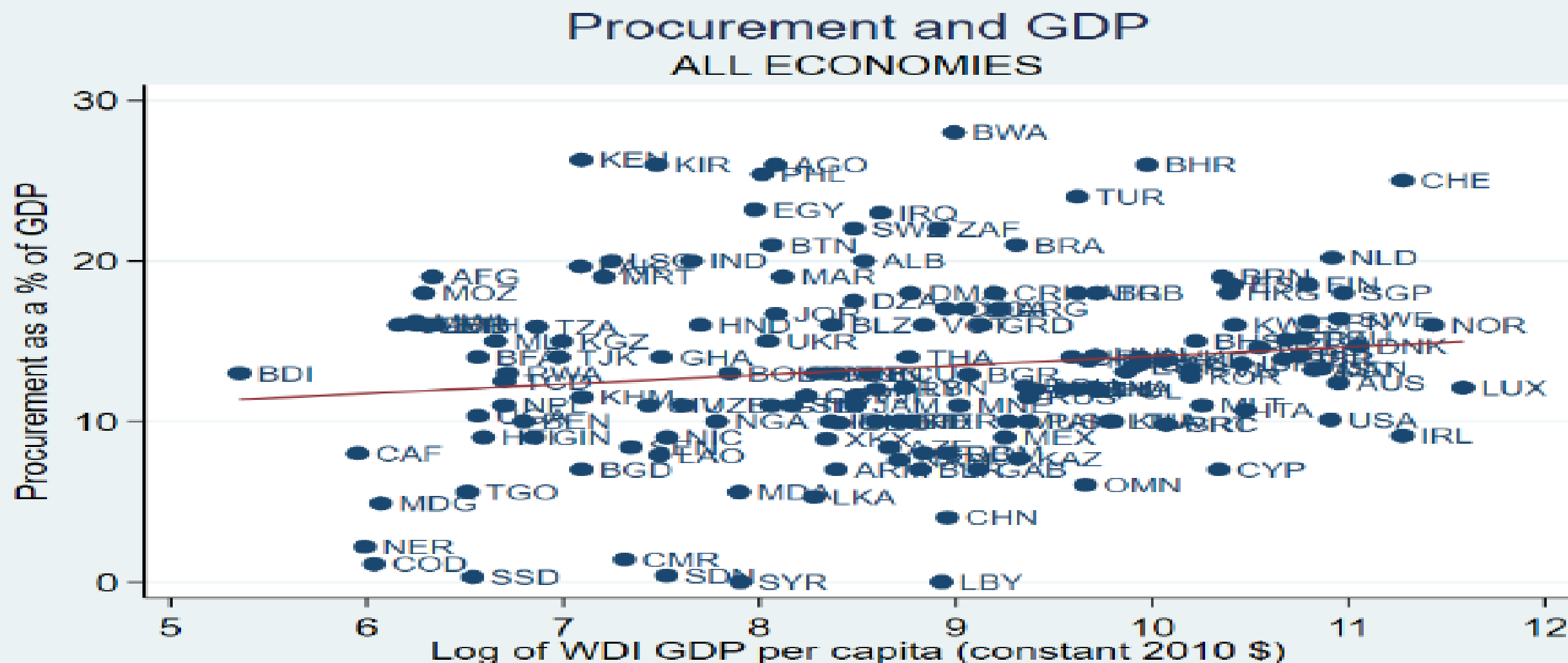
Race and Roughness Nationally



Road Repaving is Terribly Targeted (Chicago)



The Law and Public Procurement



The World Bank Procurement Survey

- A potential new component of the doing business survey.
- Correspondents (lawyers, etc.) globally are asked about a hypothetical five million dollar road construction job.
- They are asked about laws (“Do Tender Documents and Technical Specifications need to be made available by the Procuring Entity”)
- Practices: “Are tender documents and technical specification typically made available by the procuring entity”)
- Process: How frequent are collusion, favoritism or non-competitive auctions.
- How frequent is bribery?
- Product: How frequent are cost-overruns, time delays, low quality jobs?

Four Empirical Implications of the Model

- # 1: Regulatory Laws that reduce PE discretion reduce bribery.
- # 2: Practices are better than laws when accountability is high and worse when accountability is low.
- # 3: Process and product improve – regardless of the laws – in more accountable countries.
- # 4: Regulation is good in low accountability countries and bad in high accountability countries.
- Two measures of accountability: WGI Government Effectiveness and National Human Capital (many past papers on this).

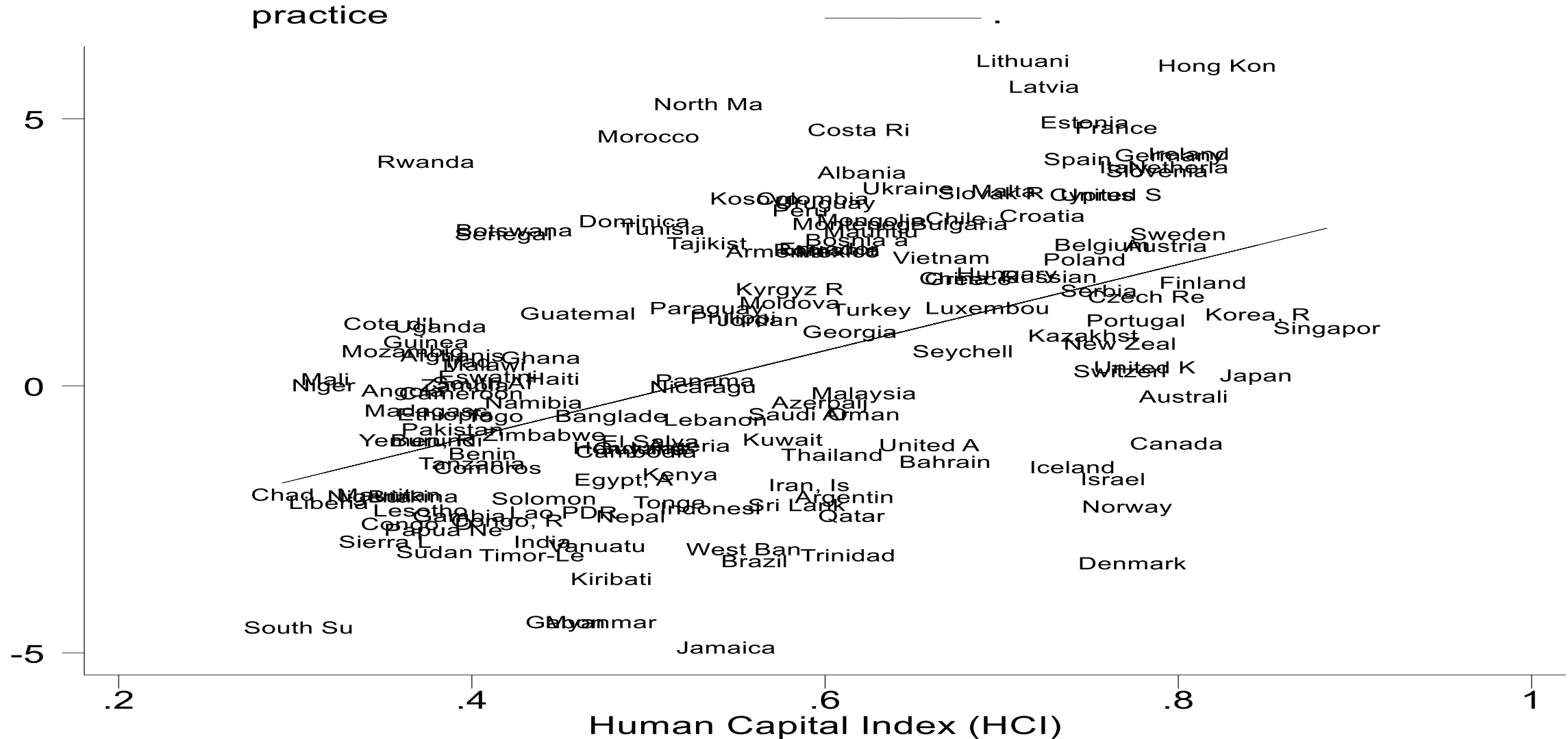
Bribes as a Function of Regulation and Government Capacity

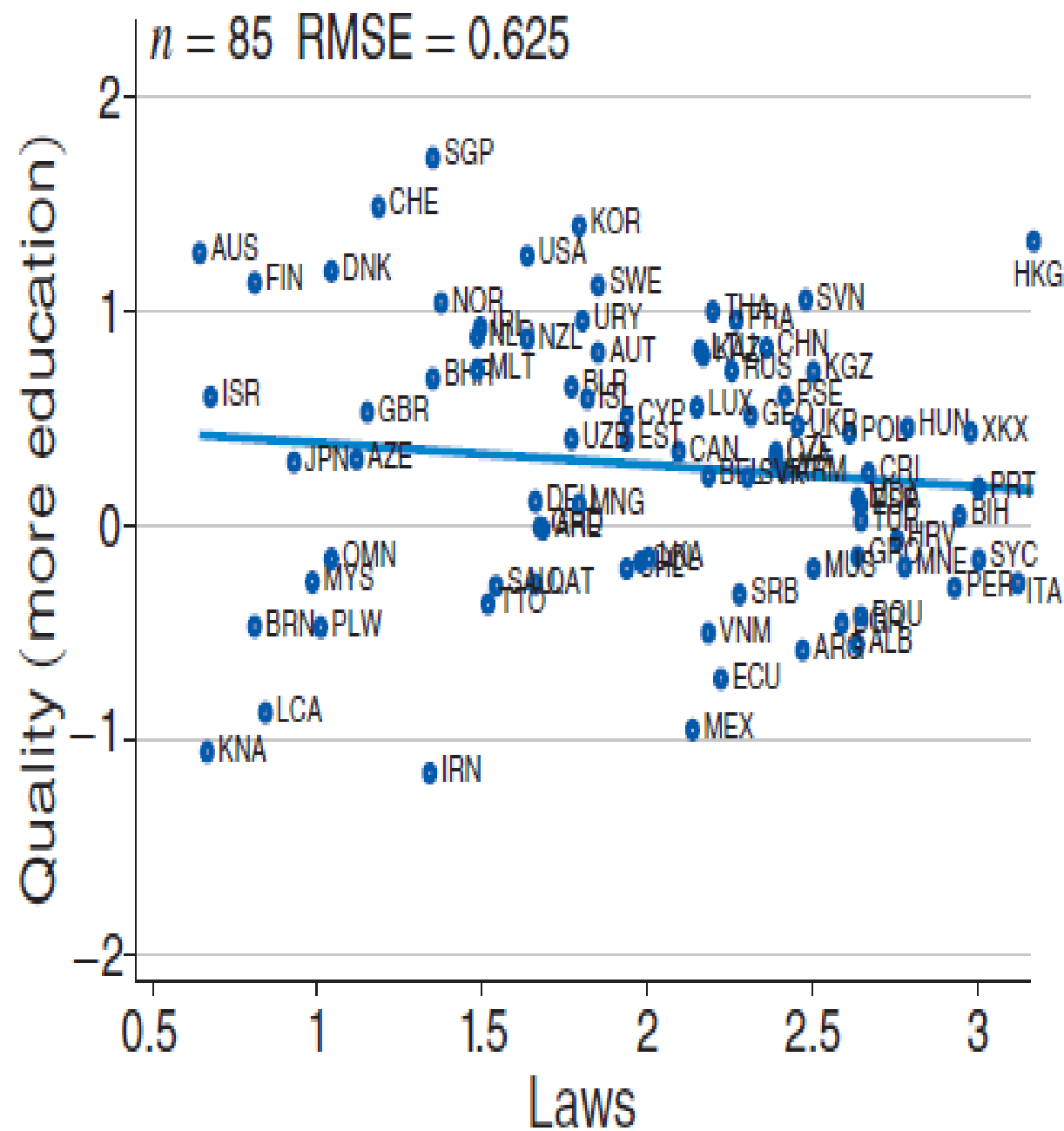
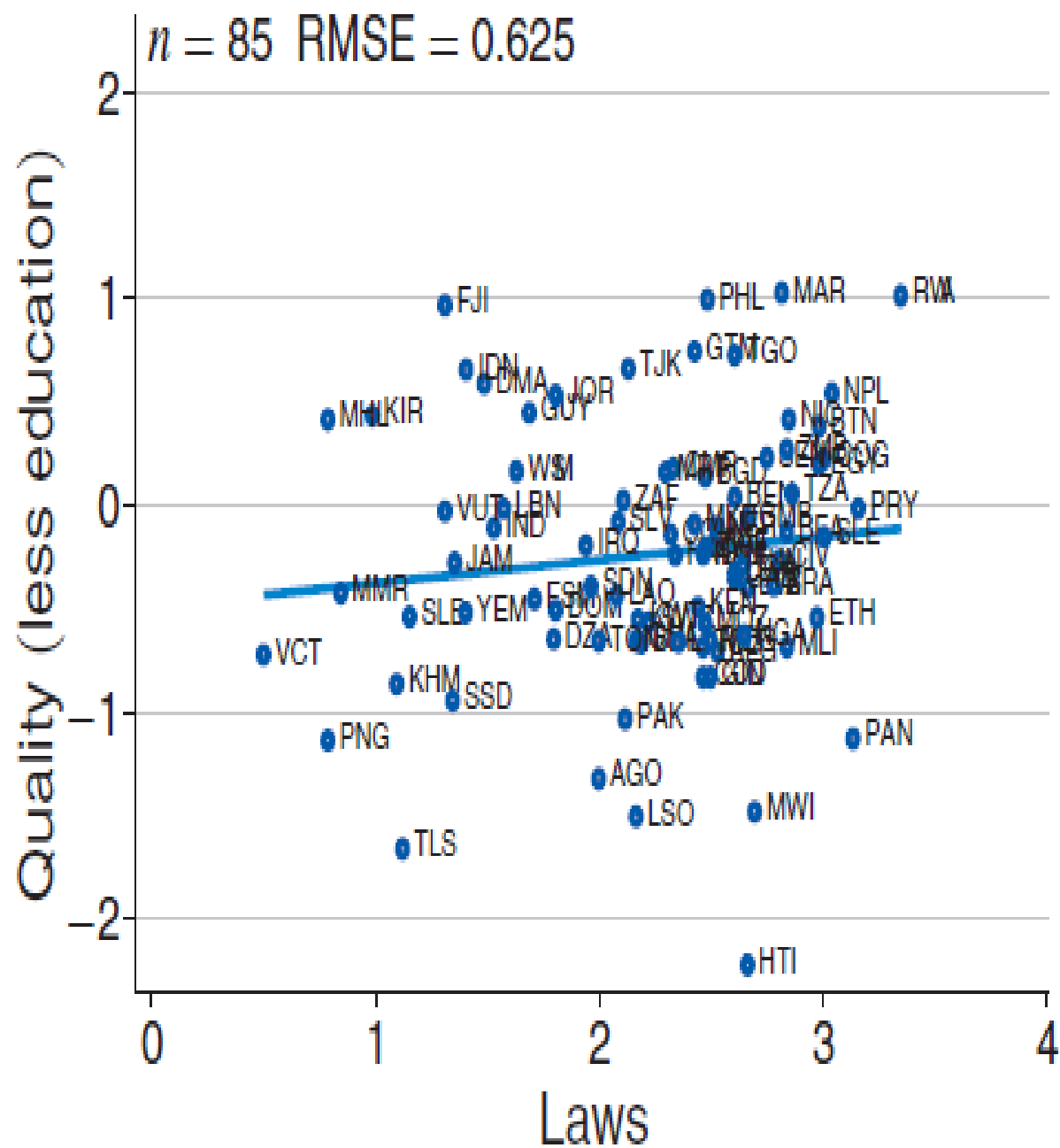
Regulation Index	-.0218 (.0063)	-.0250 (.0056)	-.0235 (.0063)	-.0367 (.0241)	-.0094 (.0079)	-.0294 (.0085)
Human Capital	-1.429 (.111)		-1.006 (.222)	-.985 (.228)	-1.346 (.6364)	-1.274 (.1955)
Government Efficiency		-.2006 (.0165)	-.0765 (.0349)	-.0856 (.0389)		
R2/# of Obs.	.53/154	.47/180	.54/154	154	.12/38	.33/114
Notes	OLS	OLS	OLS	IV (UK Legal Origin)	More Educated	Less Educated

Variable Means	Below Median Human Capital		Above Median Human Capital	
	Laws	Practice	Laws	Practice
Overall Index	.670 (.247)	-.846 (.286)	.403 (.333)	1.608 (.258)
Transparency	.492 (.021)	.414 (.029)	.510 (.026)	.562 (.027)
Competition	.617 (.022)	.297 (.023)	.545 (.026)	.493 (.025)
Exclusion	.297 (.019)	.436 (.023)	.344 (.021)	.508 (.024)
Integrity of Contract	.646 (.030)	.353 (.012)	.568 (.027)	.469 (.018)
Number of Obs.	77	77	77	77

Note: Standard errors (standard deviations divided by the square root of 77) are in parentheses.

$$Practice = \frac{.456}{(.055)} \cdot Laws + \frac{9.00}{(.98)} \cdot Human\ Capital, R^2 = .47$$





Outcome is Product Index						
Laws	.0797 (.0498)	.0838 (.0488)	.1071 (.0654)	.0316 (.0452)	.0716 (.0502)	.0925 (.0691)
Human Capital	9.625 (.839)	5.478 (1.752)	6.337 (2.08)		3.798 (1.731)	5.089 (2.)
Gov. Effectiveness		.7400 (.3787)	2.206 (.521)	1.472 (.129)	.935 (.276)	2.407 (.540)
Human Capital*Law	-1.793 (.313)	-1.523 (.323)	-1.818 (.407)			
Gov. Eff.*Laws				-.1214 (.0459)	-.1719 (.0475)	-.2094 (.0609)
Log(GDP)			-.5943 (.2403)			-.6995 (.2453)
Polity2			.0652 (.0433)			.0451 (.0557)
Function of Government			-.1979 (.0433)			-.1942 (.0985)
Efficiency (G.C.R.)			-.2294 (.0963)			-.1537 (.2192)
R2/# of Obs.	.51/154	.54/154	.59/126	.48/178	.51/154	.57/126

Cities are resilient! (Milan 1943 and 2014)



Photo by Jose Luis