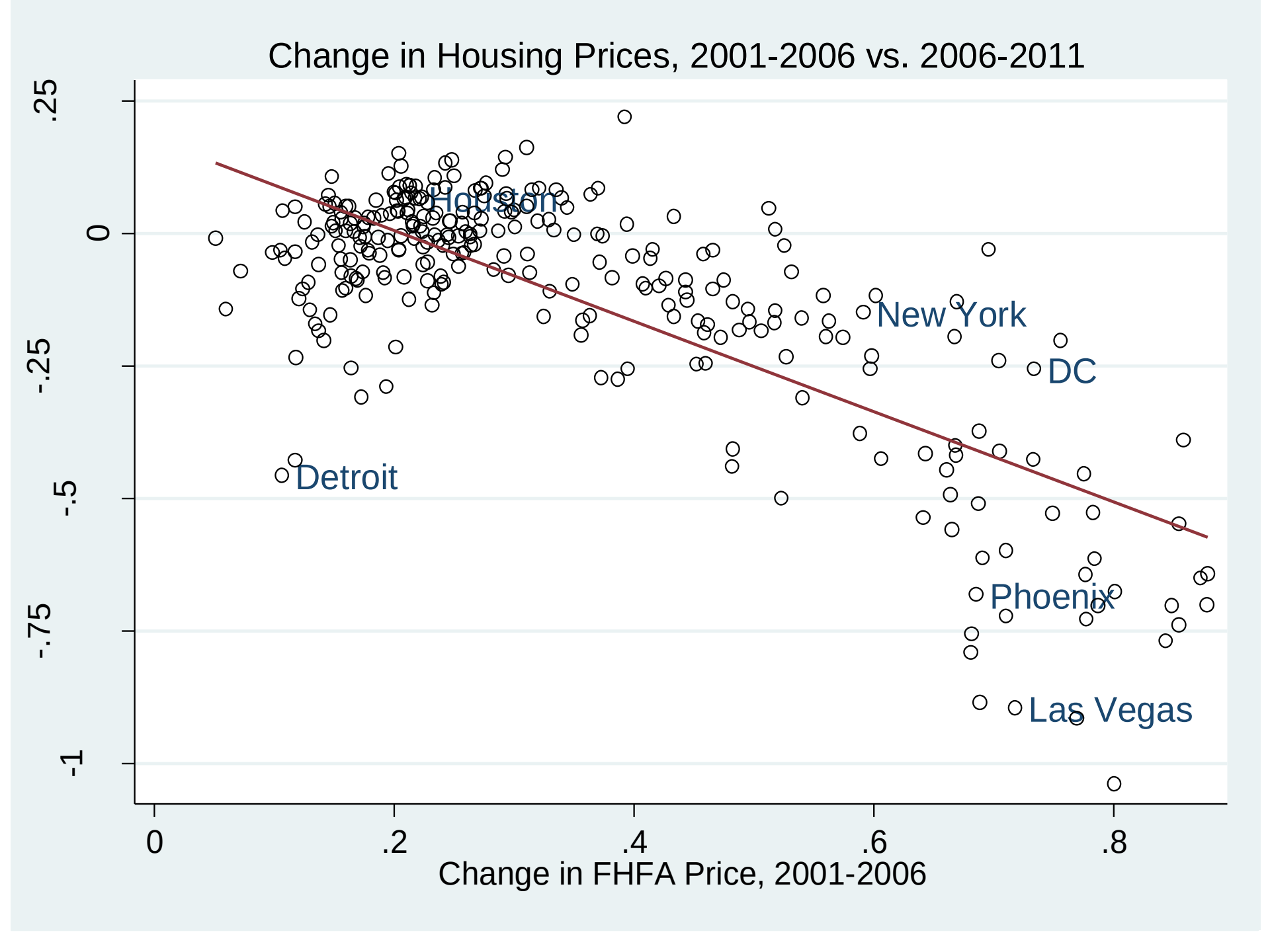
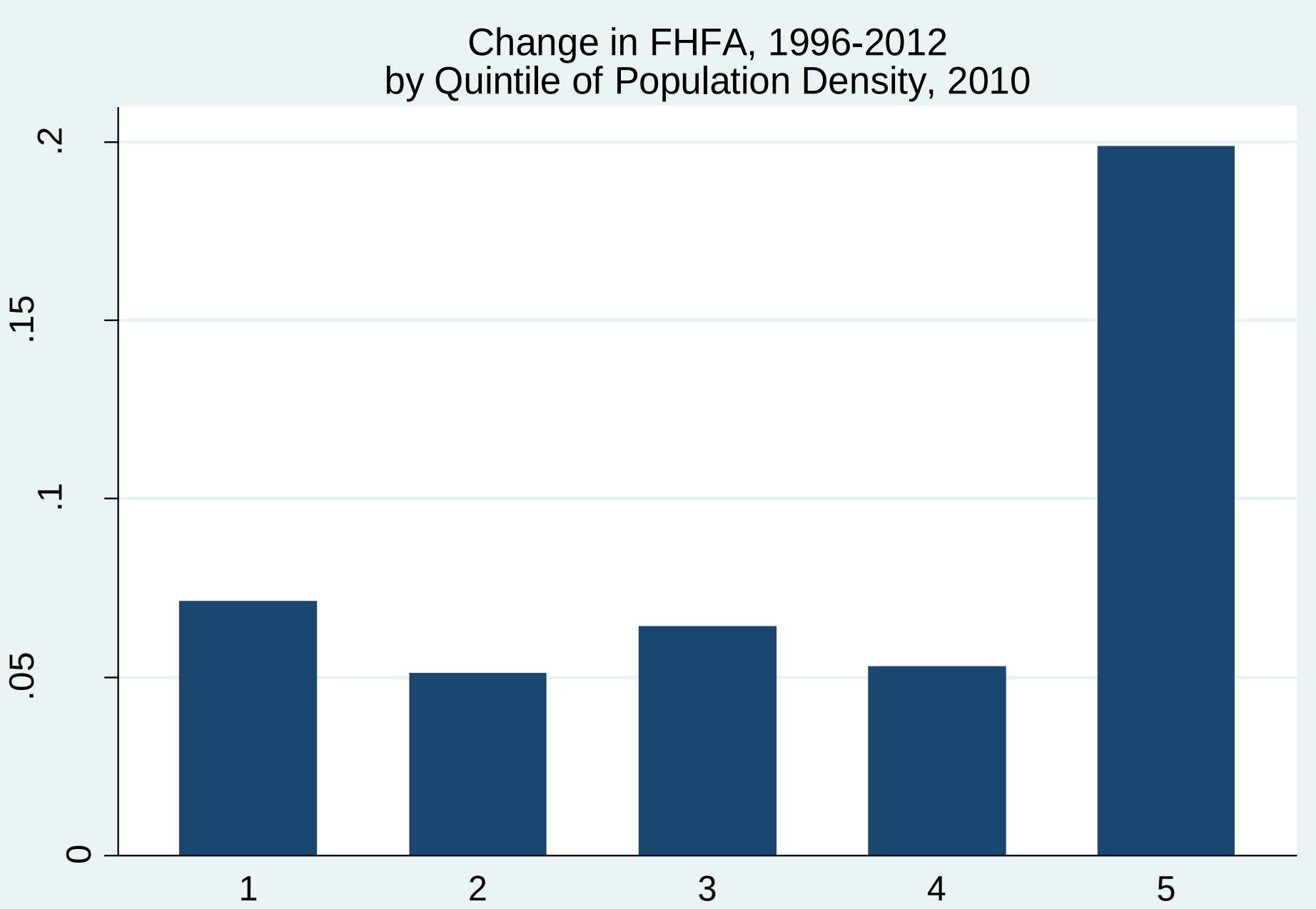
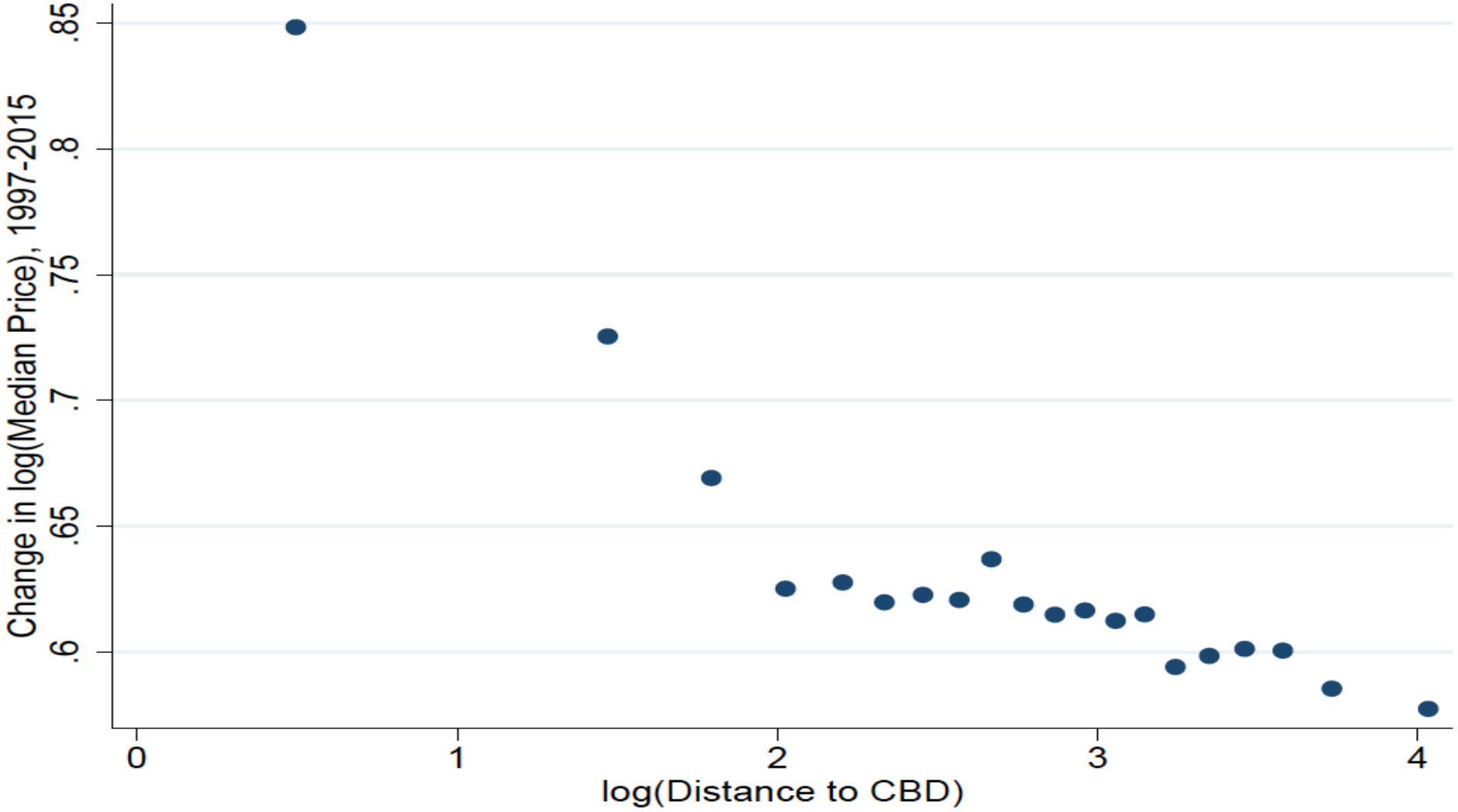
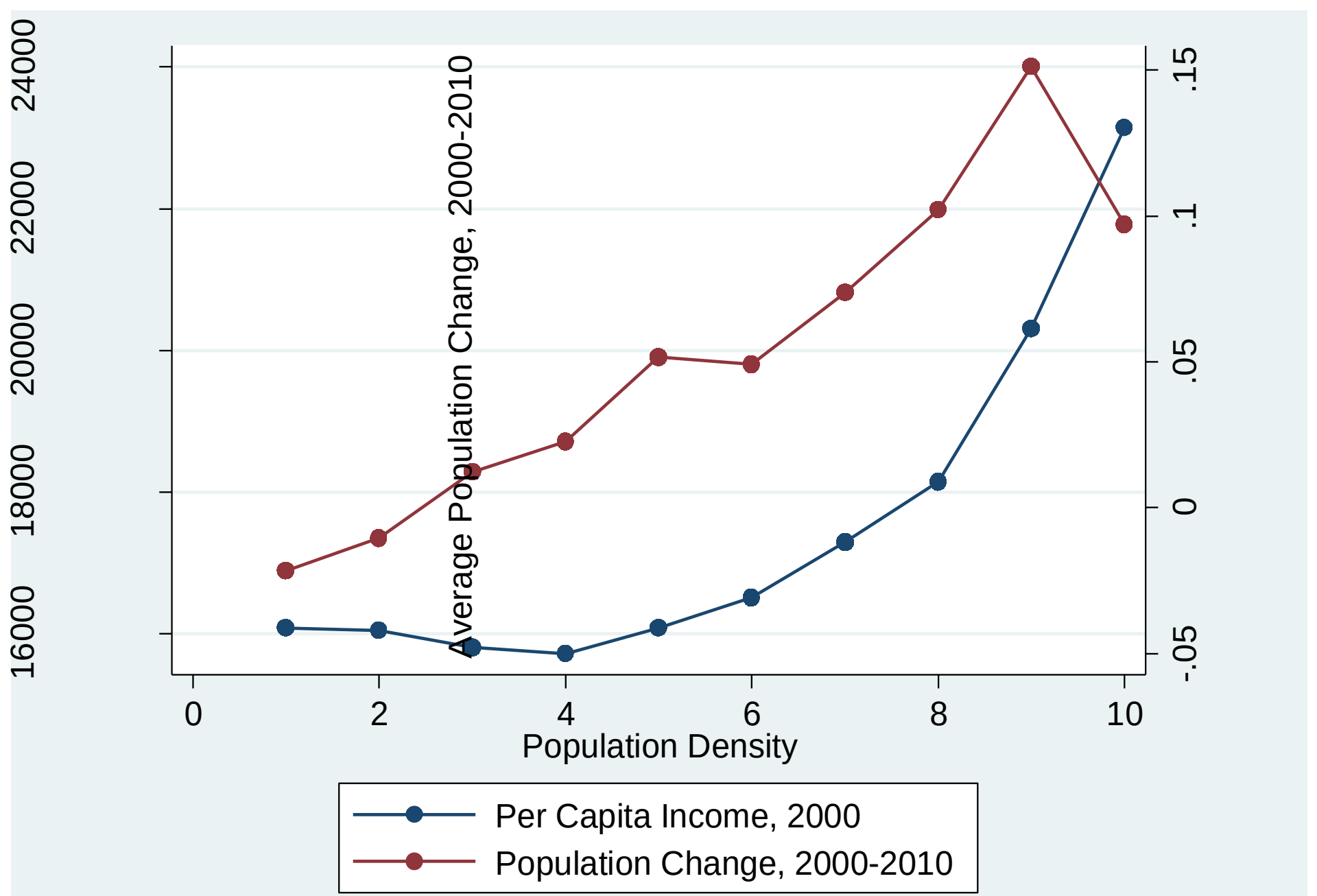

Change in Housing Prices, 2001-2006 vs. 2006-2011
.25
0
-.25
-.5
-.75
-1
Houston
New York
DC
Detroit
Phoenix
Las Vegas
0
.2
.4
.6
.8
Change in FHFA Price, 2001-2006


Change in FHFA, 1996-2012
by Quintile of Population Density, 2010
0
.05
.1
.15
.2
1
2
3
4
5
Note: For MSAs with populations greater than 250,000 in 2010.

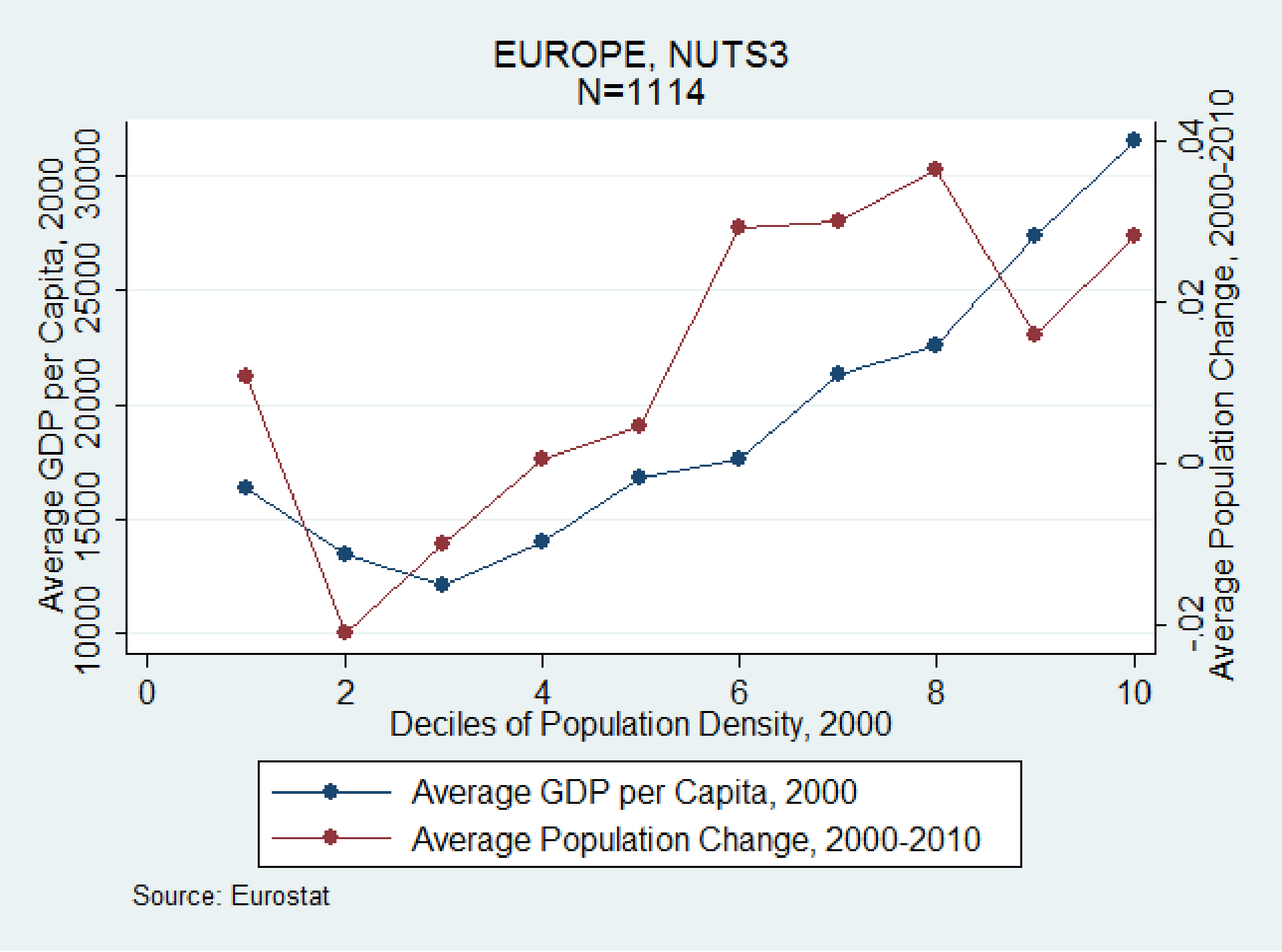
The Great Pro-City Price Tilt (U.S.)

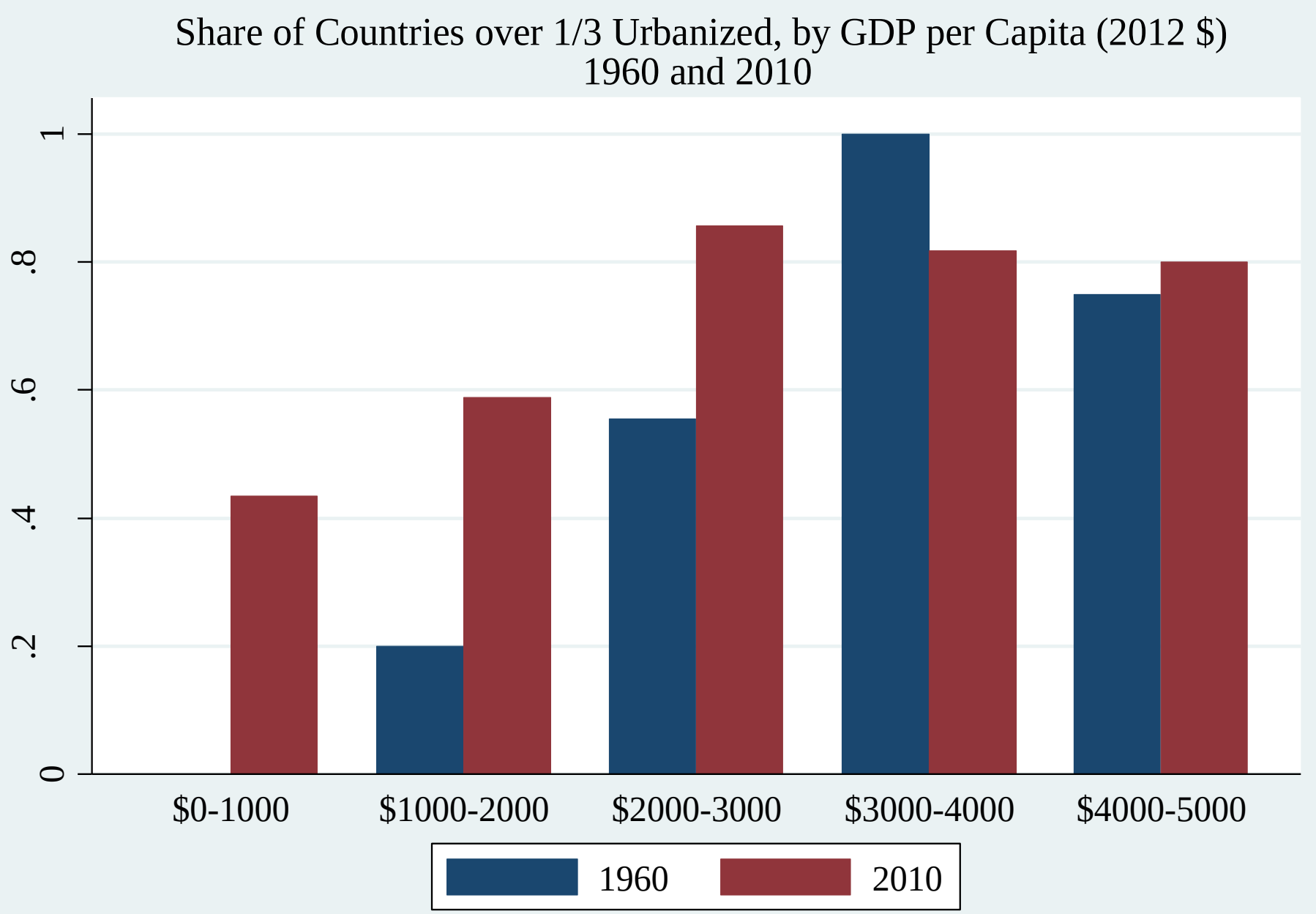


Hipsman (2015) Using Zillow Sub-city



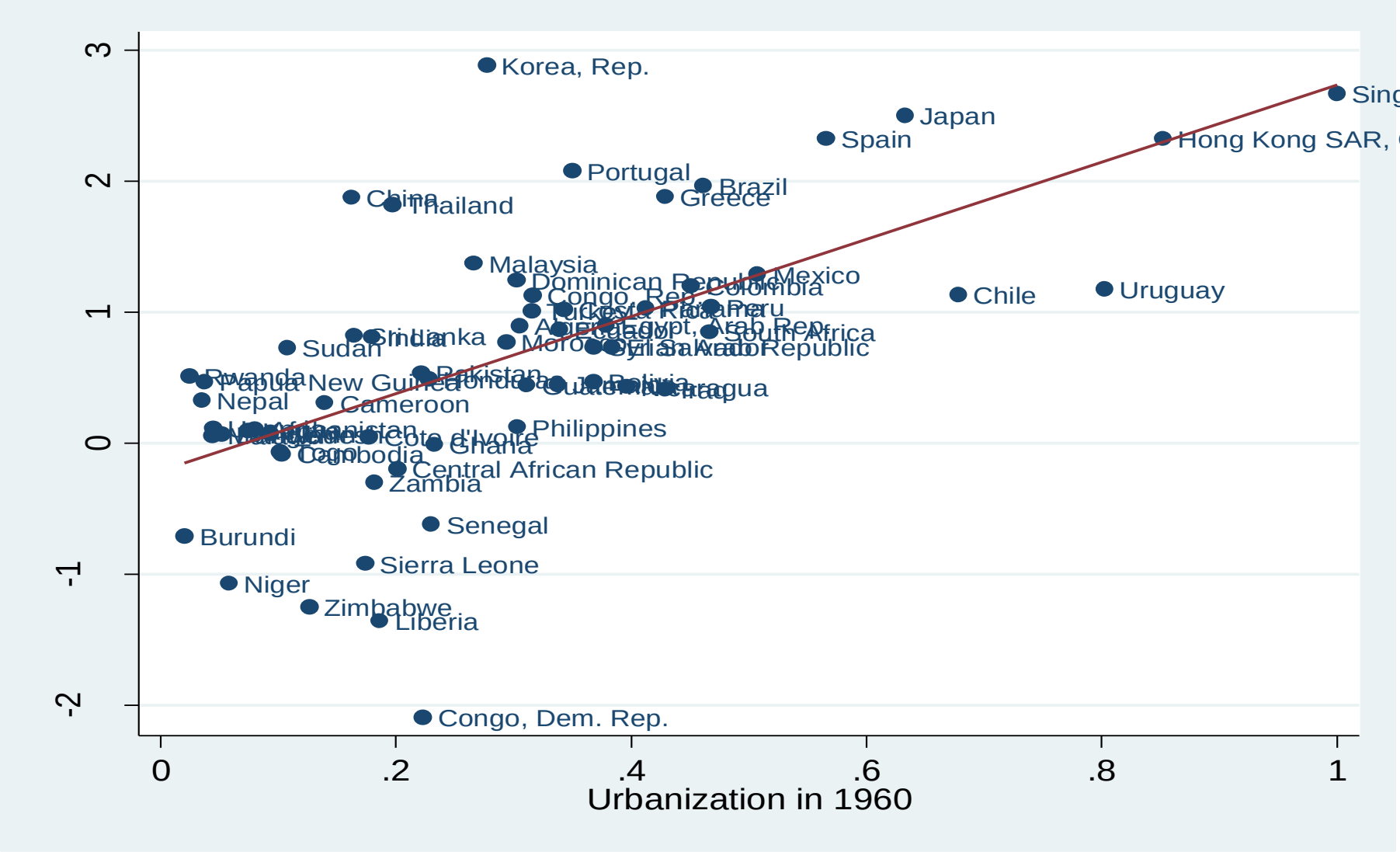
Source: U.S. Census


EUROPE, NUTS3
N=1114
Average GDP per Capita, 2000
10000
15000
20000
25000
30000
Average Population Change, 2000-2010
-.02
0
.02
.04
0
2
4
6
8
10
Deciles of Population Density, 2000
Average GDP per Capita, 2000
Average Population Change, 2000-2010
Source: Eurostat

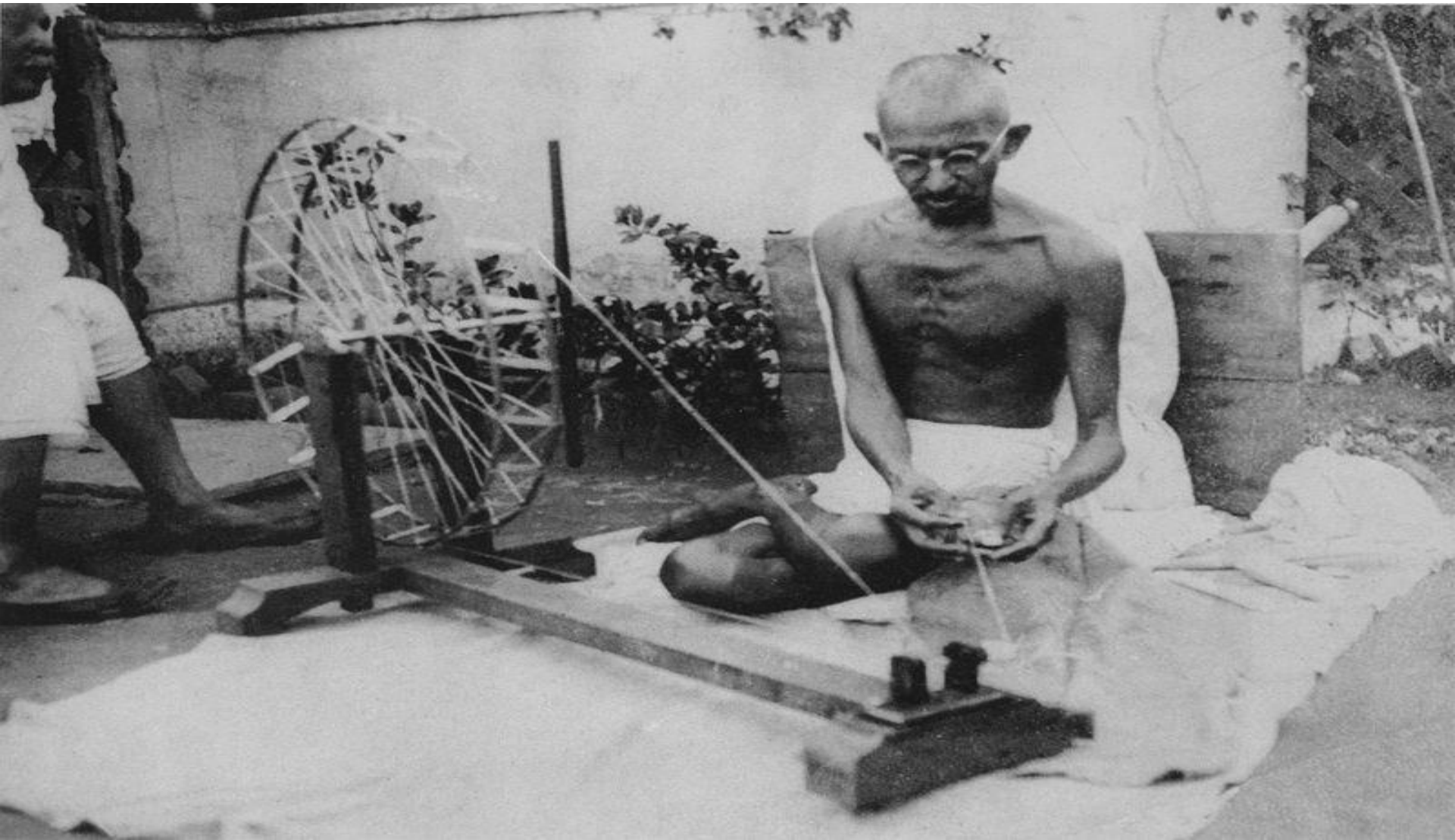


Source: World Bank

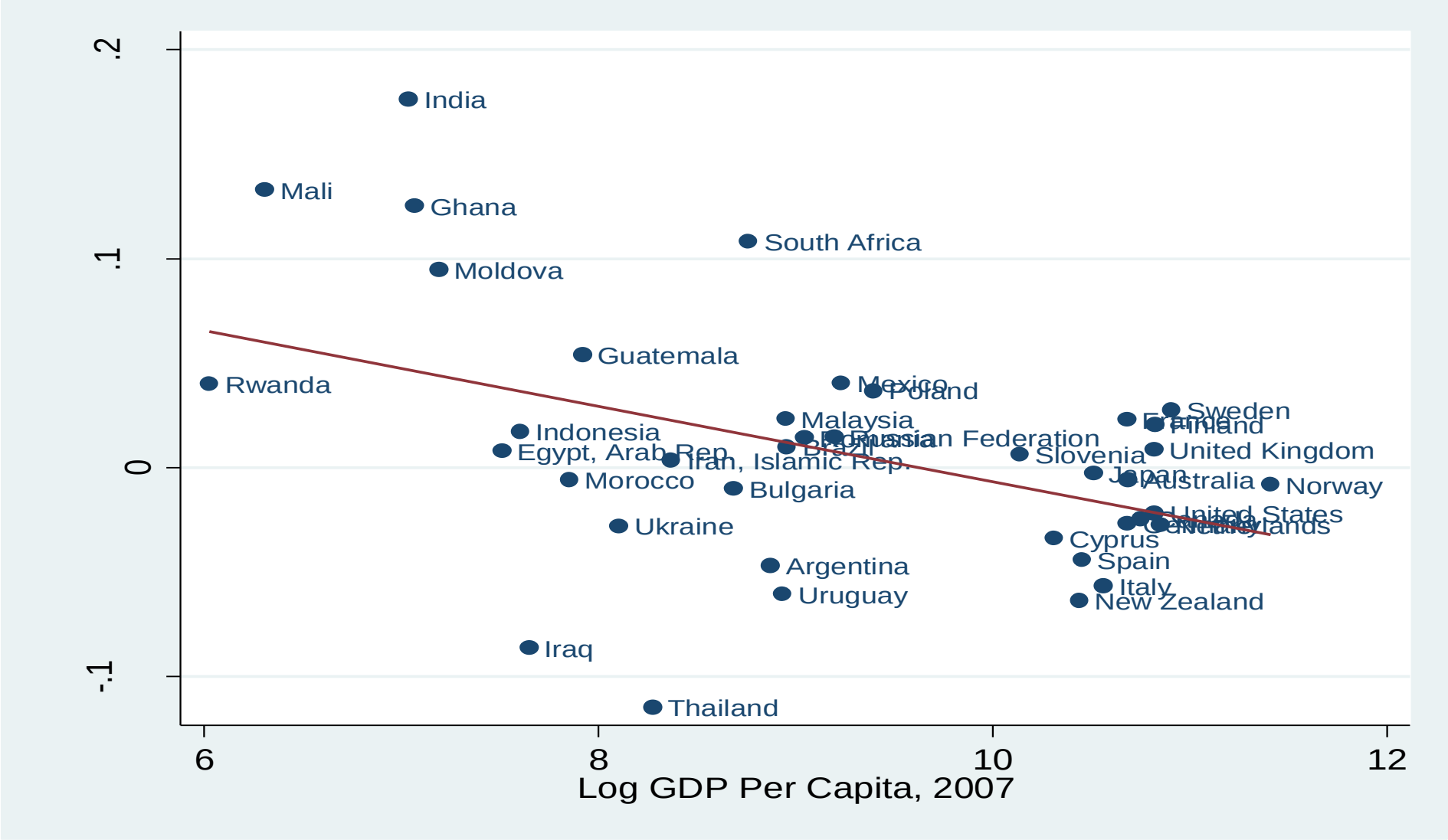
Per Capita GDP Growth 1960-2010 (Poor Countries<$5000 PC GDP)



“I regard the growth of cities as an evil thing, unfortunate for mankind and the world”



Urban-Rural Differences in Happiness



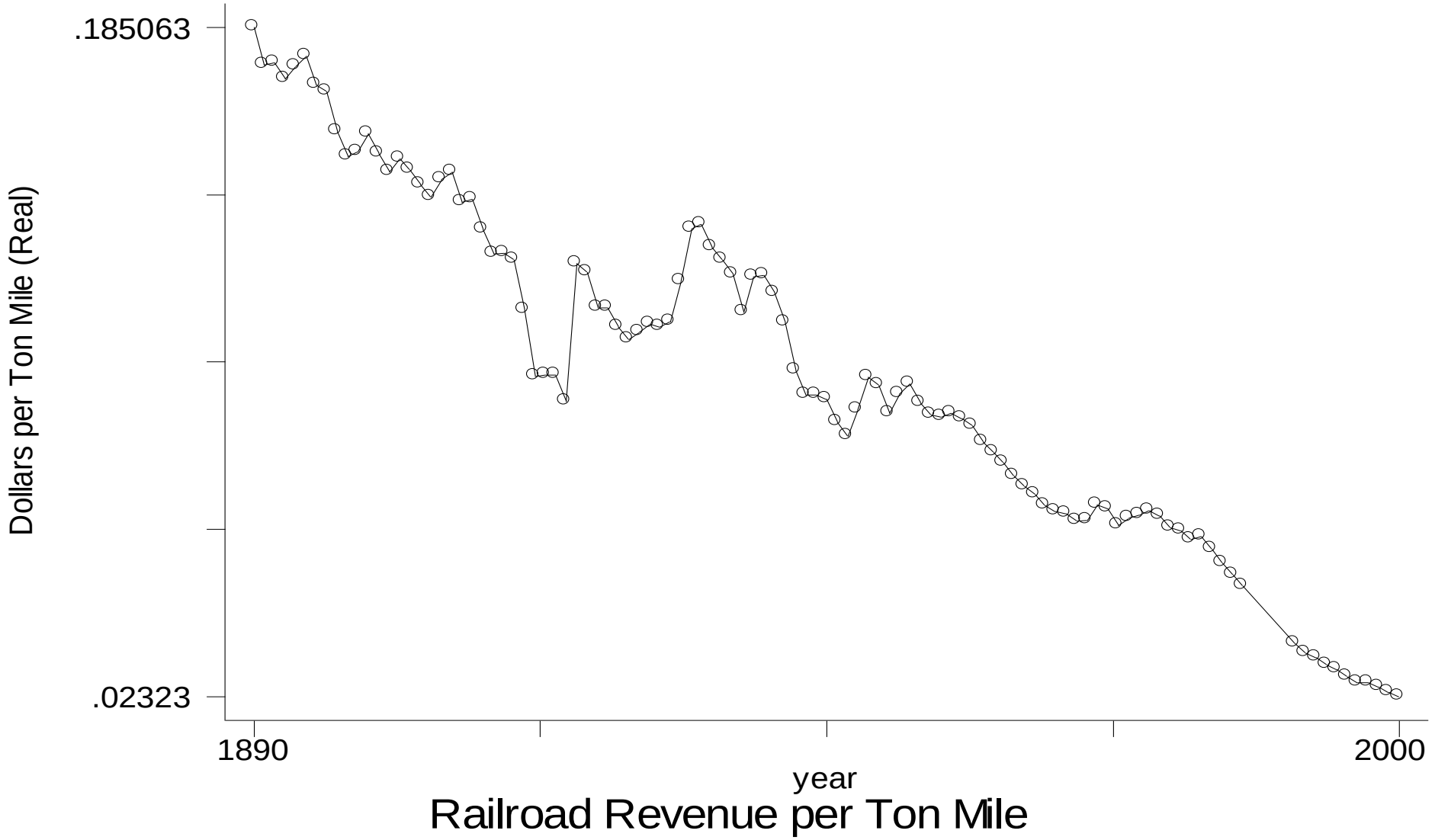
Cities are so monumental that we easily forget how fast they can fall—and rise. In the 1970s, New York verged on bankruptcy; President Ford refused to bail it out (left), and President Carter toured the grim ruins of the South Bronx (above). Three decades before these iconic images, Gotham had been an urban paragon, and three decades after them, it is again.

[Art 1:] New York Daily News *Archive / Getty Images*
[Art 2:] Teresa Zabala / The New York Times */ Redux Pictures*

Liverpool in the 1980s

Photo by David Sinclair

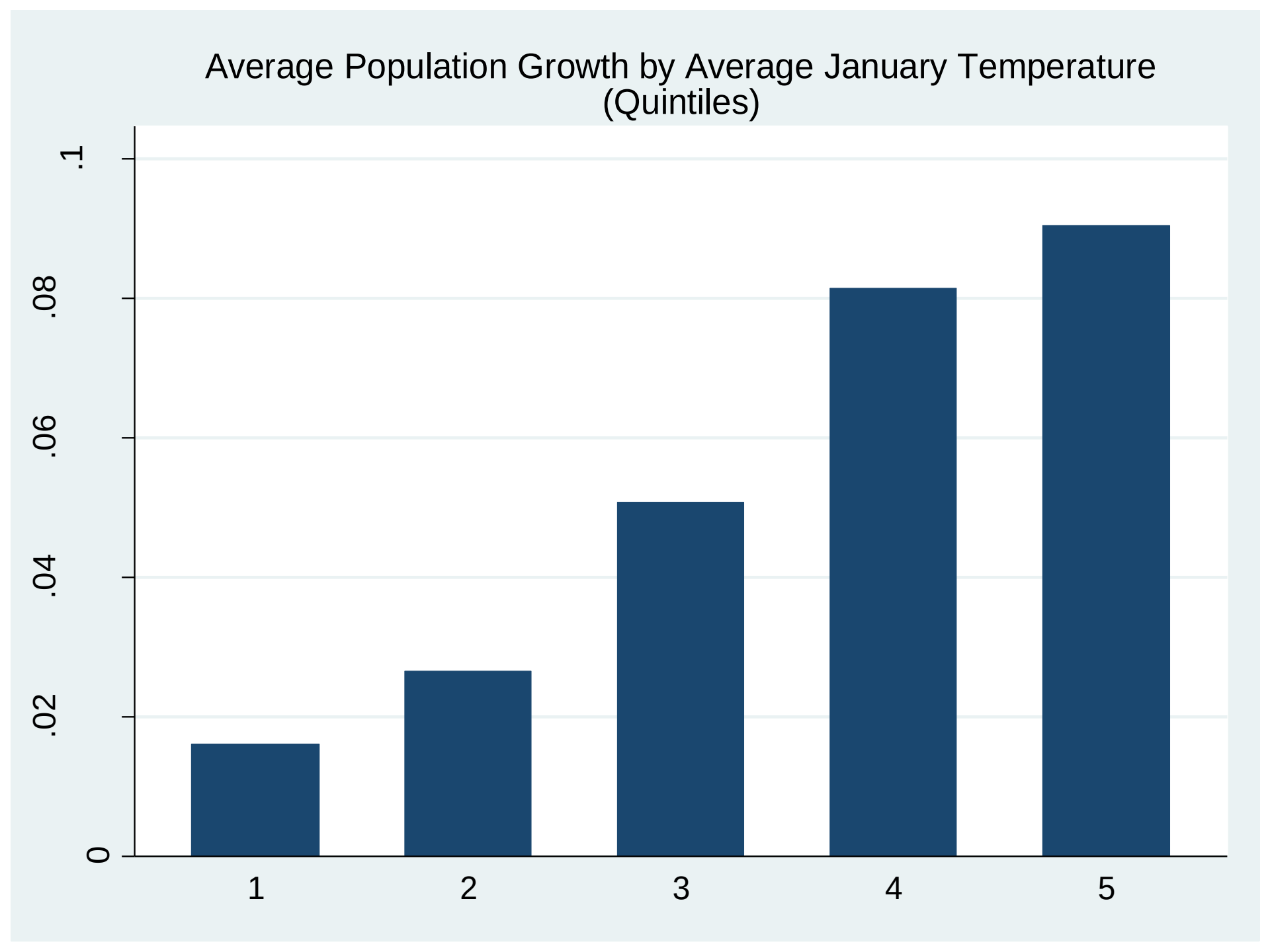
Urban Deindustrialization and the Decline of the Costs of Moving Goods

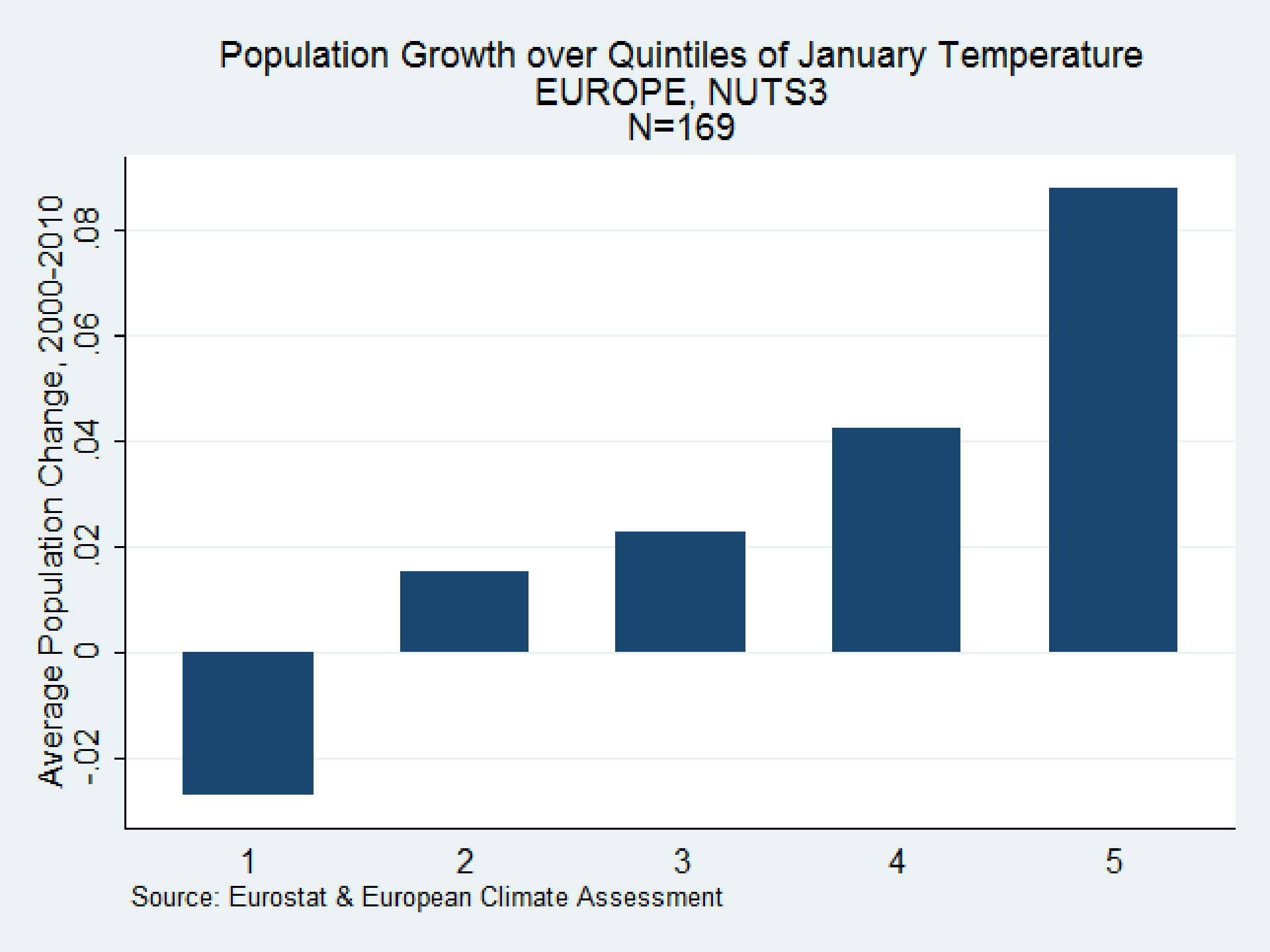


Sprawl in the New World and Old

Photo by Simon P

Photo by David Monniaux


Average Population Growth by Average January Temperature
(Quintiles)
0
.02
.04
.06
.08
.1
1
2
3
4
5


Population Growth over Quintiles of January Temperature
EUROPE, NUTS3
N=169
Average Population Change, 2000-2010
-.02
0
.02
.04
.06
.08
1
2
3
4
5
Source: Eurostat & European Climate Assessment

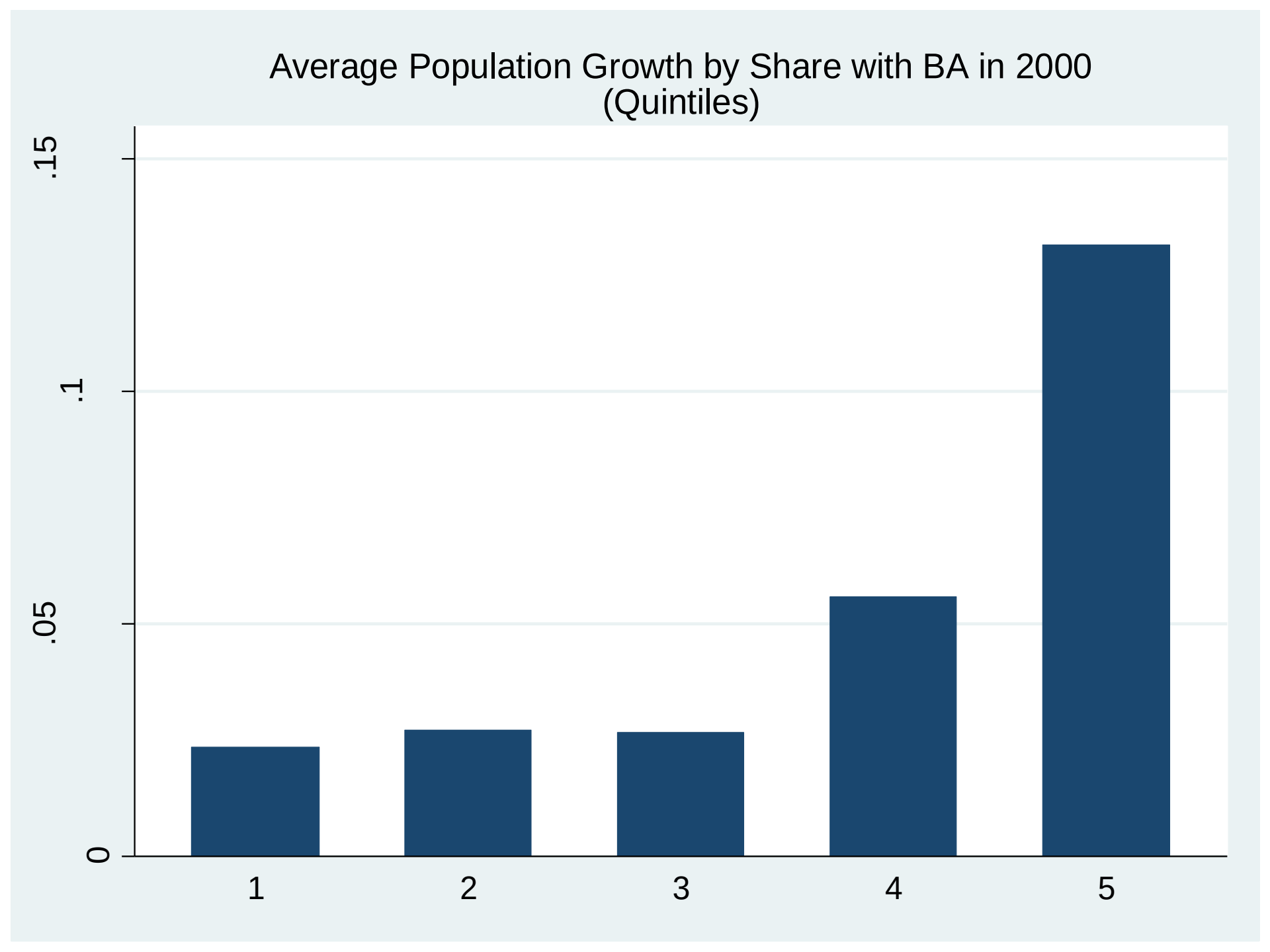
Detroit tried to reverse its decline with foolish investments like its People Mover, which here glides over essentially empty streets.

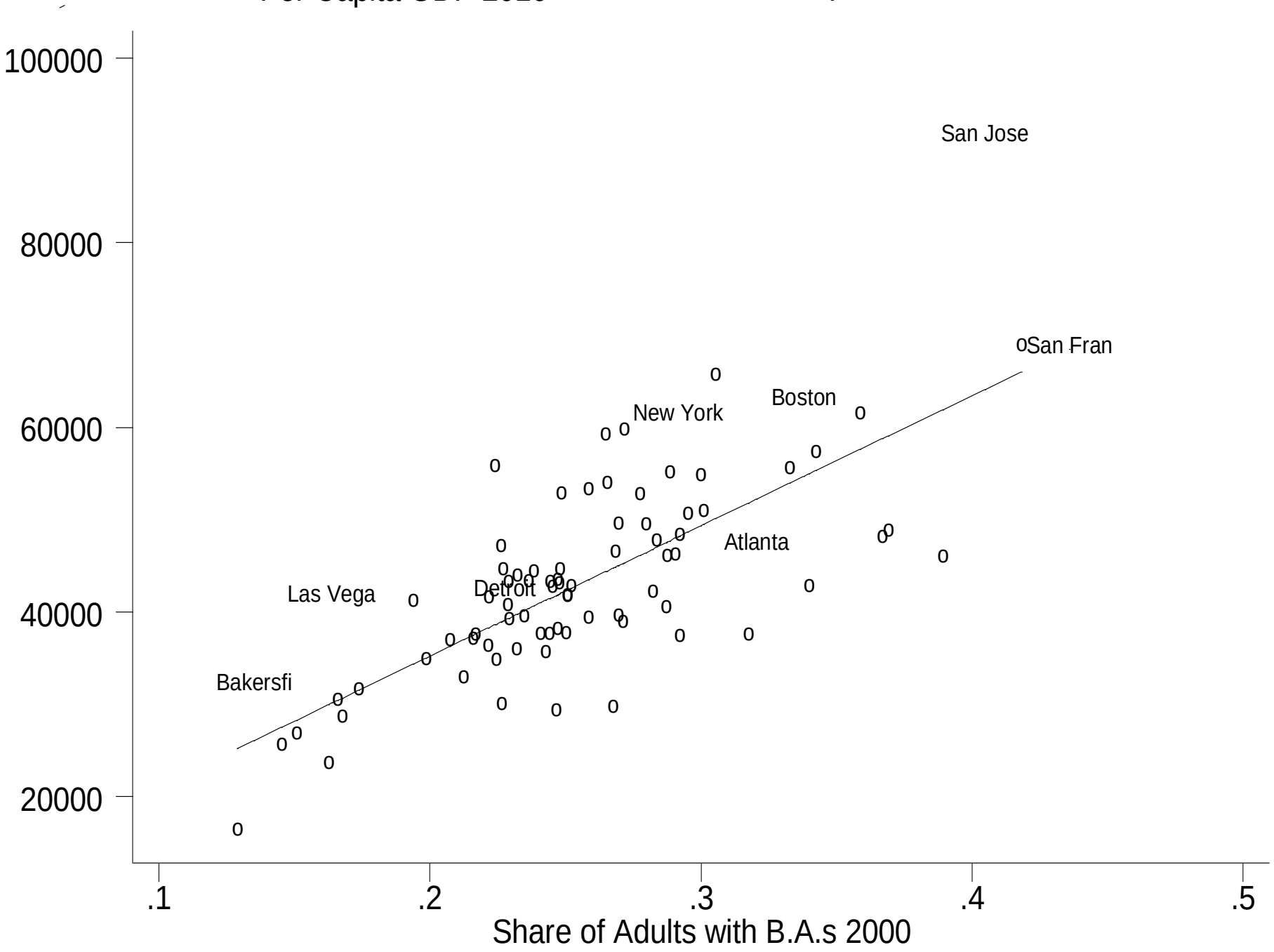
Dennis MacDonald/ World of Stock

Will the last person to leave Seattle (and Milan) please turn out the lights?

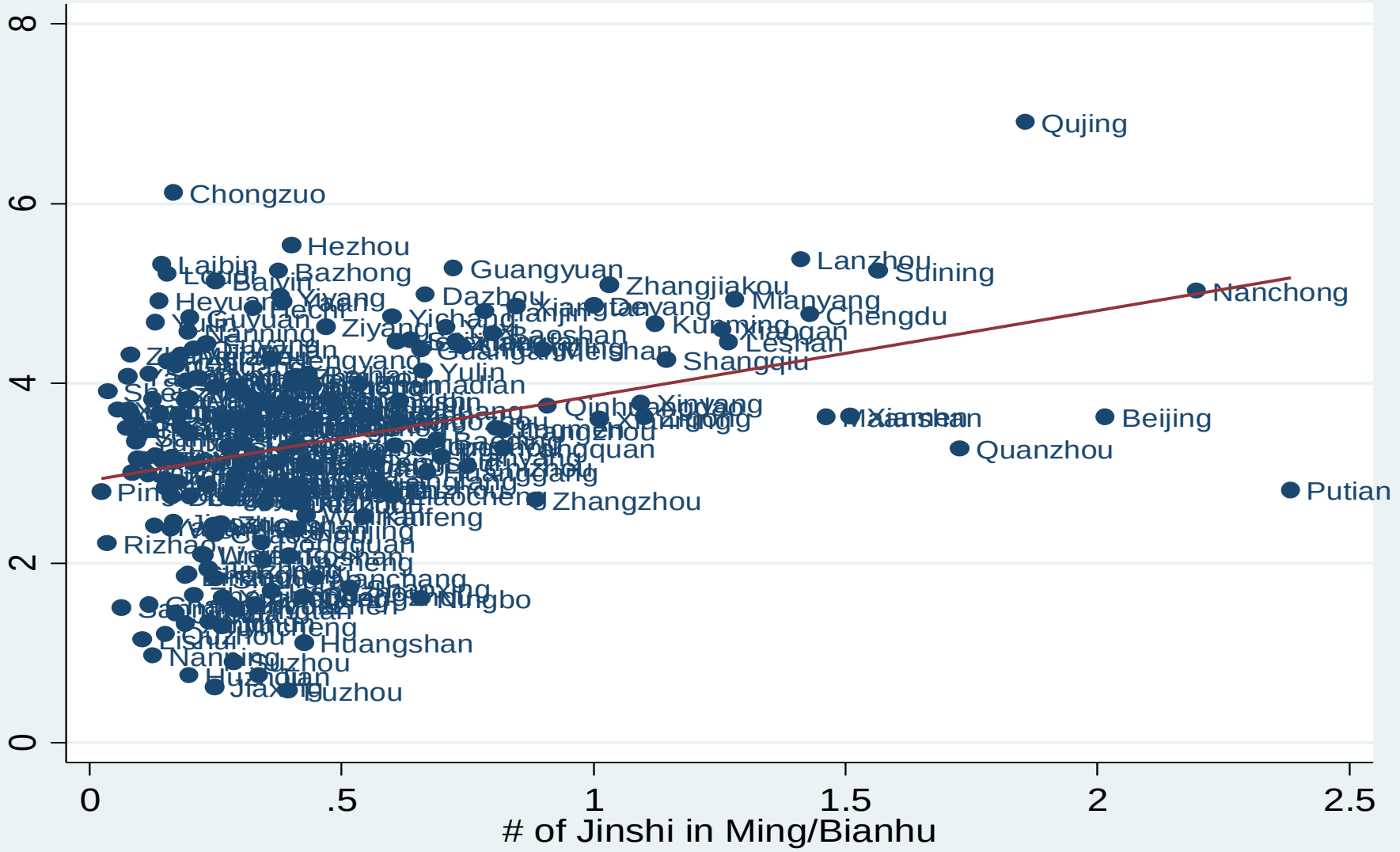
Photo by Postdil

Artist's Impression by Daniel Libeskind Studio


Average Population Growth by Share with BA in 2000
(Quintiles)
.15
.1
.05
0
1
2
3
4
5


Per Capita GDP 2010
100000
80000
60000
40000
20000
San Jose
San Fran
Boston
New York
Atlanta
Las Vega
Detroit
Bakersfi
.1
.2
.3
.4
.5
Share of Adults with B.A.s 2000

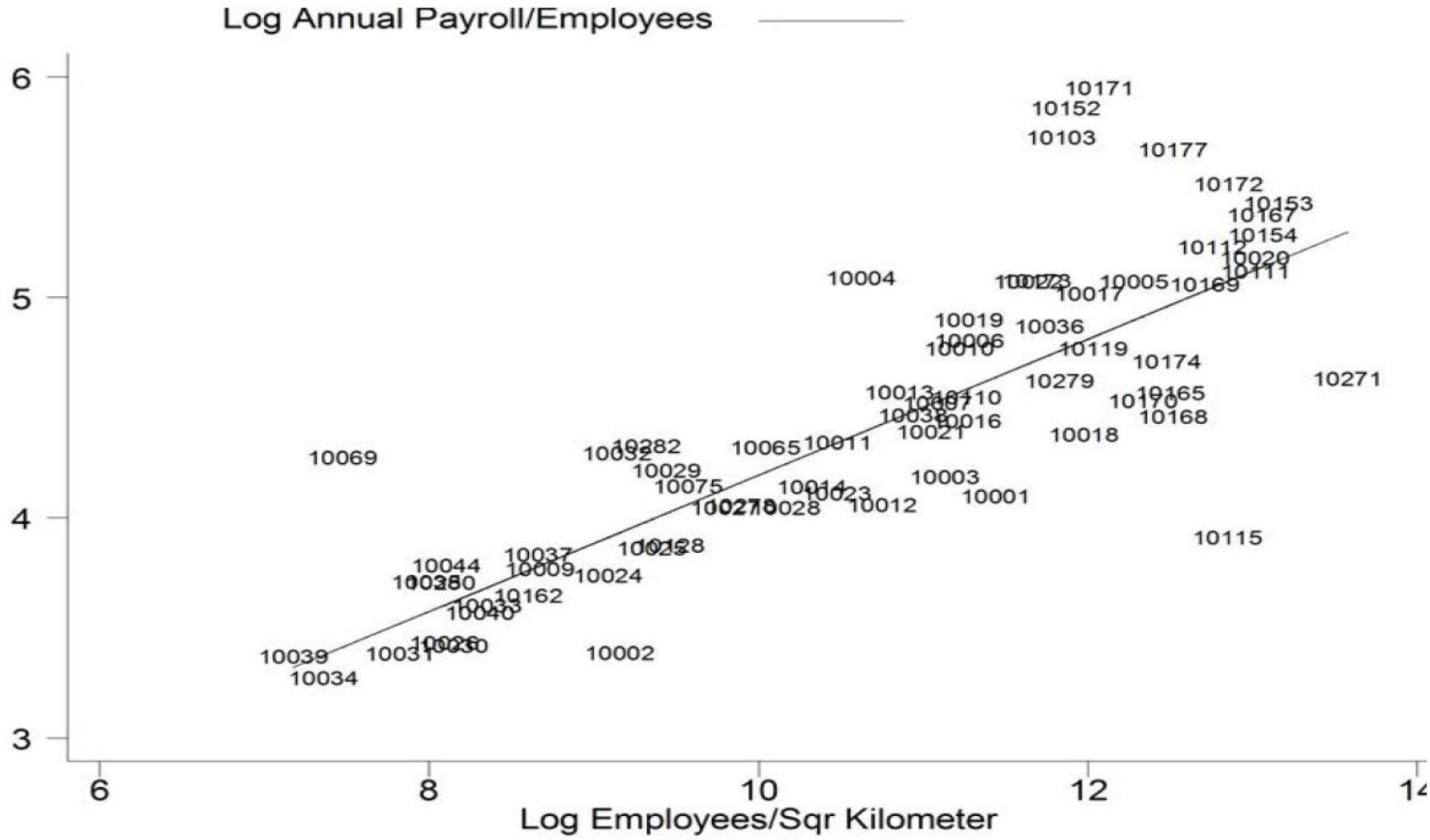
Joint with Yueran Ma



Wall-less City Hall and The GooglePlex

Photo by Runner1928

Density and Income in Manhattan



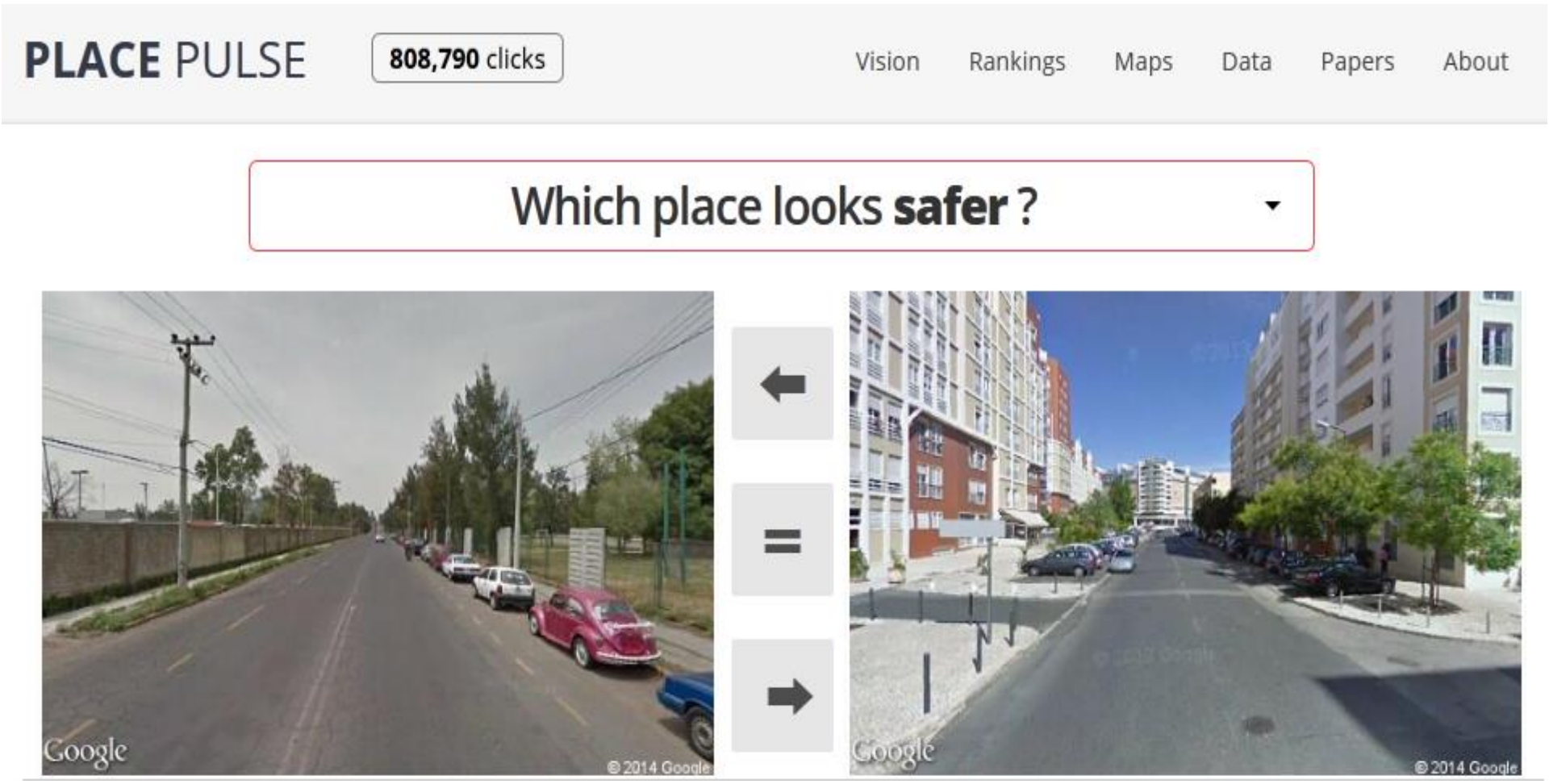
ure 1: *Per Capita Payroll and Density Across New York City Zip Codes*

Technology and the City

Photo by Bernard Gagnon

The Sharing Economy: Zipcar

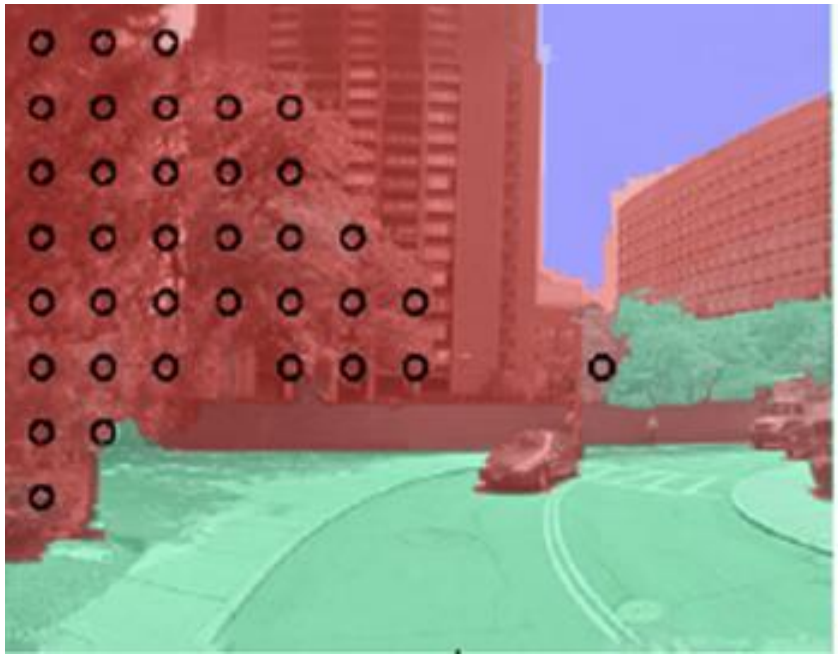
Photo by Mario Roberto Duran Ortiz



pulse.media.mit.edu
Salesses, Schechtner, and Hidalgo (2013)

Crowdsourced urban appearance survey

Image Features



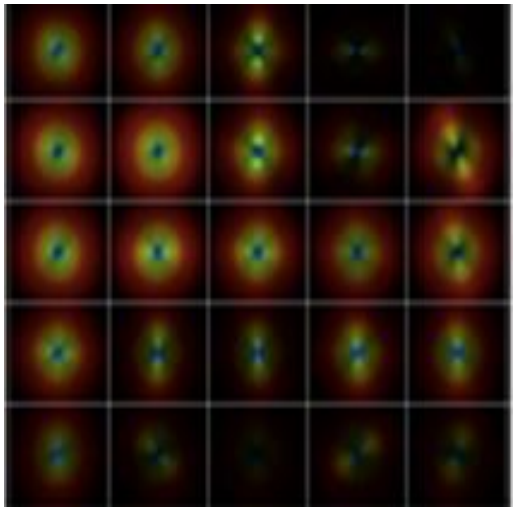
Sky

Building

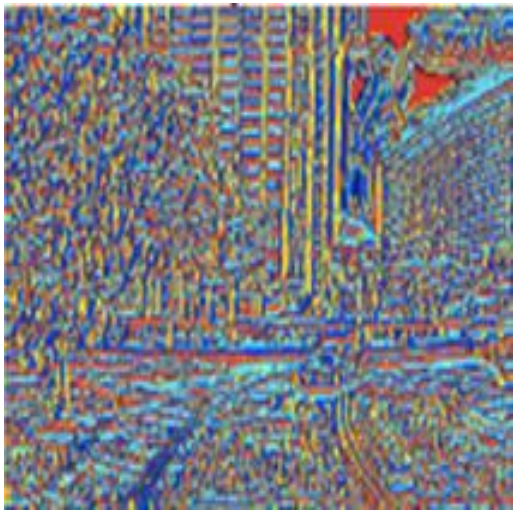
Ground

Trees

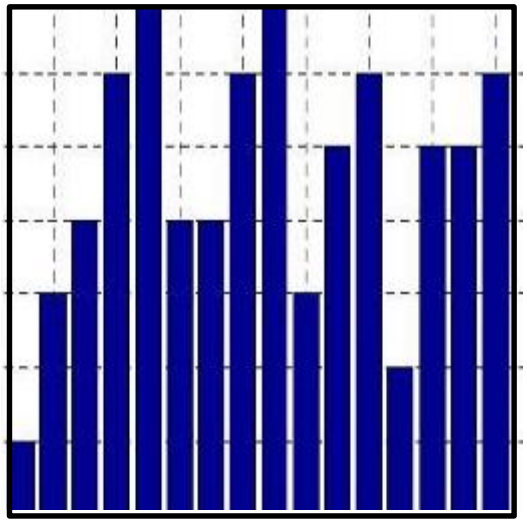
GIST



Texton Maps



CIELAB Color Histograms



Example Images – Low Streetscore

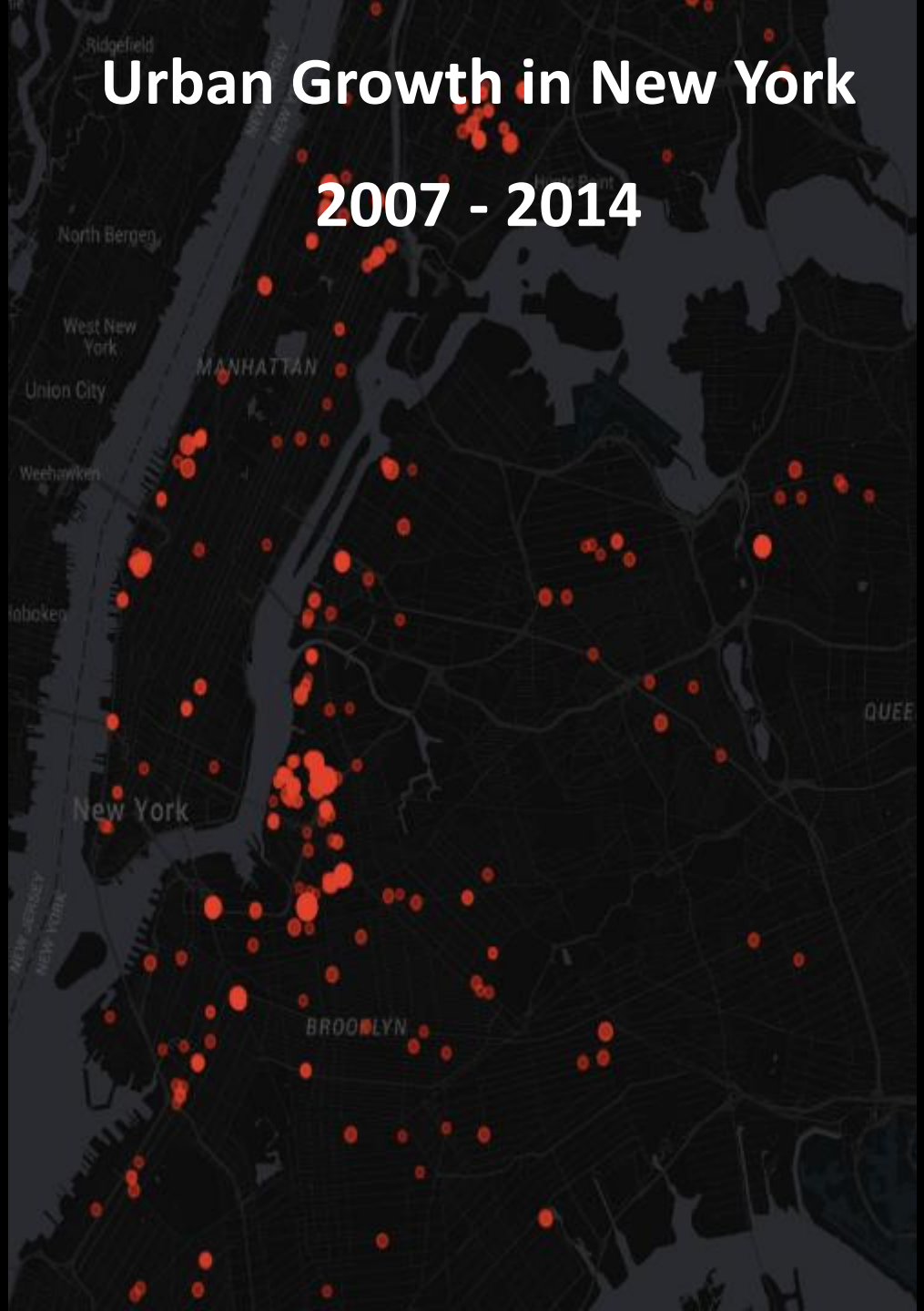
Example Images – High Streetscore

Change in Streetscore is a proxy for more general change in the built environment

Glaeser, Hidalgo, Kominers, Naik and Raskar

Urban Growth in New York

2007 - 2014



The Human Capital Agglomeration Theory

Glaeser et al. (1995, 2009), Ciccone and Hall (1996), Bettencourt (2013)

	Coefficients for Streetchange 2007-2014		
Independent Variables	(4)	(5)	(6)
Share College Education 2000	0.657***		0.703***
	(0.106)		(0.105)
Log Population Density 2000		0.056***	0.084***
		(0.020)	(0.024)
Streetscore 2007	0.027***	0.033**	0.013
	(0.010)	(0.014)	(0.012)

$***p < 0.01, **p < 0.05, *p < 0.1$

Population Density and College Education are strongest predictors of future growth in neighborhoods

Controlling for race, income, age, housing costs etc.

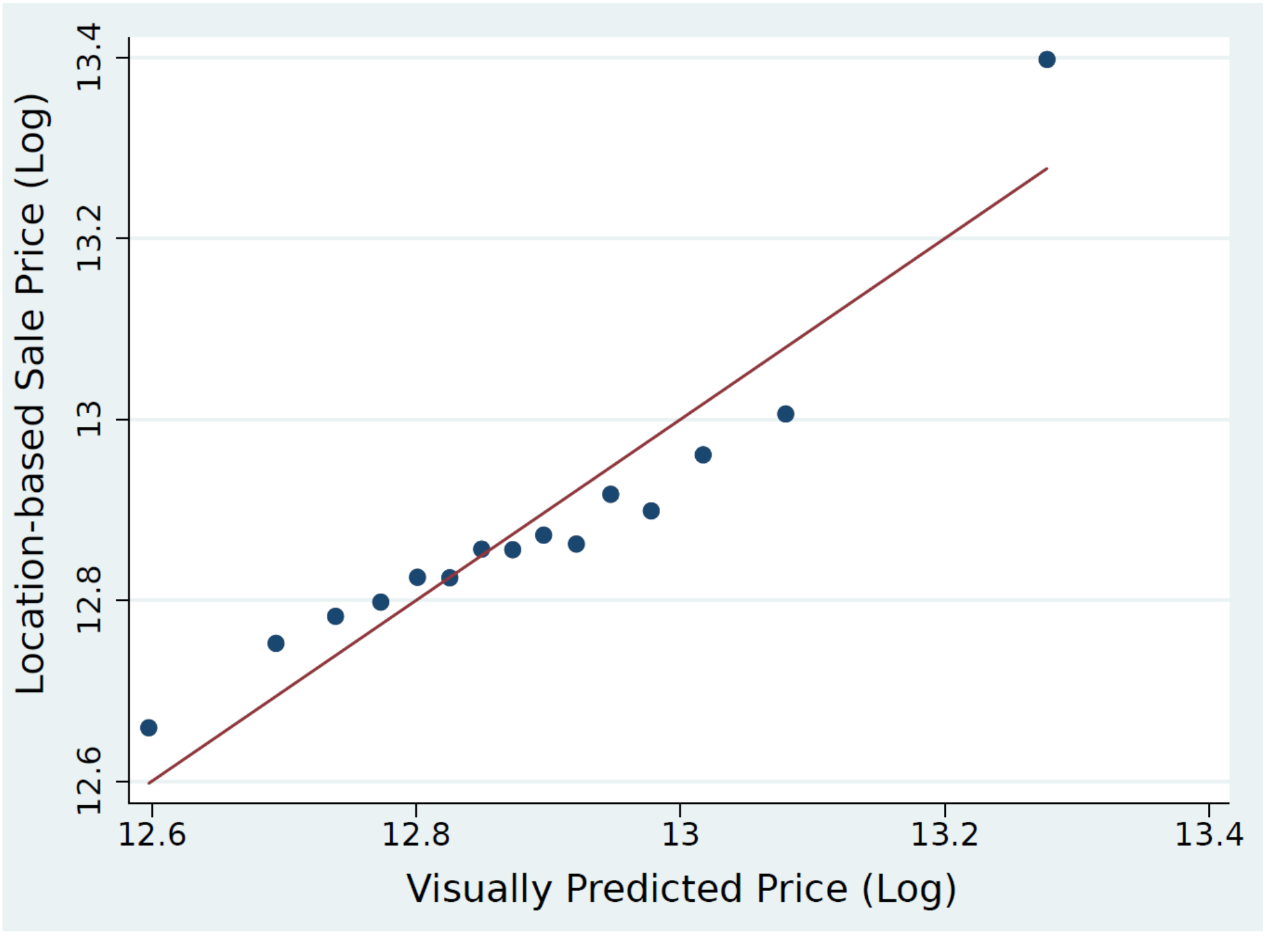
"Invasion" Theory

Burgess (1925)

	Coefficients for Streetchange 2007-2014			
Independent Variables	(1)	(2)	(3)	(4)
Distance to CBD	-0.042***	-0.050***	-0.051***	-0.036***
	(0.011)	(0.011)	(0.011)	(0.011)
Adjacent Streetscore 2007	0.063***			0.049**
	(0.019)			(0.019)
Adjacent Log Population Density 2000		0.115**		0.093**
		(0.046)		(0.046)
Adjacent Share College Education 2000			0.620***	0.626***
			(0.167)	(0.172)

Neighborhoods are more likely to improve when they are close to downtown and/or other neighborhoods perceived as safe

Predicting Property Prices from Imagery

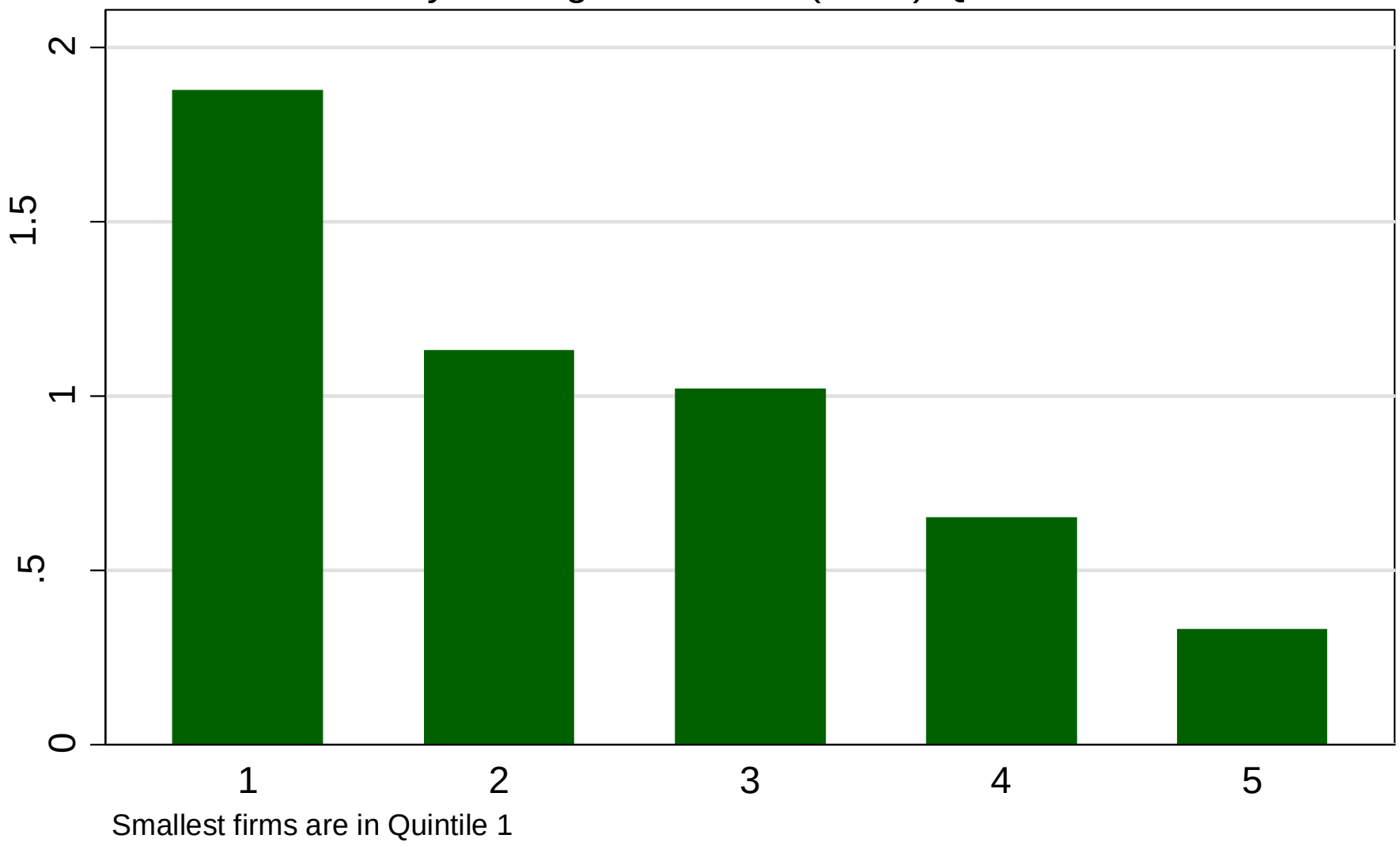

Location-based Sale Price (Log)
12.6
12.8
13
13.2
13.4
Visually Predicted Price (Log)
12.6
12.8
13
13.2
13.4

Facts about Visually Predicted Price

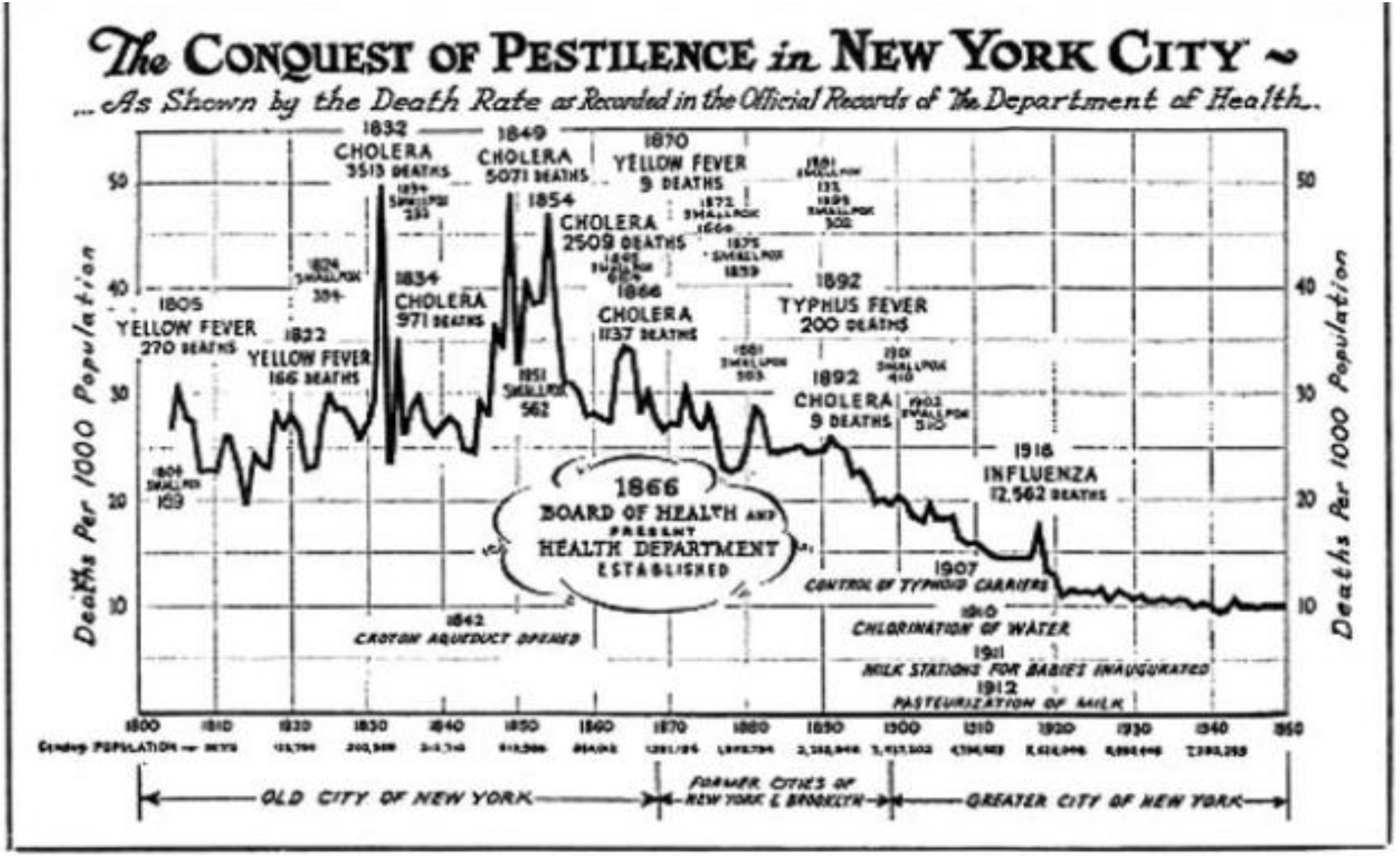
- Neighbor's appearance is almost as important as the home's appearance to value (.7).
- Neighboring homes on the same street are more important than homes on different streets.
- Homes that remodel experience a 4 percent increase in visually predicted value.
- Homes that experience foreclosure see their visually predicted value drop by 3 percent.
- There is no impact of resale or ownership on changes in visually predicted price.

Chinitz: Contrasts in Agglomeration: New York and Pittsburgh

Economic Growth and Firm Size



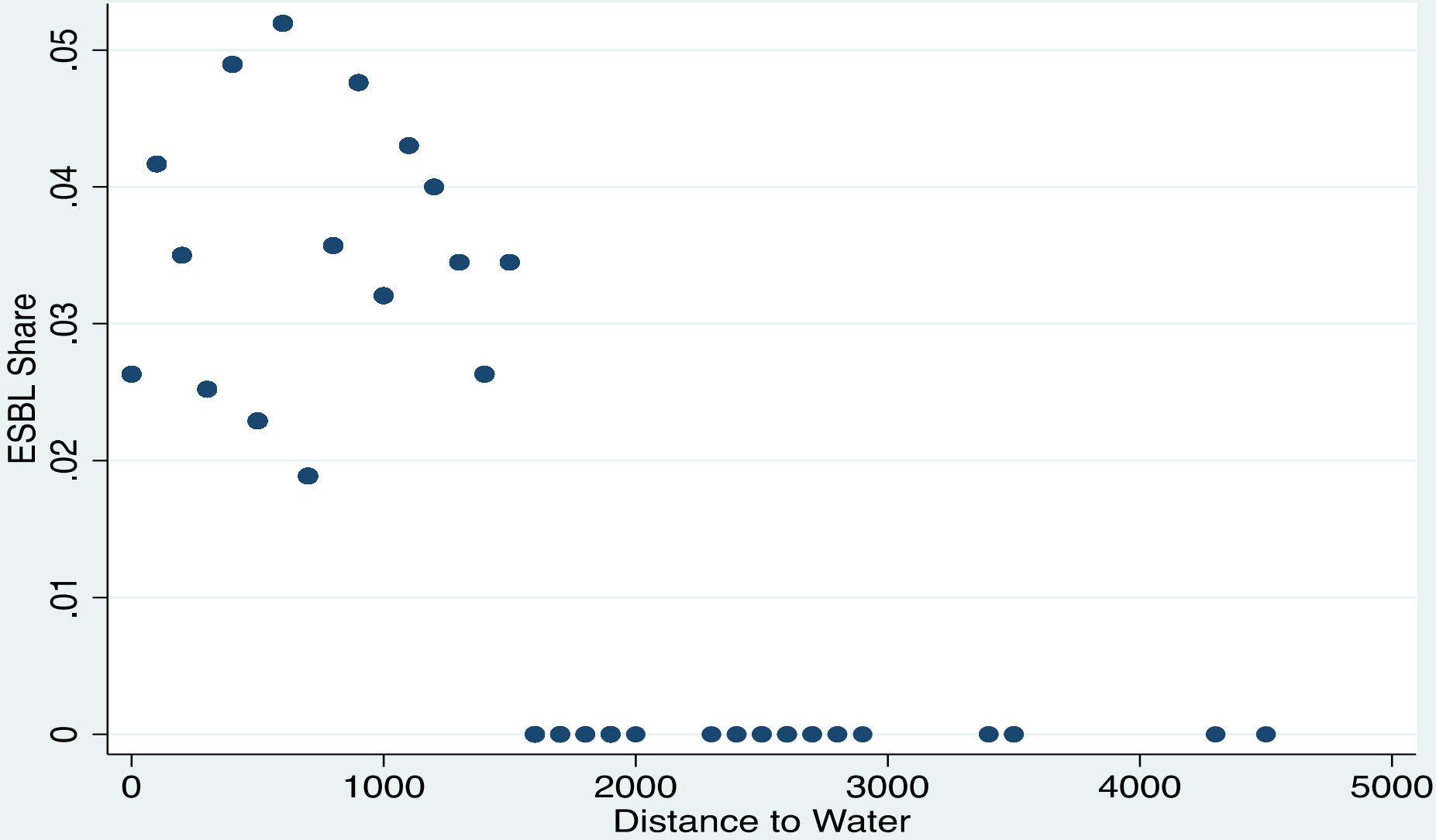
A man transports children through the bustle—and fetid streets—of Mumbai's Dharavi slum. Conditions like this are similar to those that faced many residents of Paris, London, New York, and other large cities in the nineteenth century. *Prashanth Vishwanathan / Bloomberg / Getty Images*



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

Antibiotic Resistant Disease and Proximity to Water in Hyderabad

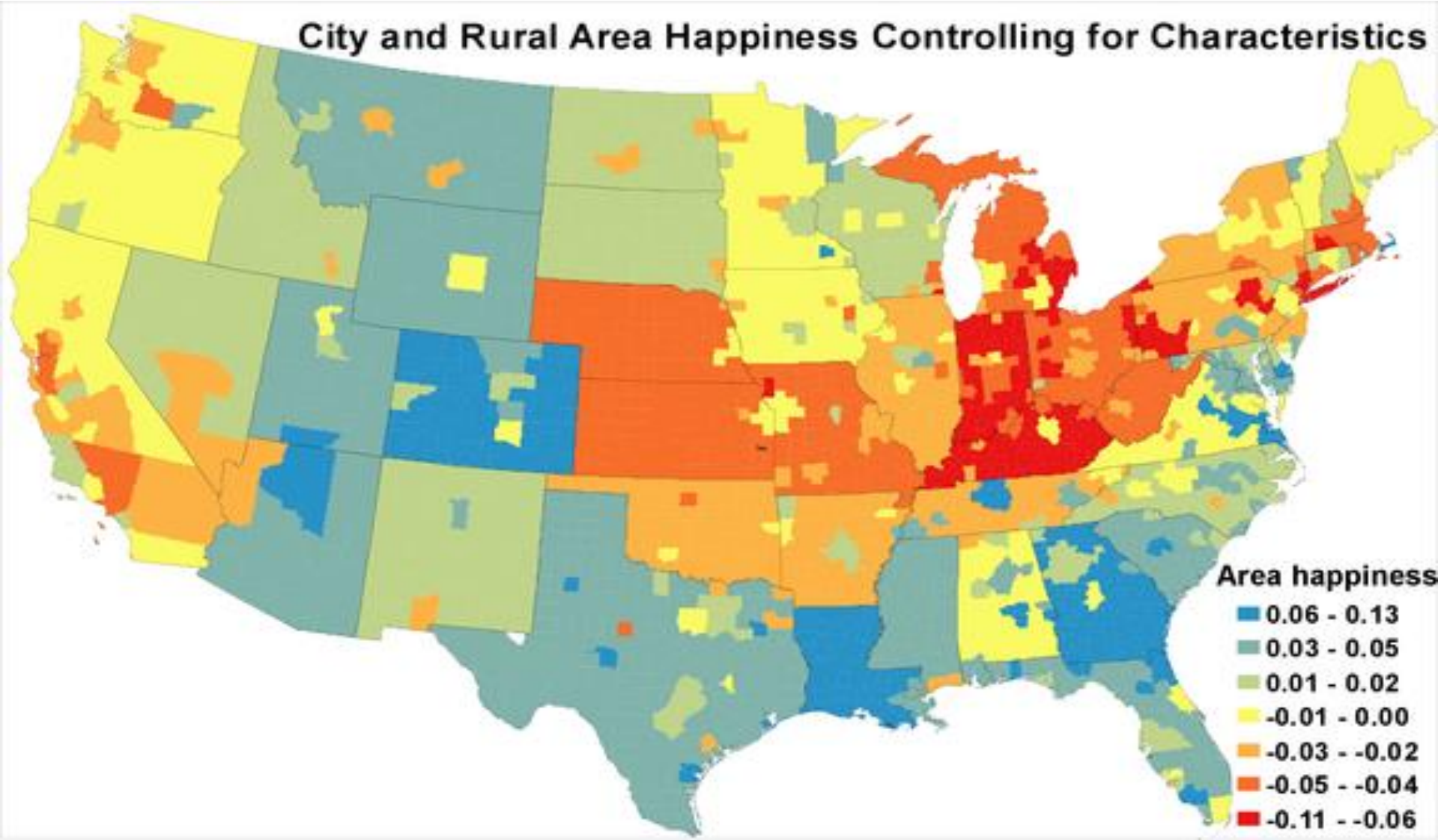


A Tale of Two Technologies: Governing and the Fate of Poorer Cities

Gautrain by Habib M’henni

Engineering vs. Economics: Singapore, Stockholm and Oslo

Attract and Train Smart People and then get out of their way



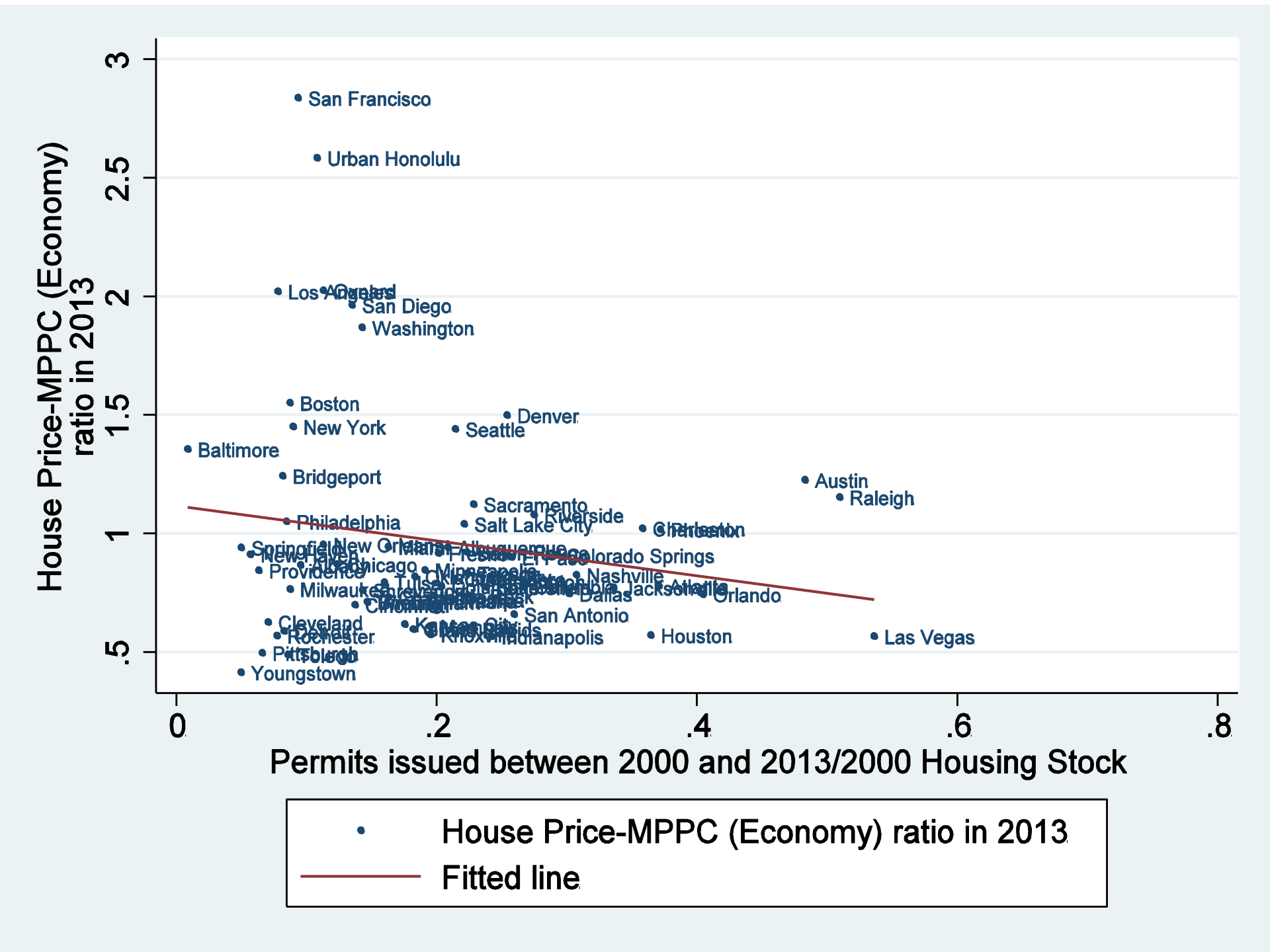
Quality of Life: Economic Development

The Rise of the Consumer City

Picture by JIP

Skilled Sunbelt Superstars

Photo by Arvindn


House Price-MPPC (Economy) ratio in 2013
.5
1
1.5
2
2.5
3
0
.2
.4
.6
.8
Permits issued between 2000 and 2013/2000 Housing Stock
San Francisco
Urban Honolulu
San Diego
Washington
Boston
Denver
New York
Seattle
Baltimore
Bridgeport
Austin
Raleigh
Sacramento
Riverside
Philadelphia
Salt Lake City
Providence
Nashville
Dallas
Orlando
San Antonio
Cleveland
Houston
Las Vegas
Youngstown
House Price-MPPC (Economy) ratio in 2013
Fitted line

The Physical City:
NIMBYism vs. Monumentalism

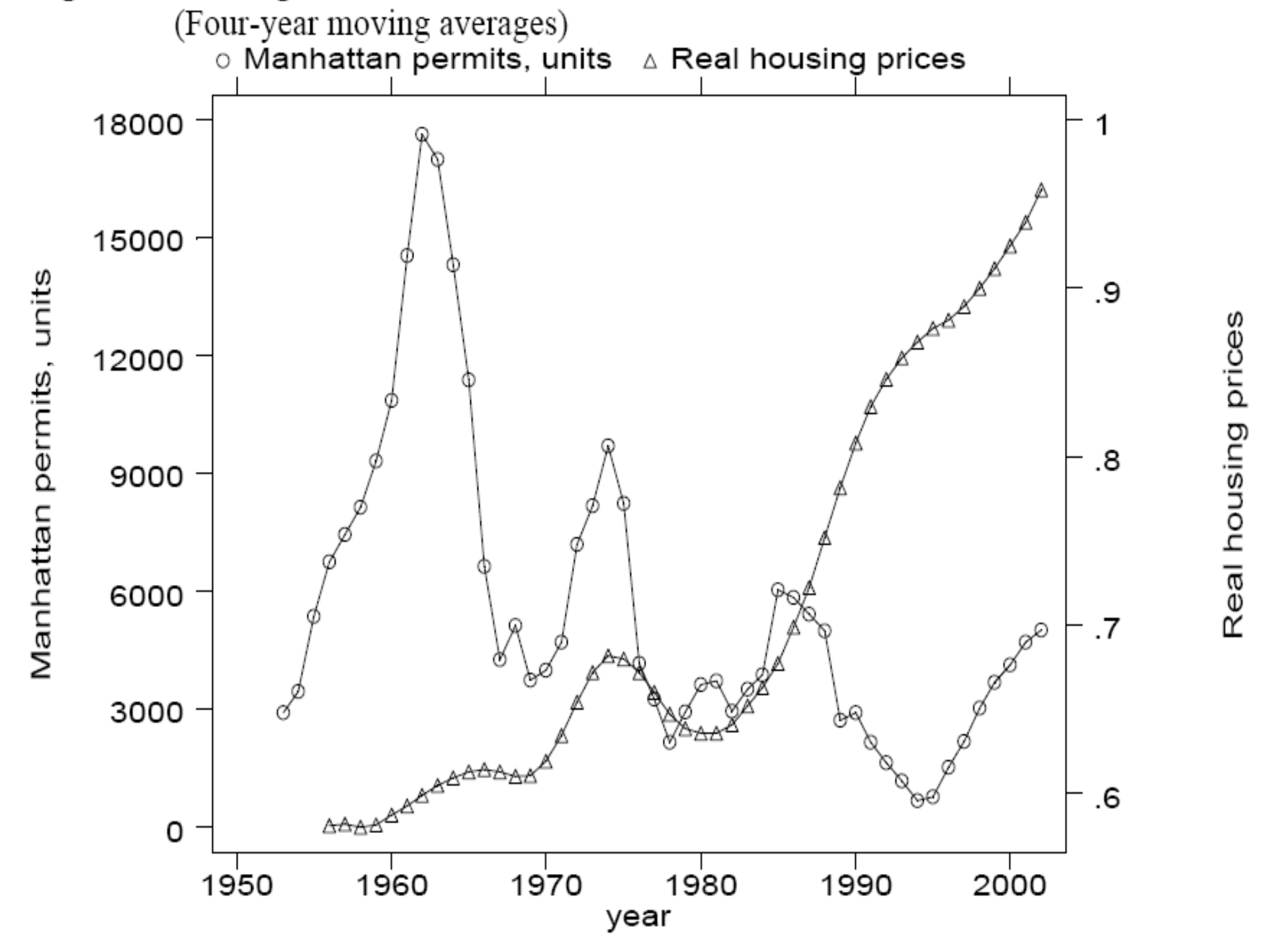
Mumbai has recently begun building up, but the city is still short, expensive, and congested because of decades of overrestricting height. *Scott Eels / Bloomberg / Getty Images*

Astana by ChelseaFunNumberOne

-

The great urbanist Jane Jacobs looks none too happy with the tall buildings surrounding her. She argued vigorously against such high-rises and in favor of a low-slung cityscape like that of New York's Greenwich Village. Her arguments have not all proven correct.

Bob Gomel/ Time & Life Pictures/Getty Images


(Four-year moving averages)
Manhattan permits, units
Real housing prices
18000
15000
12000
9000
6000
3000
0
Manhattan permits, units
1
.9
.8
.7
.6
Real housing prices
1950
1960
1970
1980
1990
2000
year

Saiz, Geography and Regulations

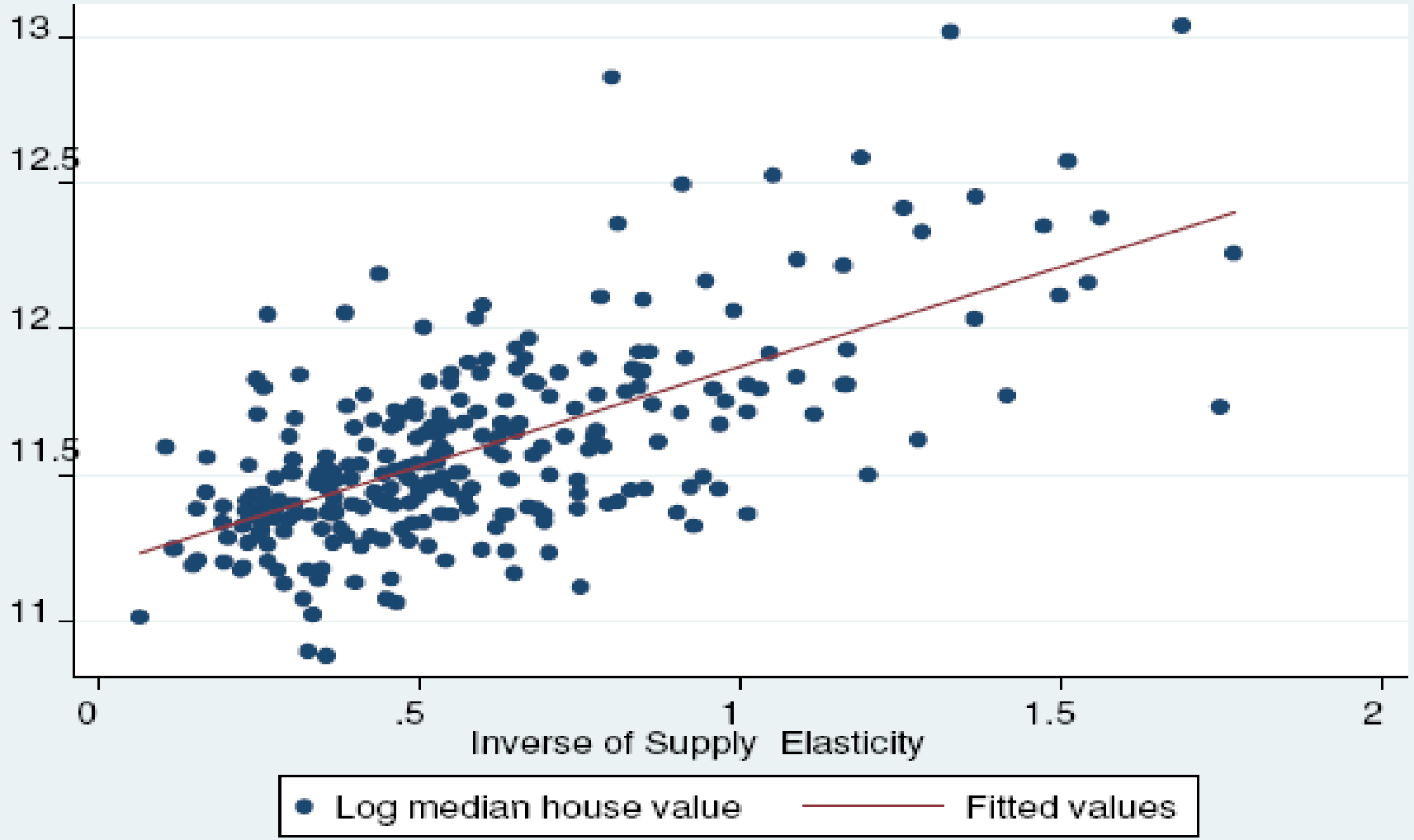


Figure 1: Price Growth by Tier: China and U.S.

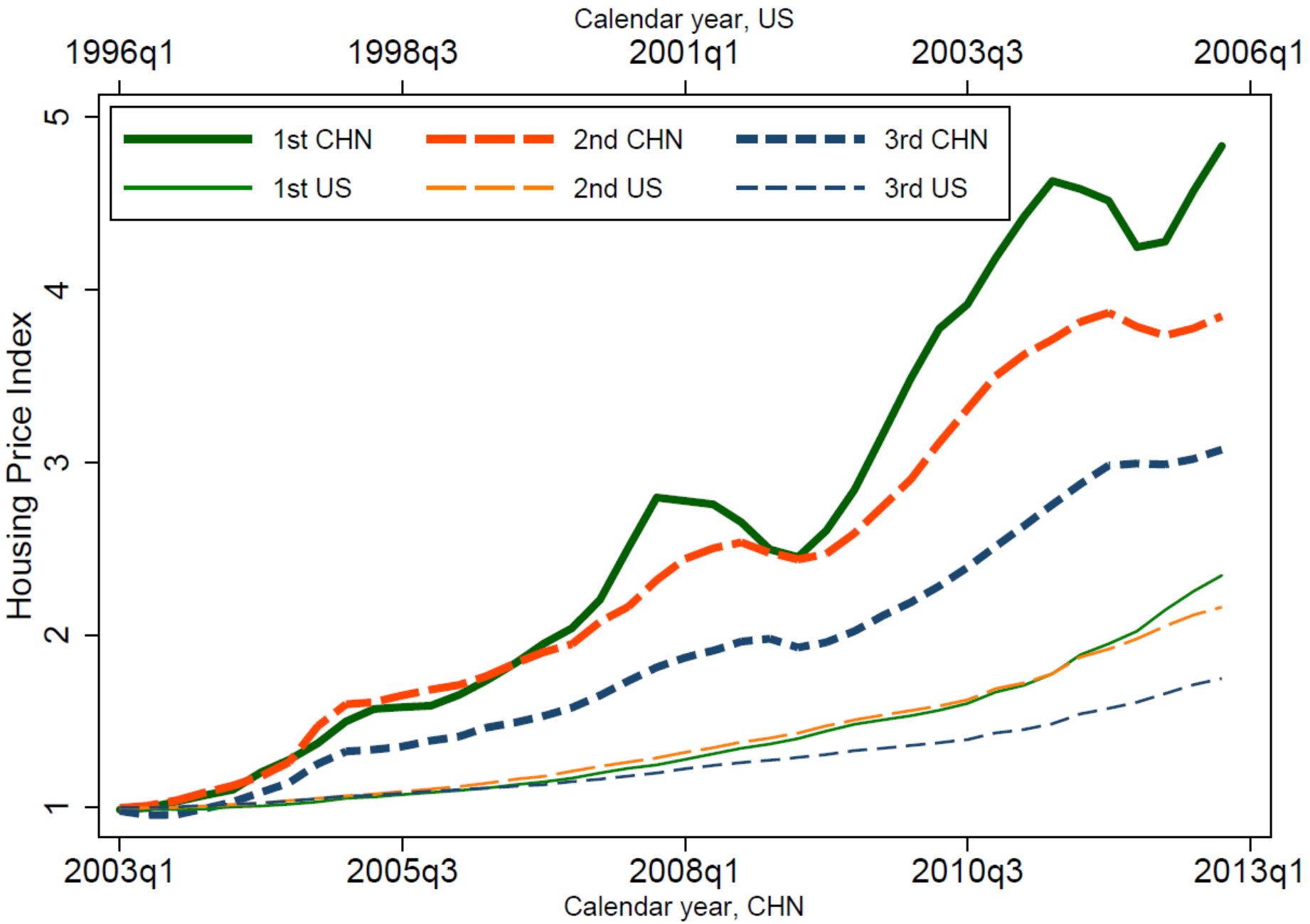


Figure 2b: Construction (dollar value) China and U.S.

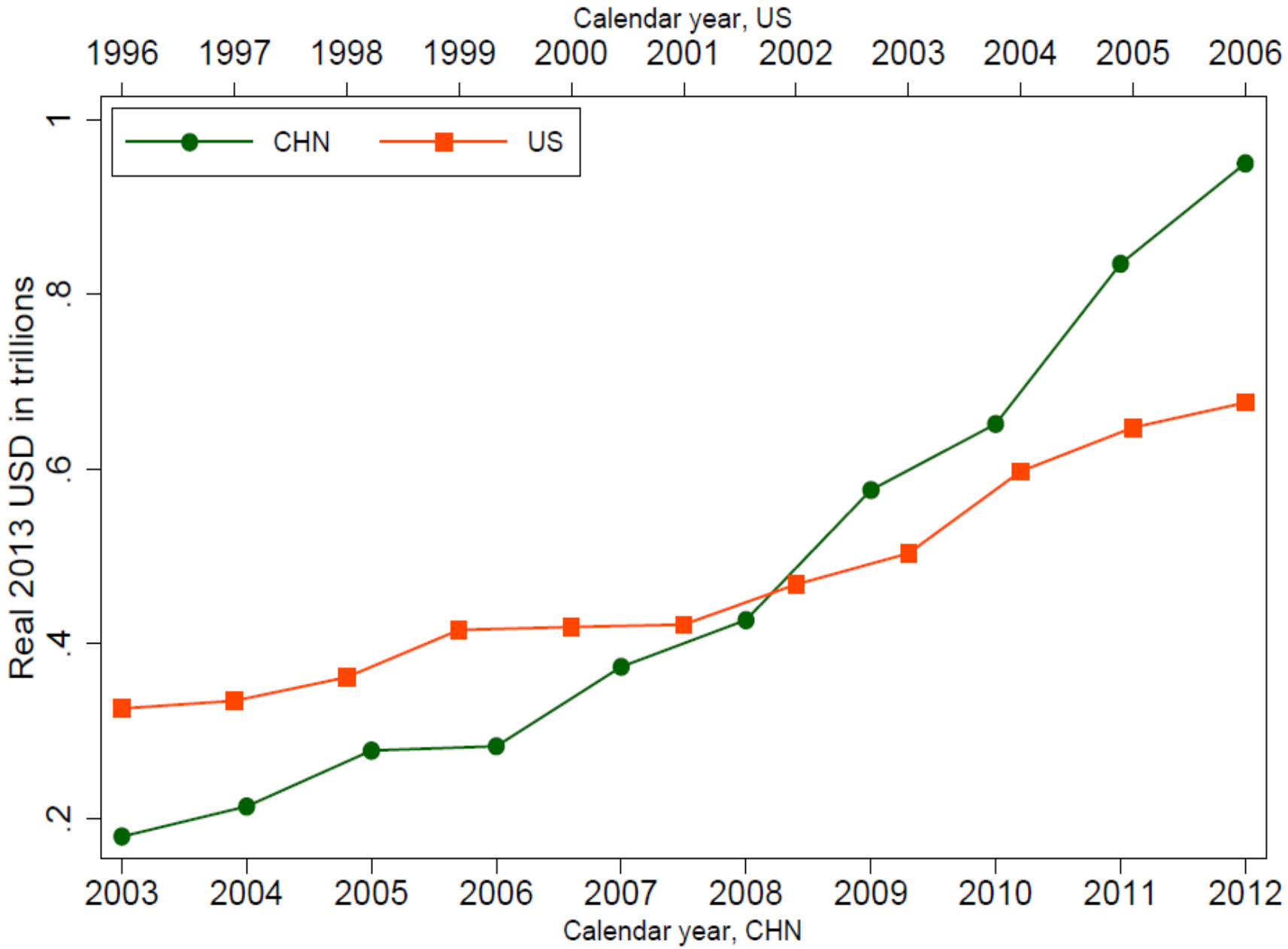
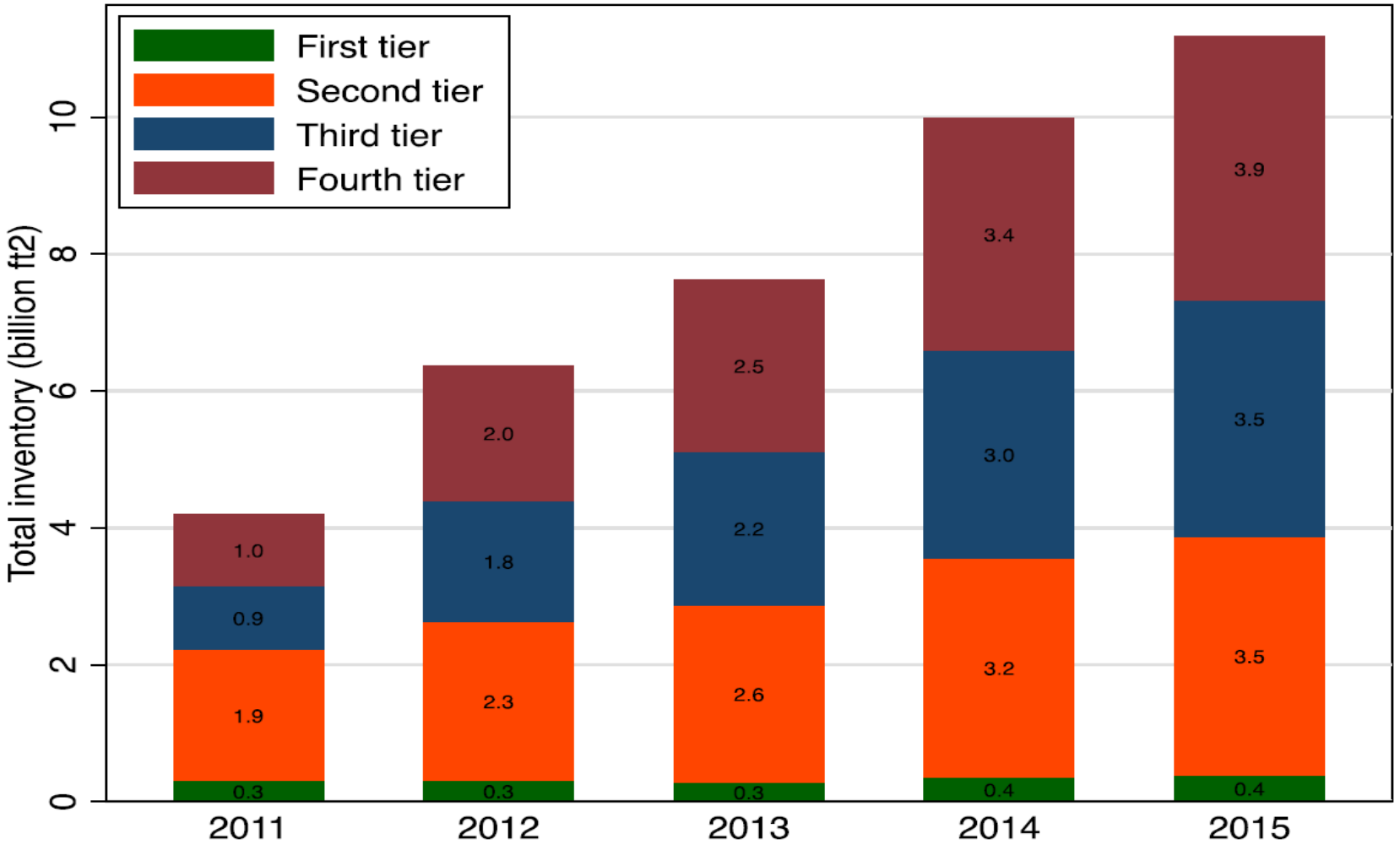
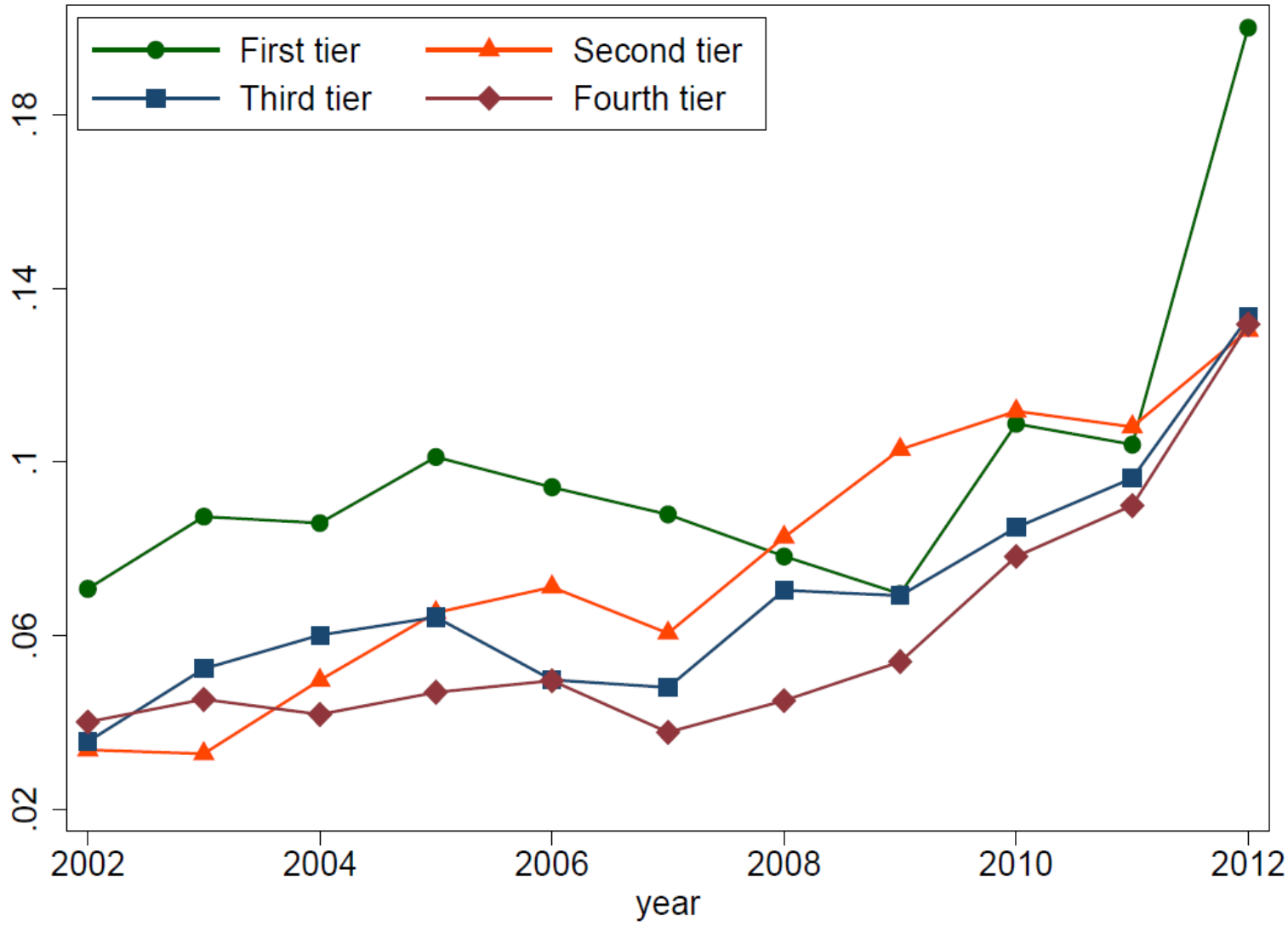


Figure 4: Inventory Estimates by Tier



Note: Developer inventory data is from local housing bureau (Fangguanju), and compiled by Soufun. Because the data does not cover all the cities, our estimates of inventory in each tier is based on inventory per capita by tier multiplied by urban population in each tier. We also assume the 4th tier cities have the same inventory per capita as the 3rd tier cities. In total, the estimates are based on 262 prefecture level cities: 4 cities in the first tier, 34 in the second tier and 84 in the third and 140 in the fourth.

Figure 5: Vacancy Rates 2002-2012 Urban Housing Survey (36 Cities)



Note: Data from China Urban Household Survey. We keep the 36 cities with observations throughout 2002-2012. City tiers are based on Fang et al. (2015).

Figure 6b: Second Tier

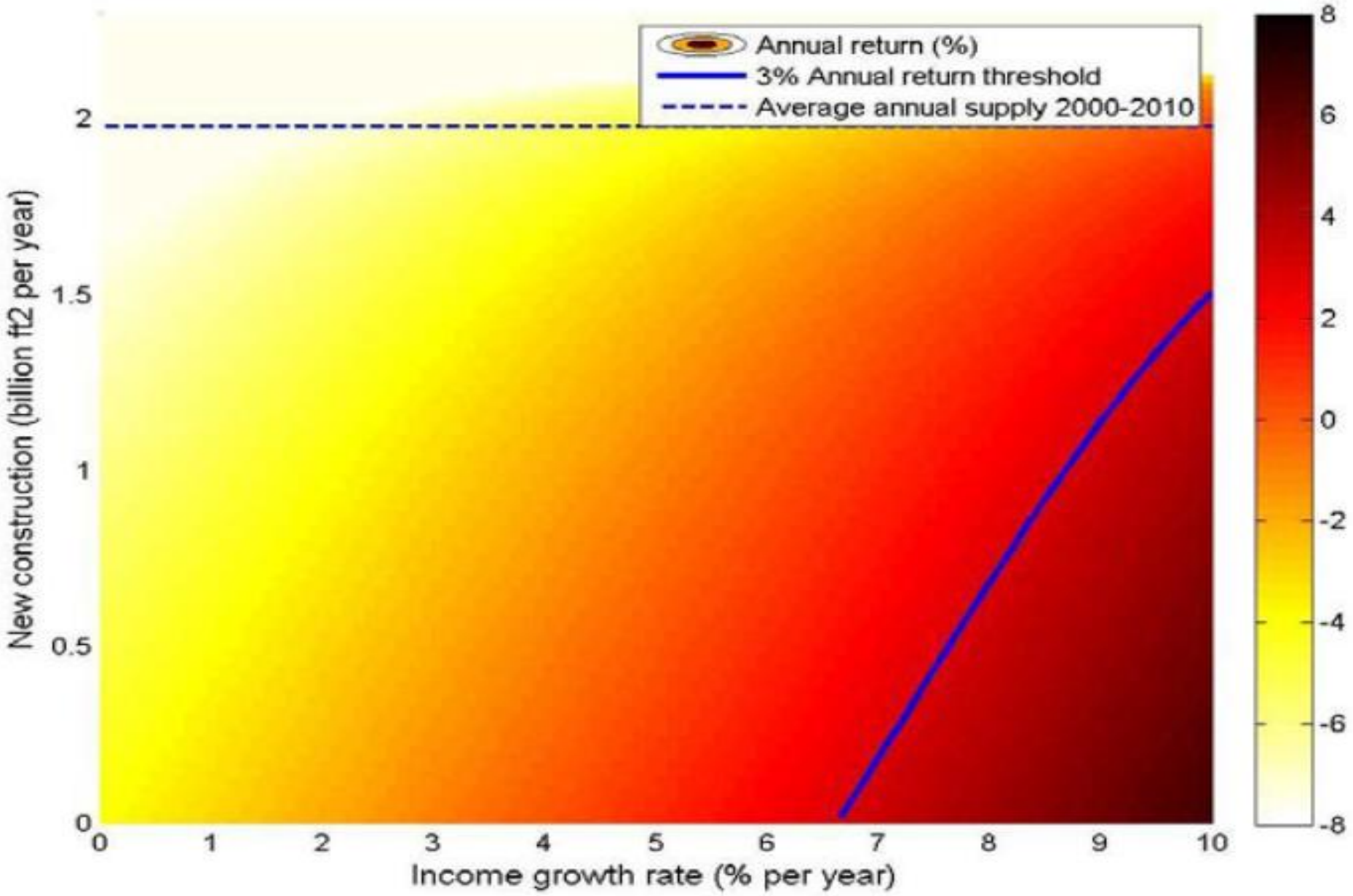
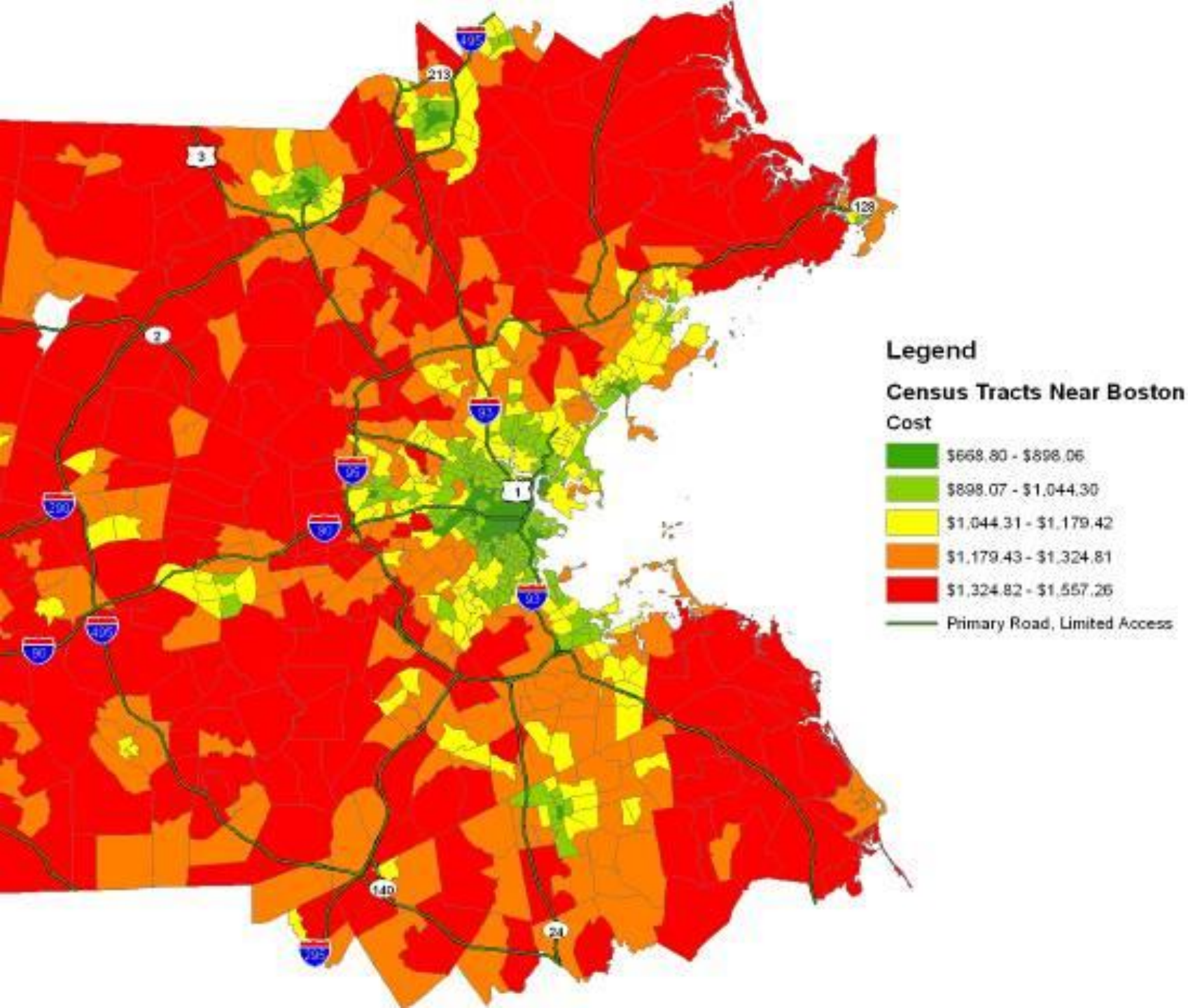
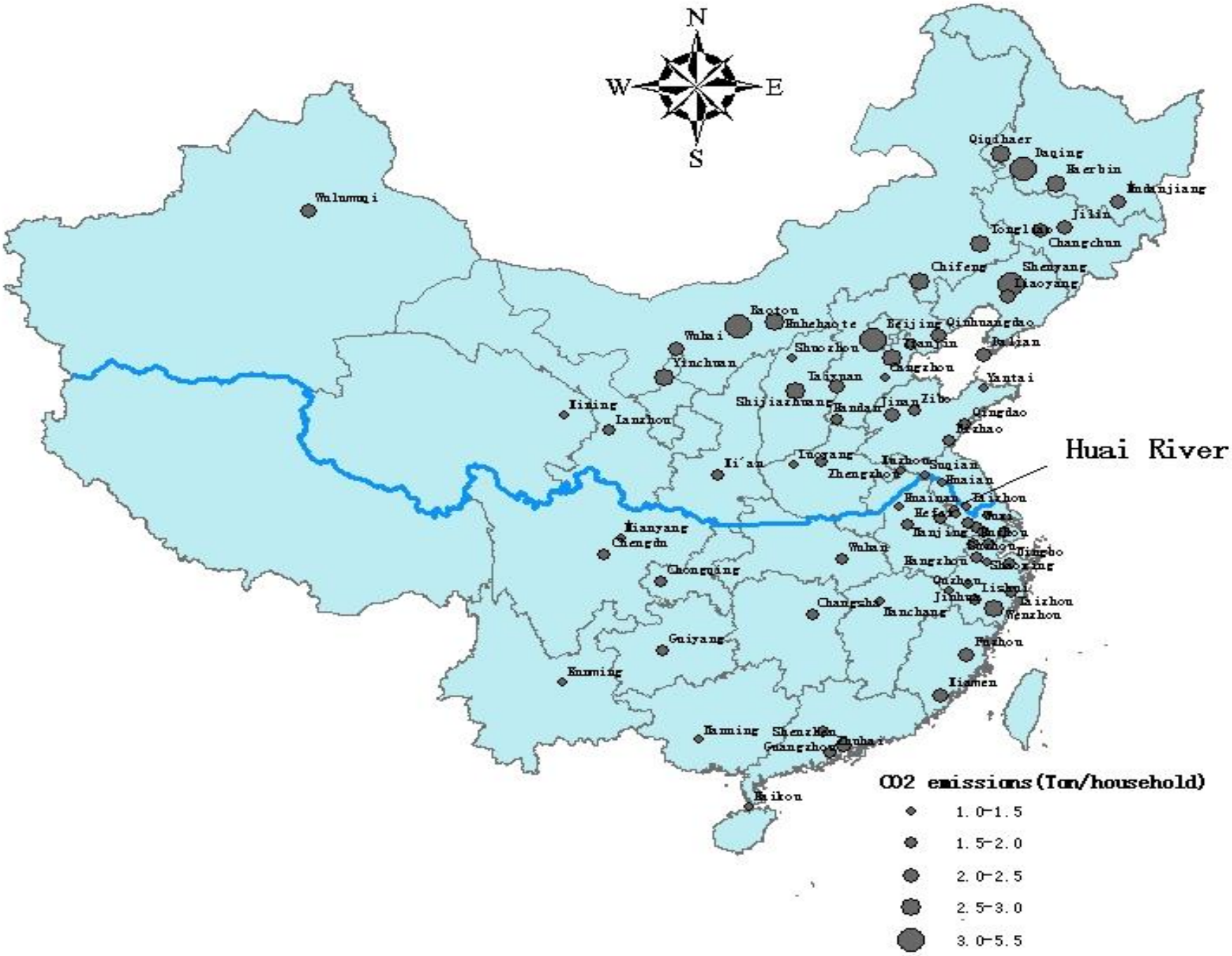


Image by QuarterCircleS


Legend
Census Tracts Near Boston
Cost
$668.80 - $898.06
$898.07 - $1,044.30
$1,044.31 - $1,179.42
$1,179.43 - $1,324.81
$1,324.82 - $1,557.26
Primary Road, Limited Access


N
W
E
S
Huai River
Qiqihaer
Daqing
Haerbin
Mudanjiang
Jilin
Tonglao
Changchun
Chifeng
Shenyang
Liaoyang
Baotou
Huhehaote
Beijing
Qinhuangdao
Wuhai
Shuozhou
Tianjin
Dalian
Yinchuan
Cangzhou
Taiyuan
Yantai
Shijiazhuang
Handan
Jinan
Zibo
Qingdao
Lanzhou
Rizhao
Luoyang
Zhengzhou
Suqian
Huaian
Huainan
Taizhou
Hefei
Wuxi
Nanjing
Suzhou
Ningbo
Wuhan
Hangzhou
Shaoxing
Chongqing
Quzhou
Lishui
Jinhua
Taizhou
Changsha
Nanchang
Wenzhou
Guiyang
Fuzhou
Kunming
Xiamen
Nanning
Shenzhen
Guangzhou
Zhuhai
Haikou
CO2 emissions(Ton/household)
1.0-1.5
1.5-2.0
2.0-2.5
2.5-3.0
3.0-5.5