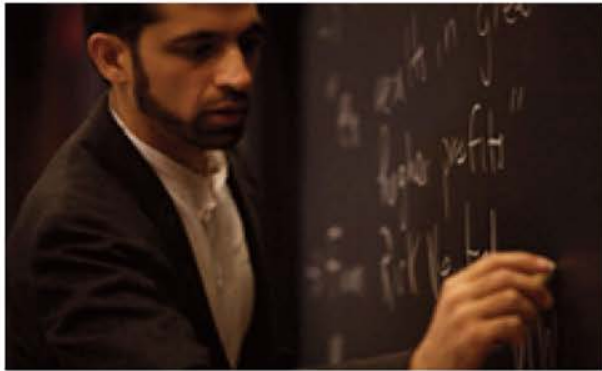




HARVARD Kennedy School

RAPPAPORT INSTITUTE

for Greater Boston



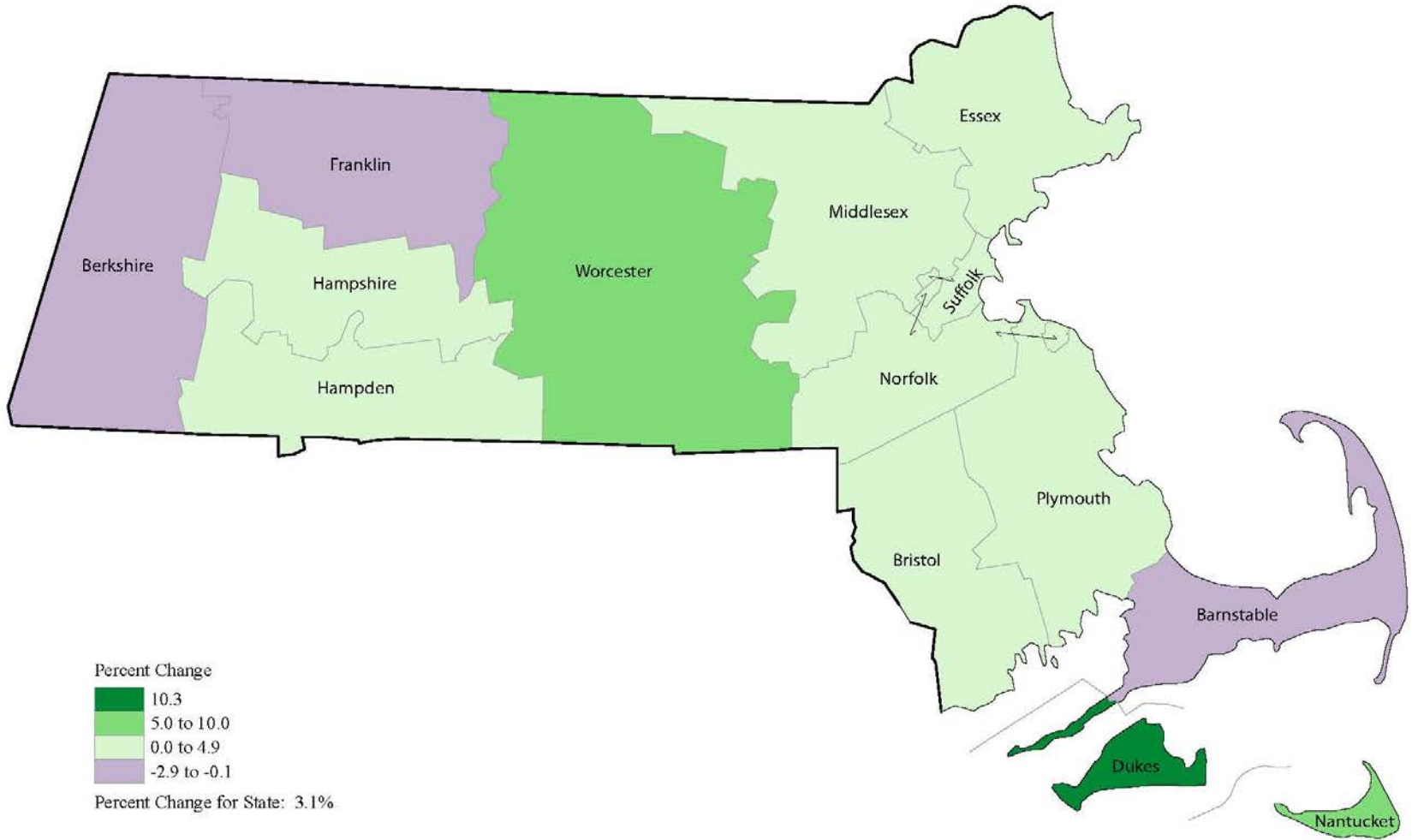
The Growth of Worcester in National Perspective

Edward Glaeser

Director, Rappaport Institute for Greater Boston and
Professor of Economics, Harvard University

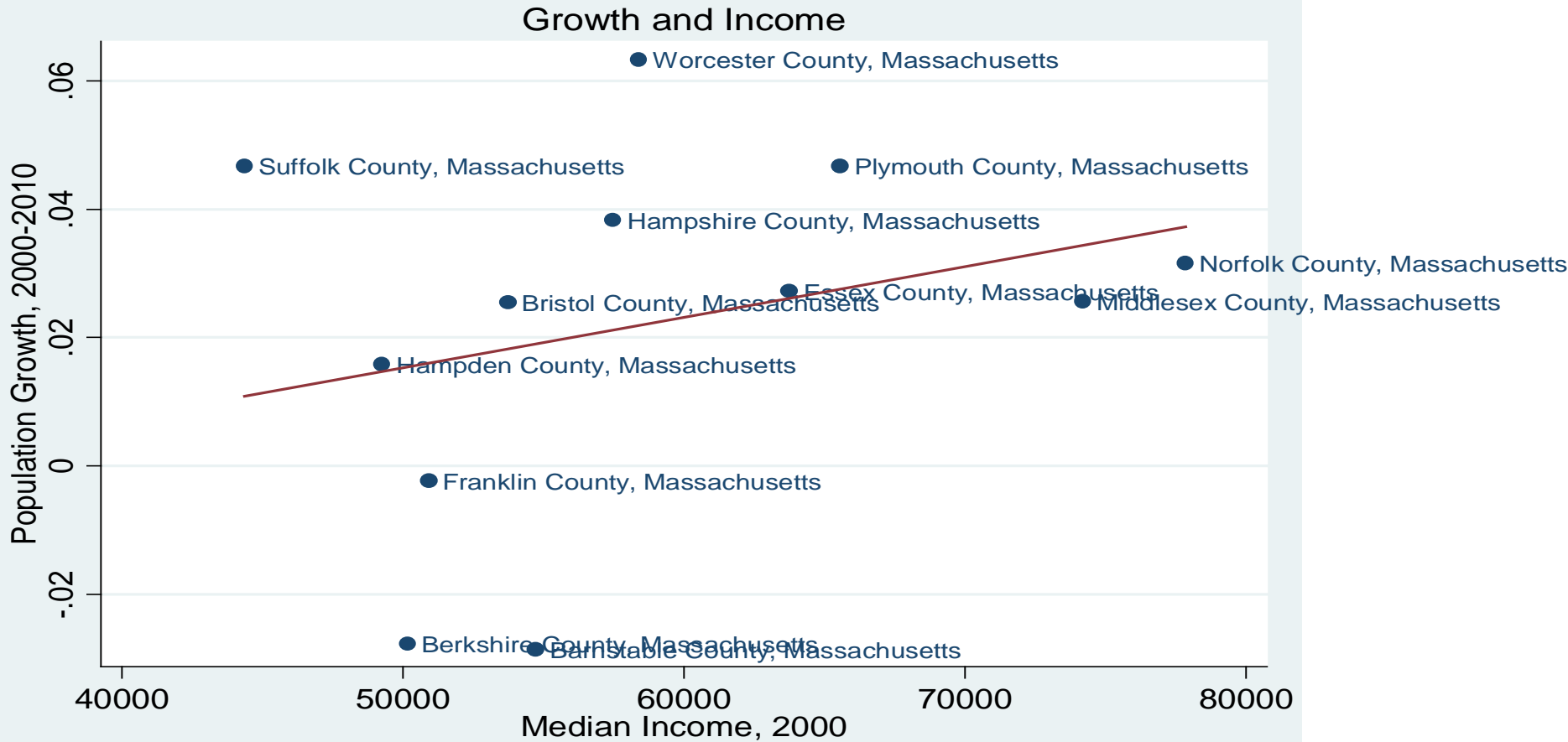
MASSACHUSETTS - 2010 Census Results

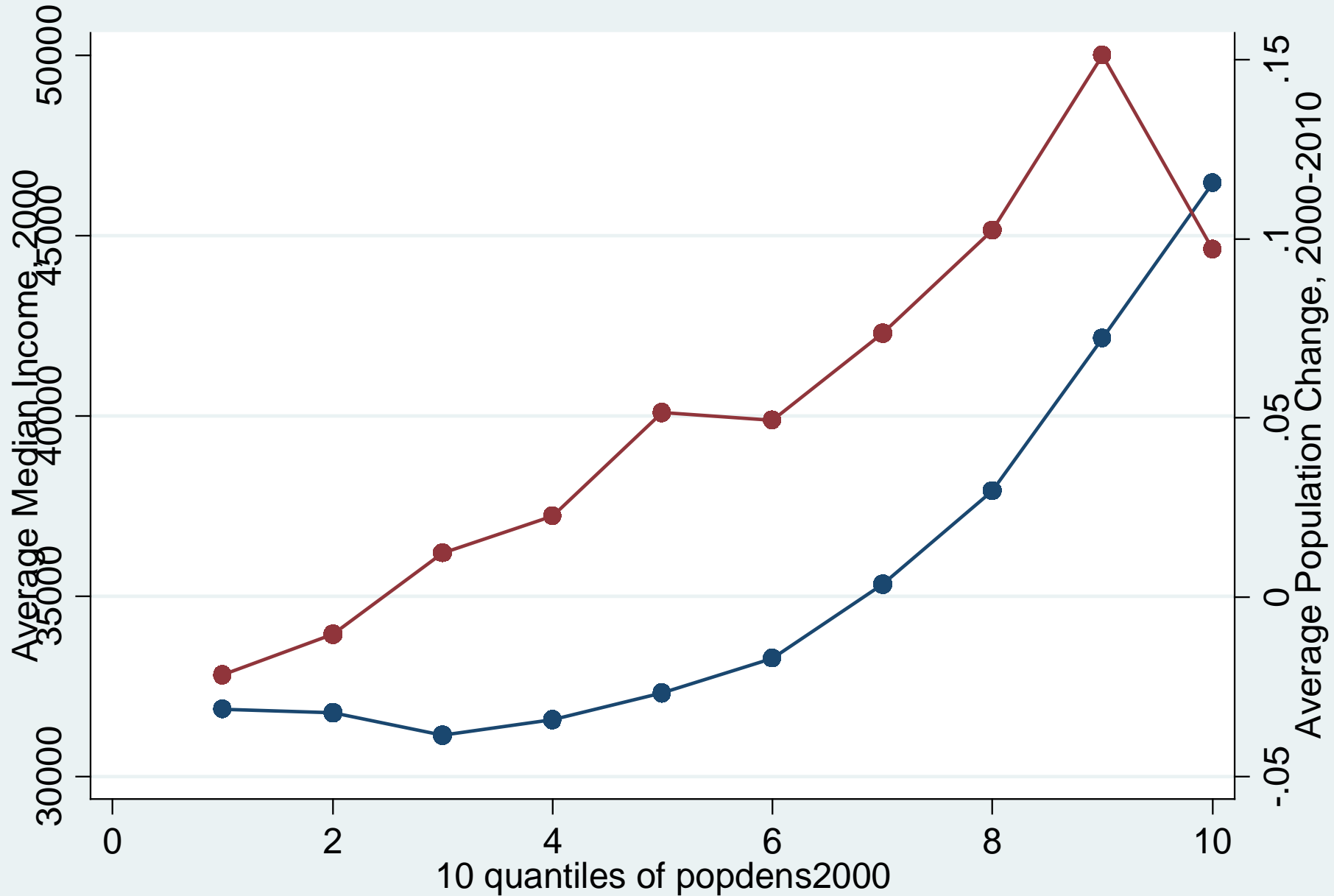
Percent Change in Population by County: 2000 to 2010



Source: U.S. Census Bureau, Census 2000 and 2010 Census Redistricting Data Summary File
For more information visit www.census.gov

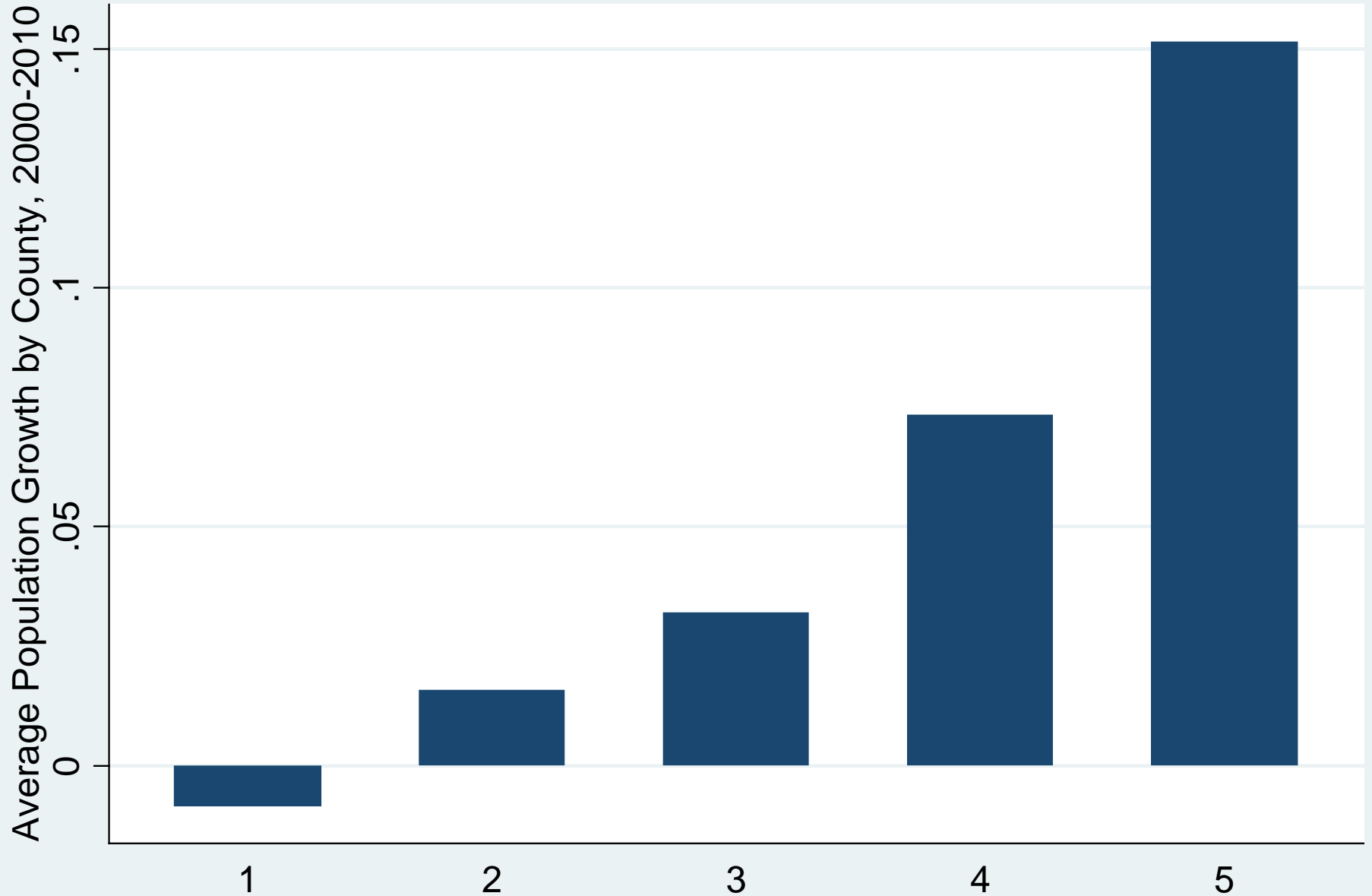
Growth and Income in MA



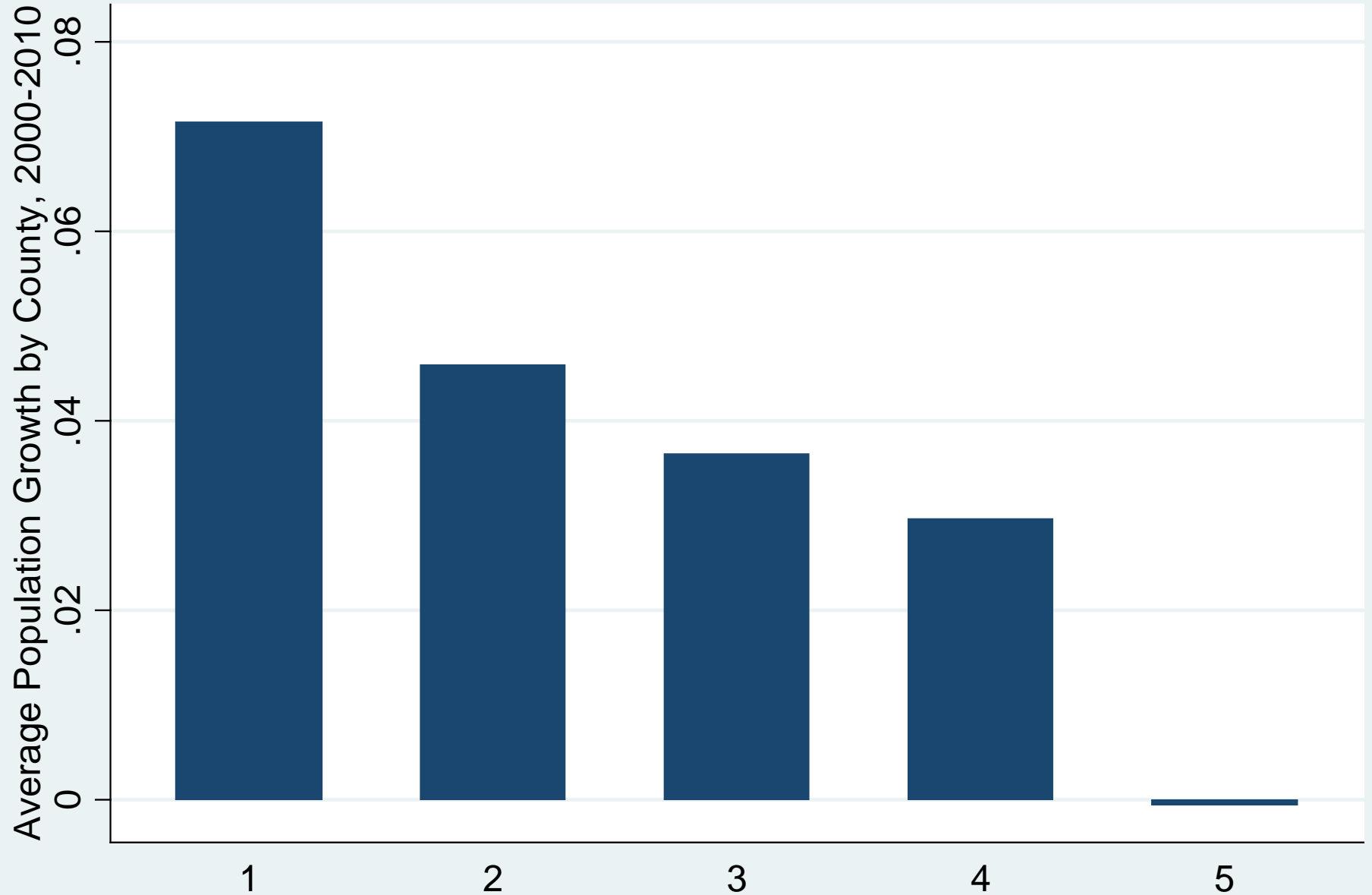


—●— Average Median Income, 2000 —●— Average Population Change

Average Population Growth by Median Income in 2000
(Quintiles)



Average Population Growth by Distance to Nearest Port (Quintiles)



The Central Paradox

Why is it that in an era in which transportation and communication costs have virtually vanished, cities have become more important than ever?

Urban resurgence is visible in high income levels, robust housing prices, and a concentration of innovation in urban areas.

This is even clearer in the developing world.



FINAL DAILY NEWS 15¢
NEW YORK'S PREMIER NEWSPAPER
SUNDAY, SEPTEMBER 10, 1974

FORD TO CITY: DROP DEAD

Vows He'll Veto Any Bail-Out



**Abe, Carey
Rip Stand**

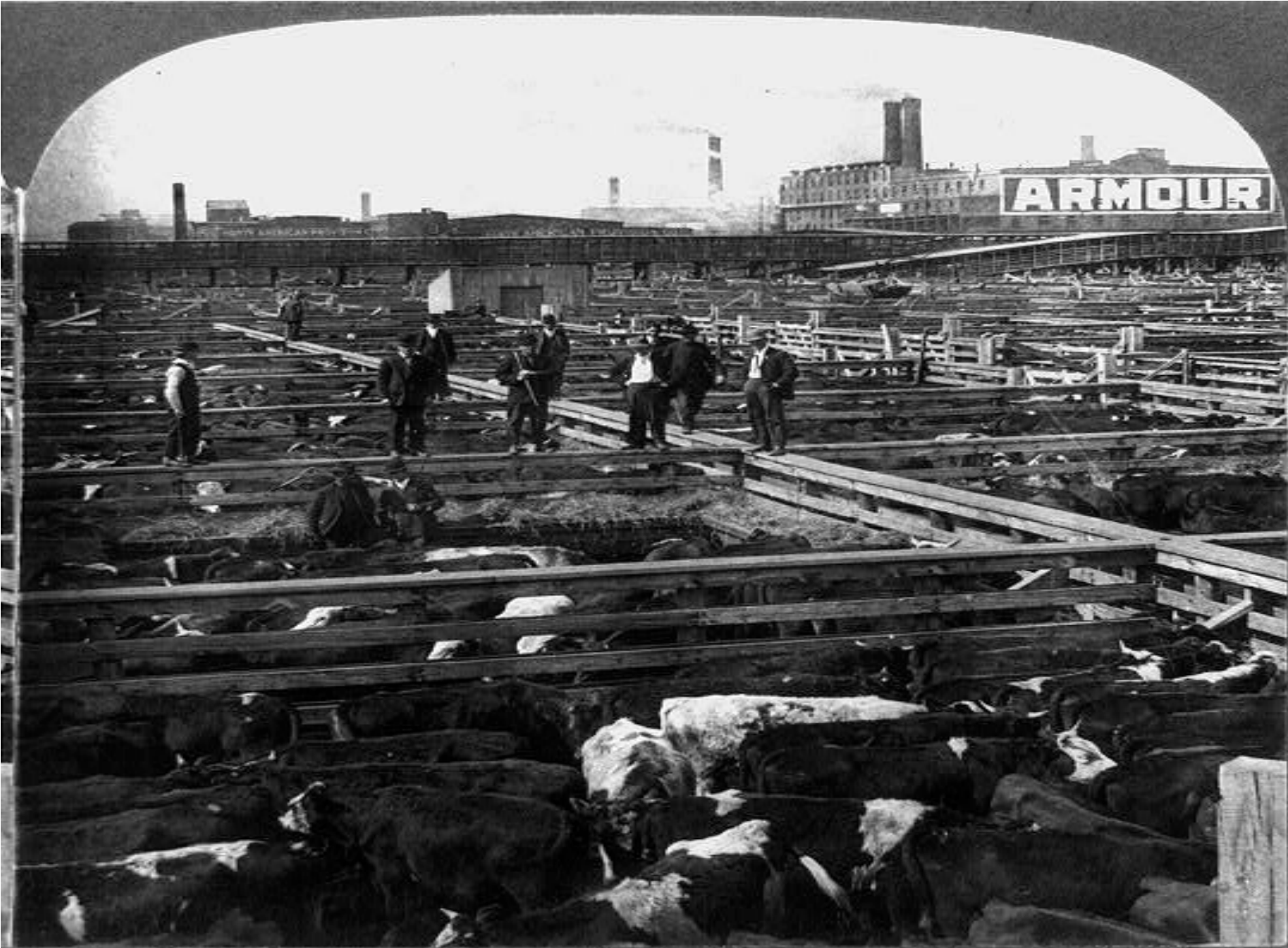
*Stocks Skid,
Dow Down 12*

Three pages of photos
appear on pages 10, 11 and 12.

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*





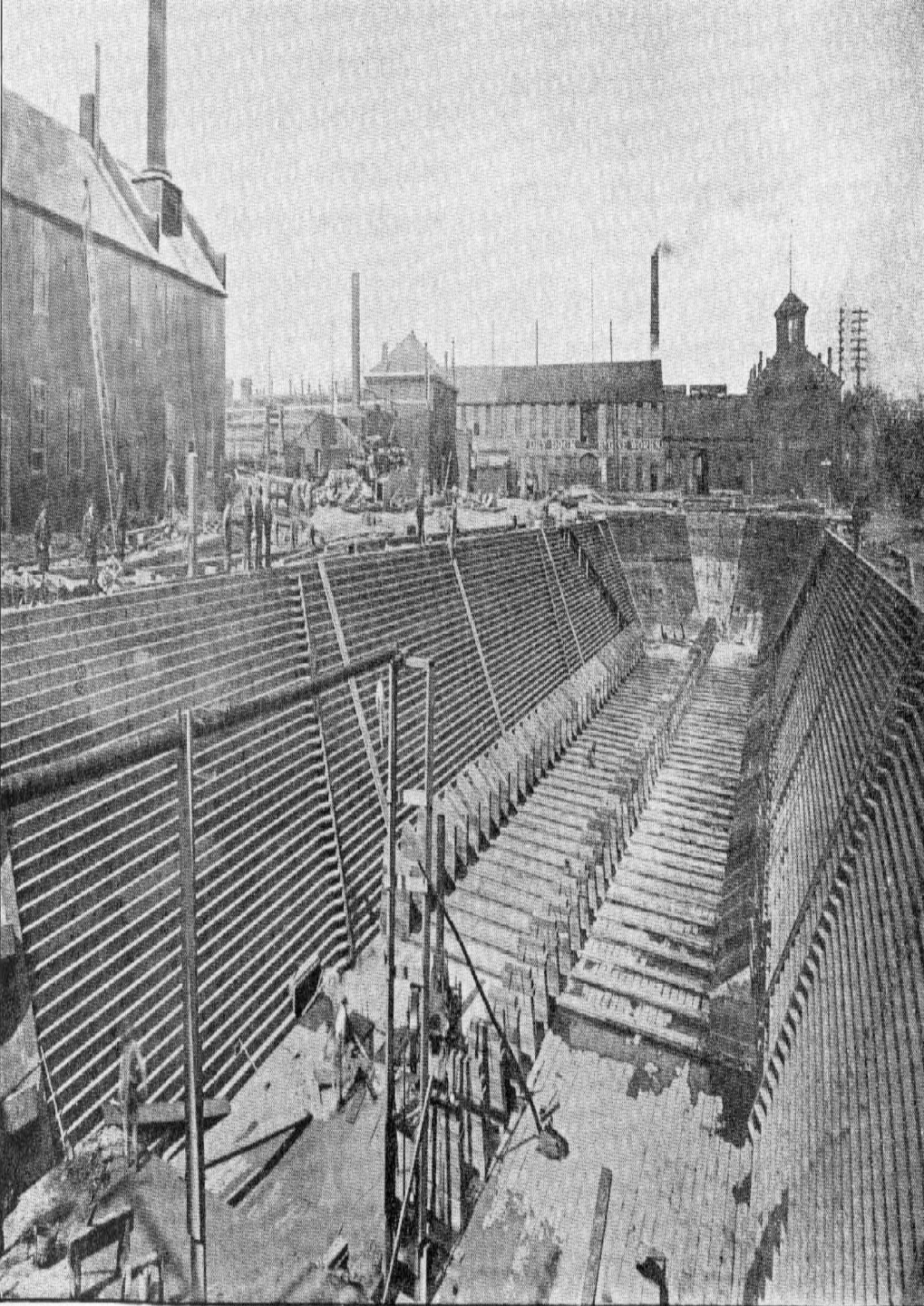
The Chicago Home Insurance Building, built in 1885, is widely considered the world's first metal-framed skyscraper. This technology would come to dictate the shape of most cities in the twentieth century and beyond.

Chicago History Museum/Getty Images

Until nearby commercial structures began to dwarf it in 1890, Trinity Church had been New York's tallest building for forty years. The two buildings to the church's left held that honor for thirty years until they were destroyed in a terrible attack that ultimately illustrated the resilience of a great city.

Jeff Greenberg/ World of Stock





Innovation in the Industrial Age

Francis Cabot Lowell goes to Manchester and memorizes the structure of power looms—Boston associates establish Lowell and Lawrence.

The “father of American watch-making,” “went to Boston to perfect himself as a journeyman watchmaker ... so that he could get the instruction of Tubal Hone, then the best watchmaker in America.”

Lawrence establishes the Lawrence Scientific School at Harvard; Rogers comes to Boston for the scientific atmosphere and gets the legislature to found M.I.T.



Ford's Big Idea (River Rouge)



Dollars per Ton Mile (Real)

.185063

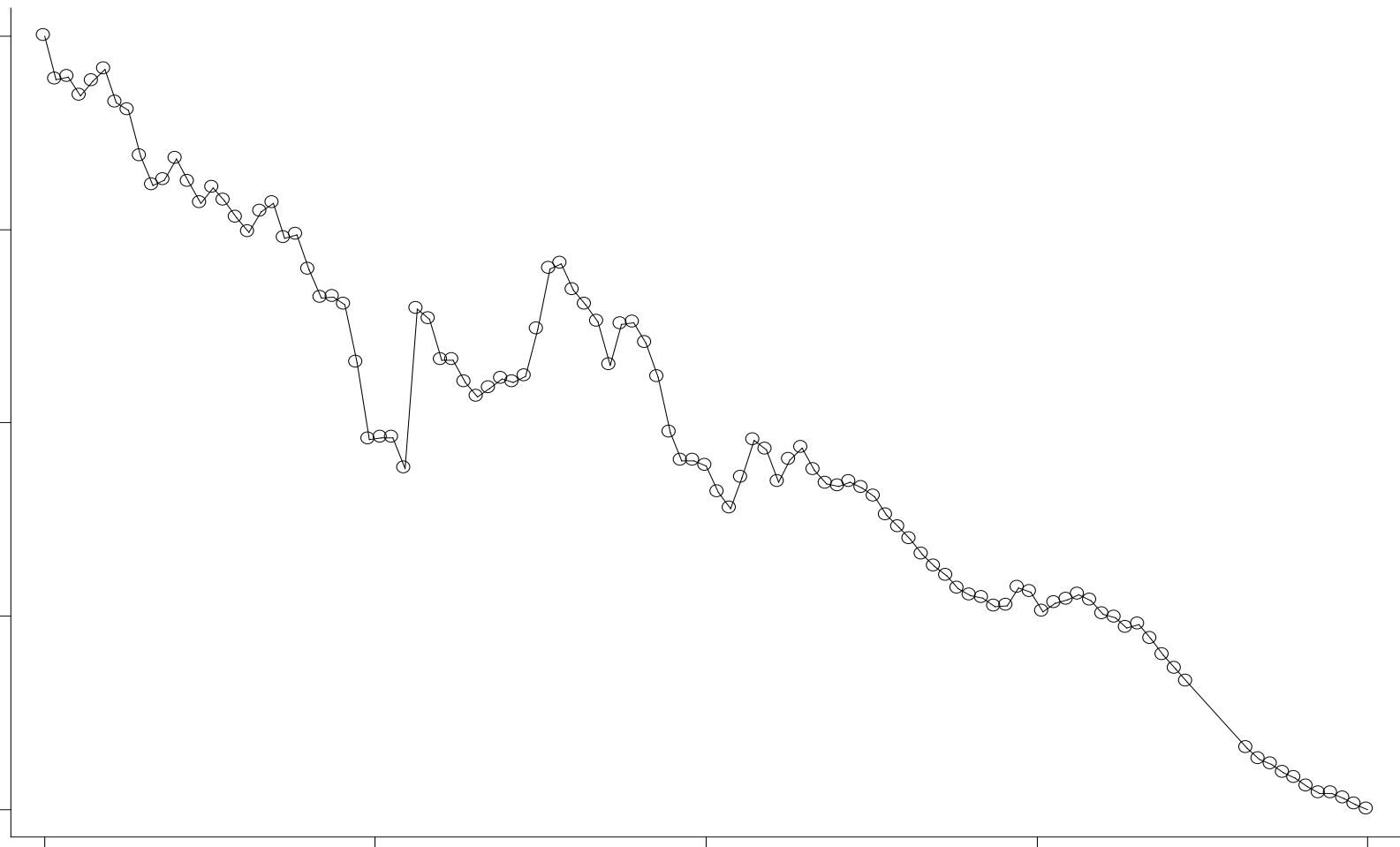
.02323

1890

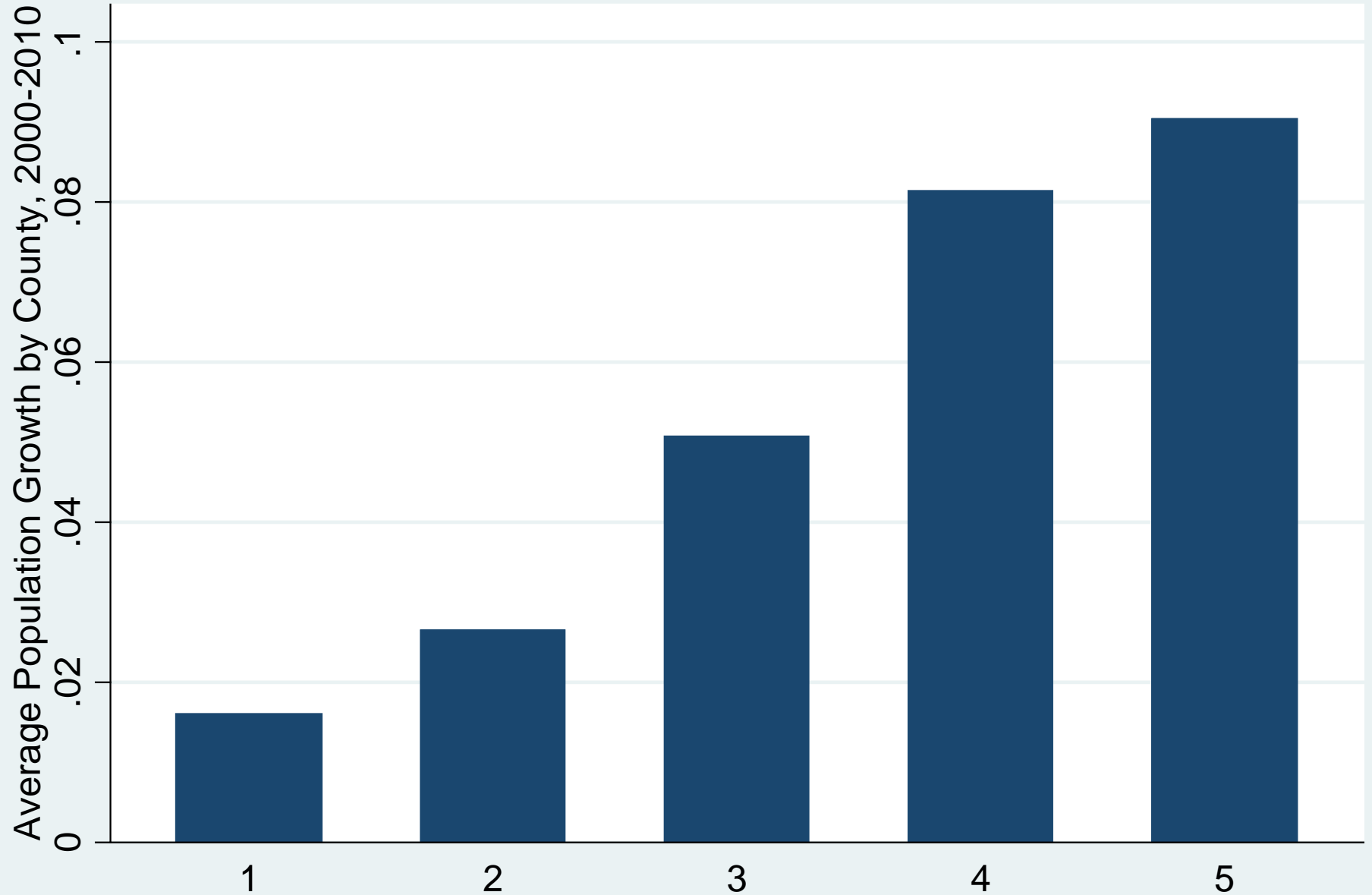
year

2000

Railroad Revenue per Ton Mile

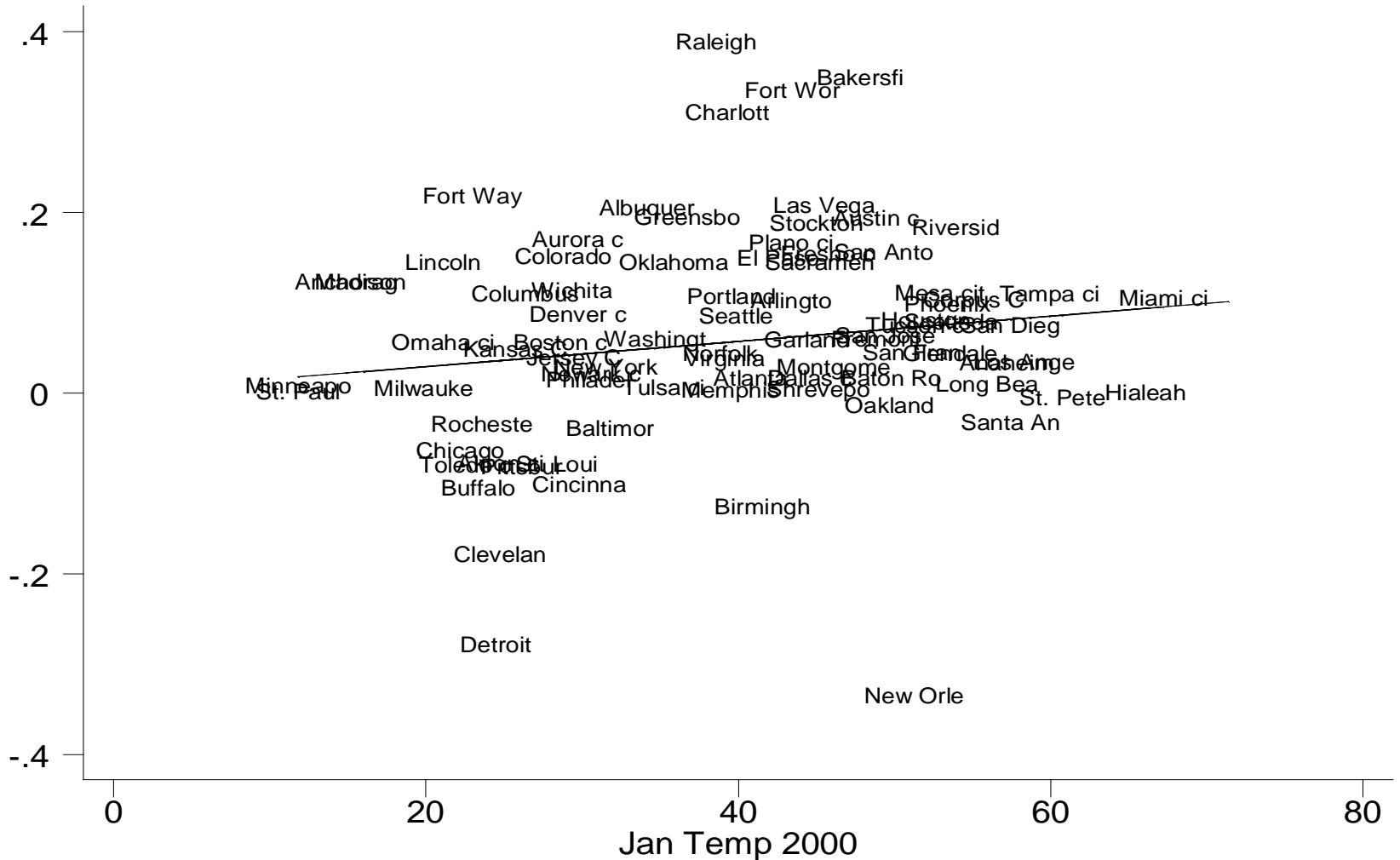


Average Population Growth by Average January Temperature (Quintiles)

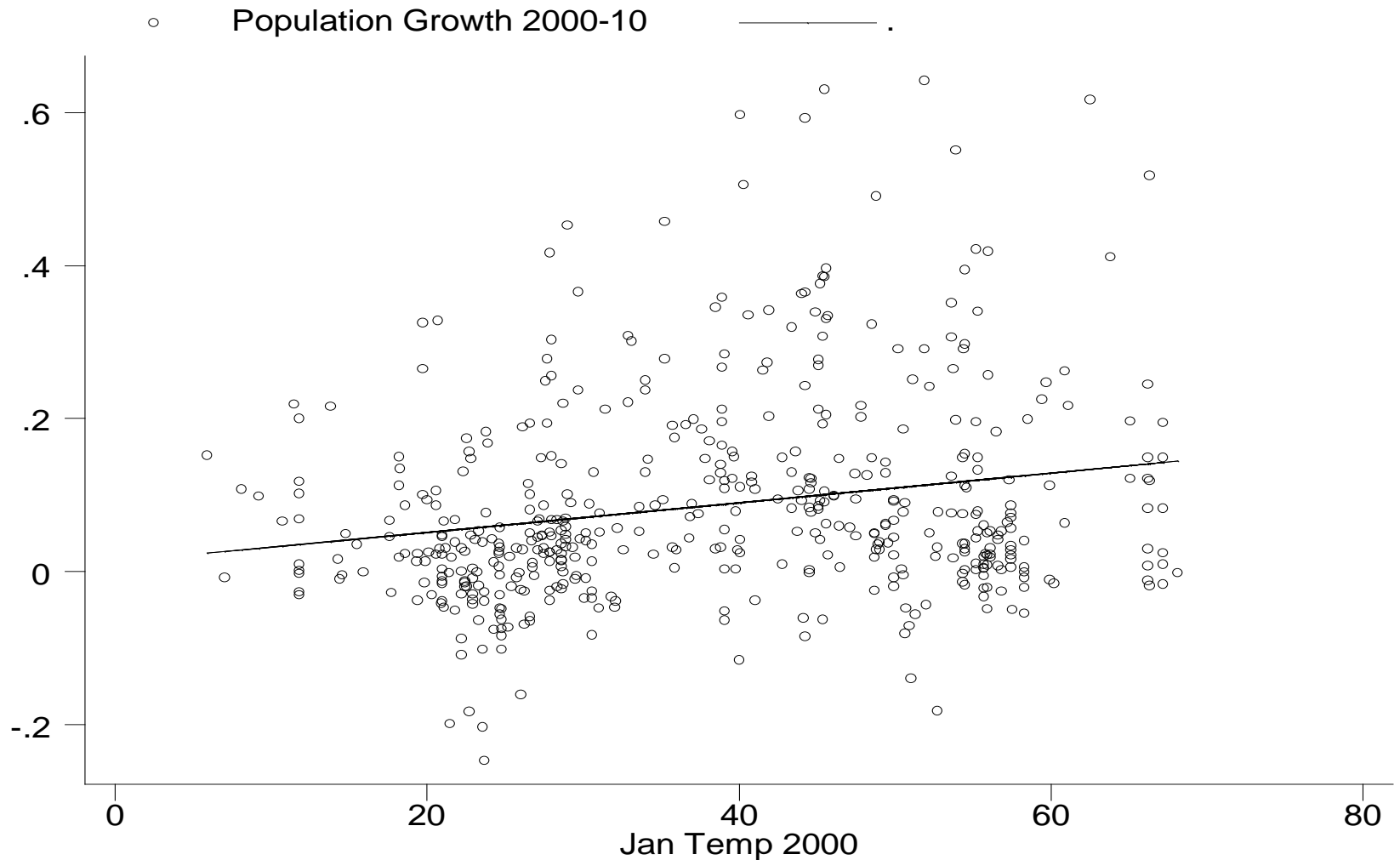


Temperature and Growth: Large Cities

Population Growth 2000-10



Temperature and Growth: Small Cities





Levittown, New York, provided thousands of mass-produced homes that helped America rebuild itself around the car.

Hulton Archive/ Getty Images

The Woodlands, outside Houston, shows how much more luxurious and sylvan large-scale suburban development has become since Levittown. Unfortunately, the expansion of the exurbs has lead to more carbon intensive lifestyles. All that greenery is really pretty brown.

© Ted Washington (per permission grant)



City	1950 Pop.	2000 Pop.	Change
New York	7,891,957	8,008,278	+1.5 %
Chicago	3,620,962	2,896,016	-20%
Philadelphia	2,071,605	1,517,550	-27%
Los Angeles	1,970,358	3,694,820	+87%
Detroit	1,849,568	951,270	-52%
Baltimore	949,708	651,154	-32%
Cleveland	914,808	478,403	-48%
St. Louis	856,796	348,189	-60%
Washington	802,178	572,059	-29%
Boston	801,444	589,141	-26%



Detroit's 1967 riot destroyed more than two thousand buildings and came to symbolize the decline of that once-great city. *Rolls Press/Popperfoto/Getty Images*

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



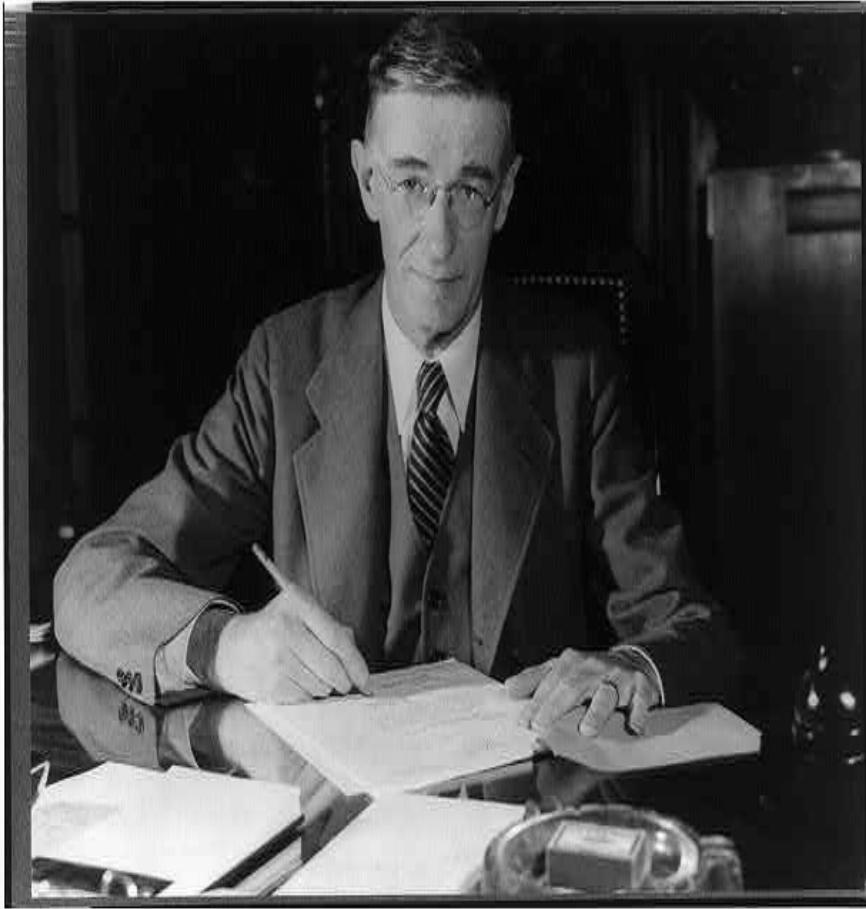
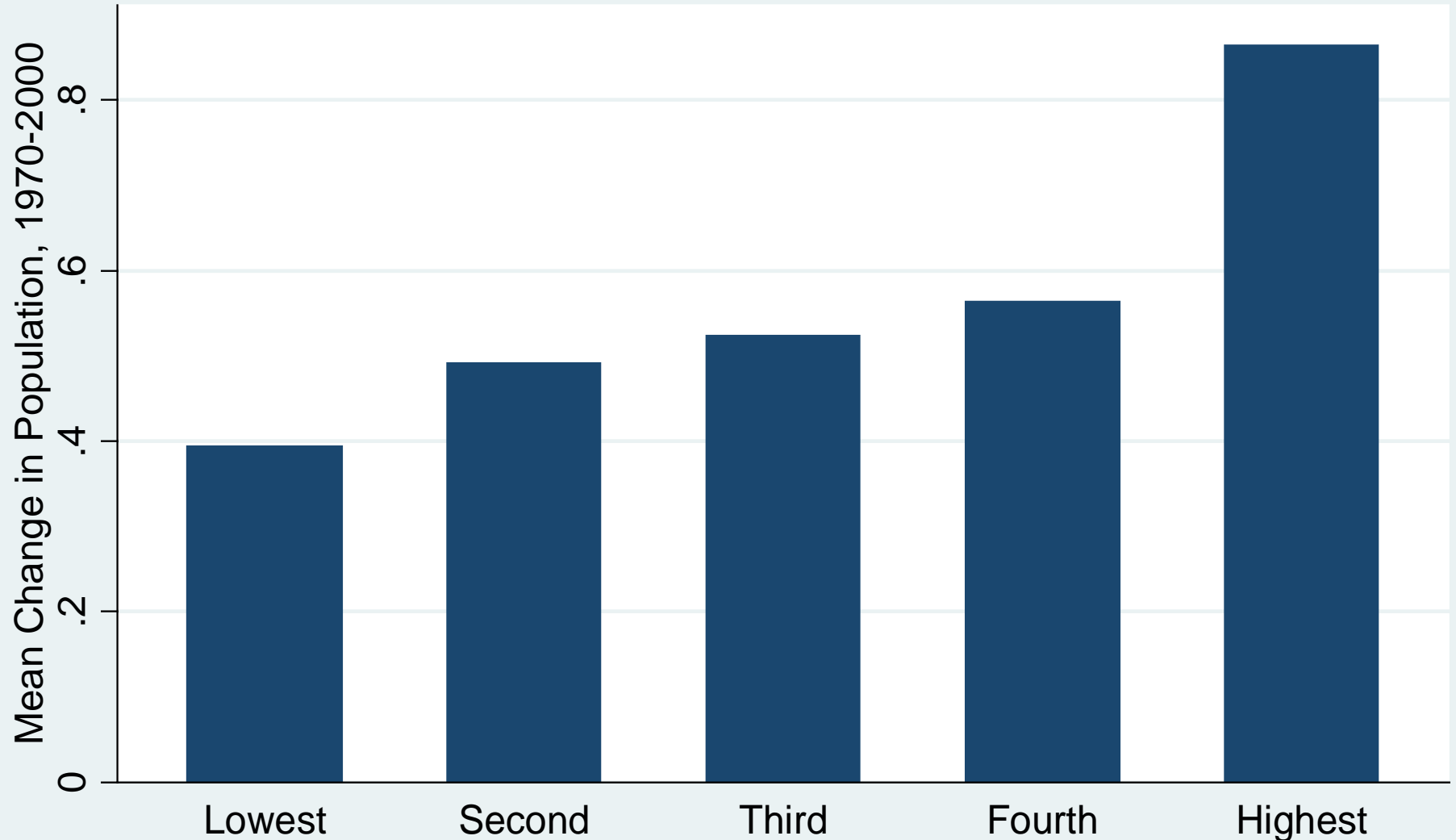


Figure 7:

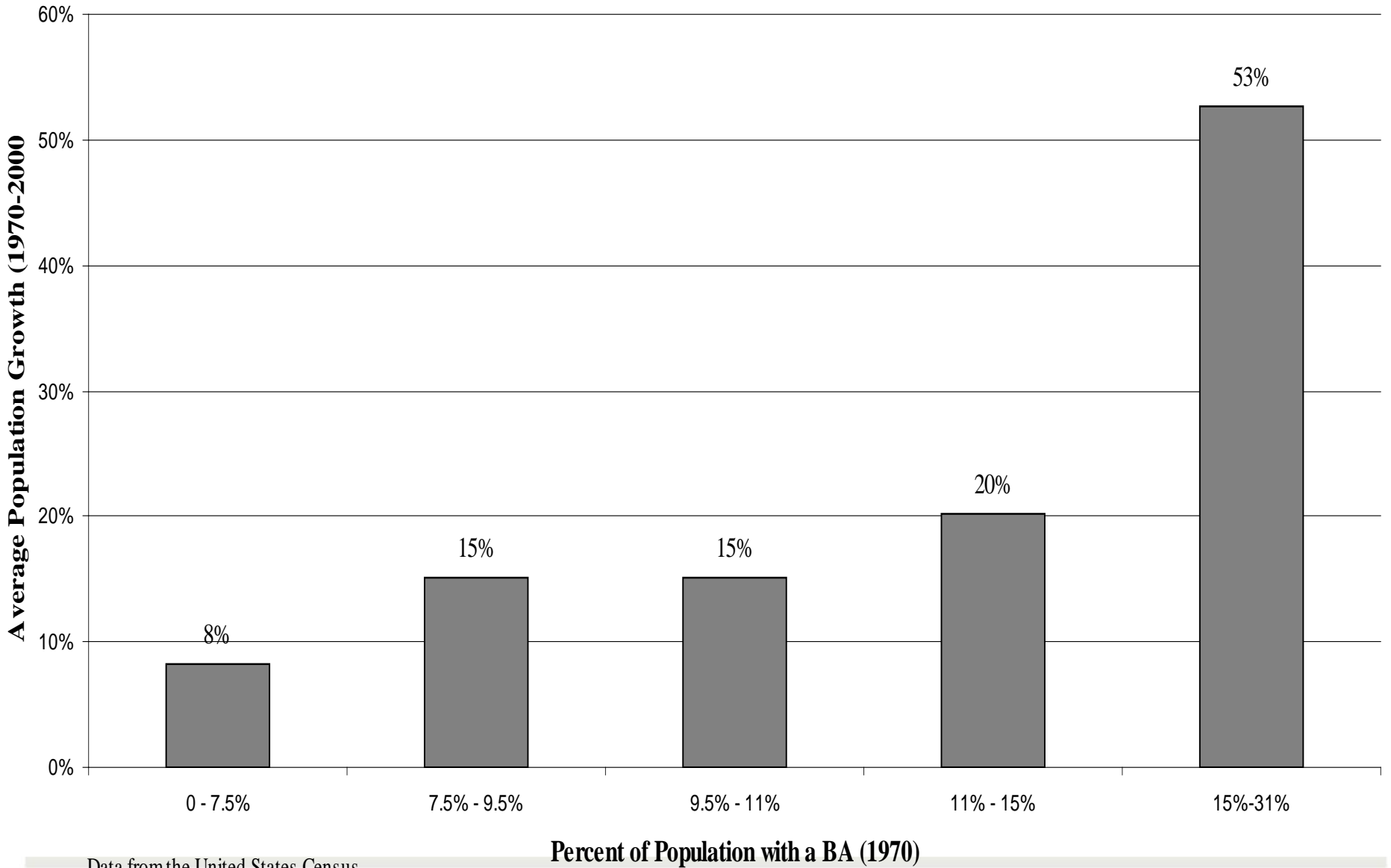
Change in Population, 1970-2000
by Quintile of Percent College Graduates, 1970



Source: U.S. Census Bureau

Figure 4:

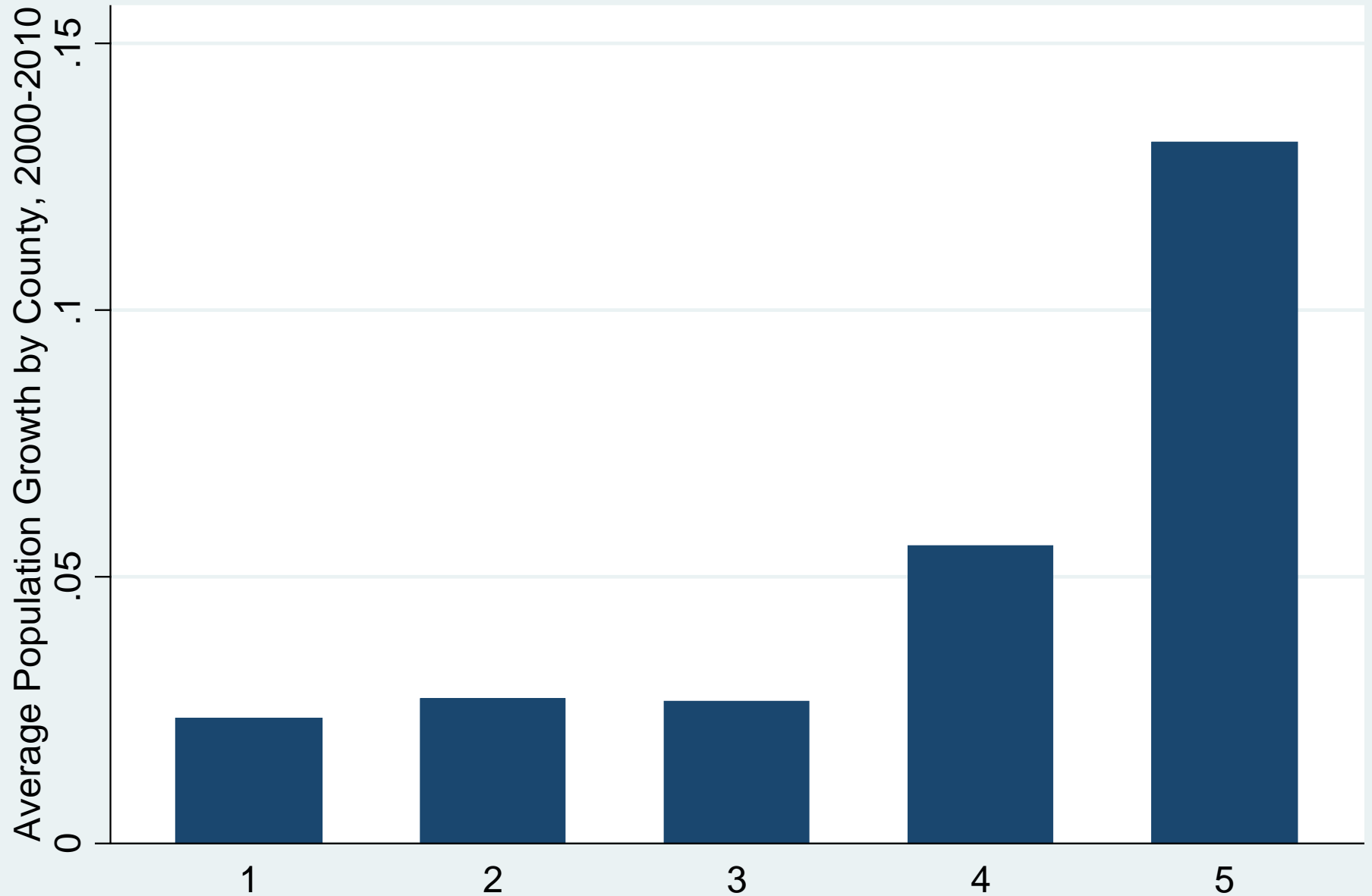
Population Growth for MSAs in the Northeast and Midwest



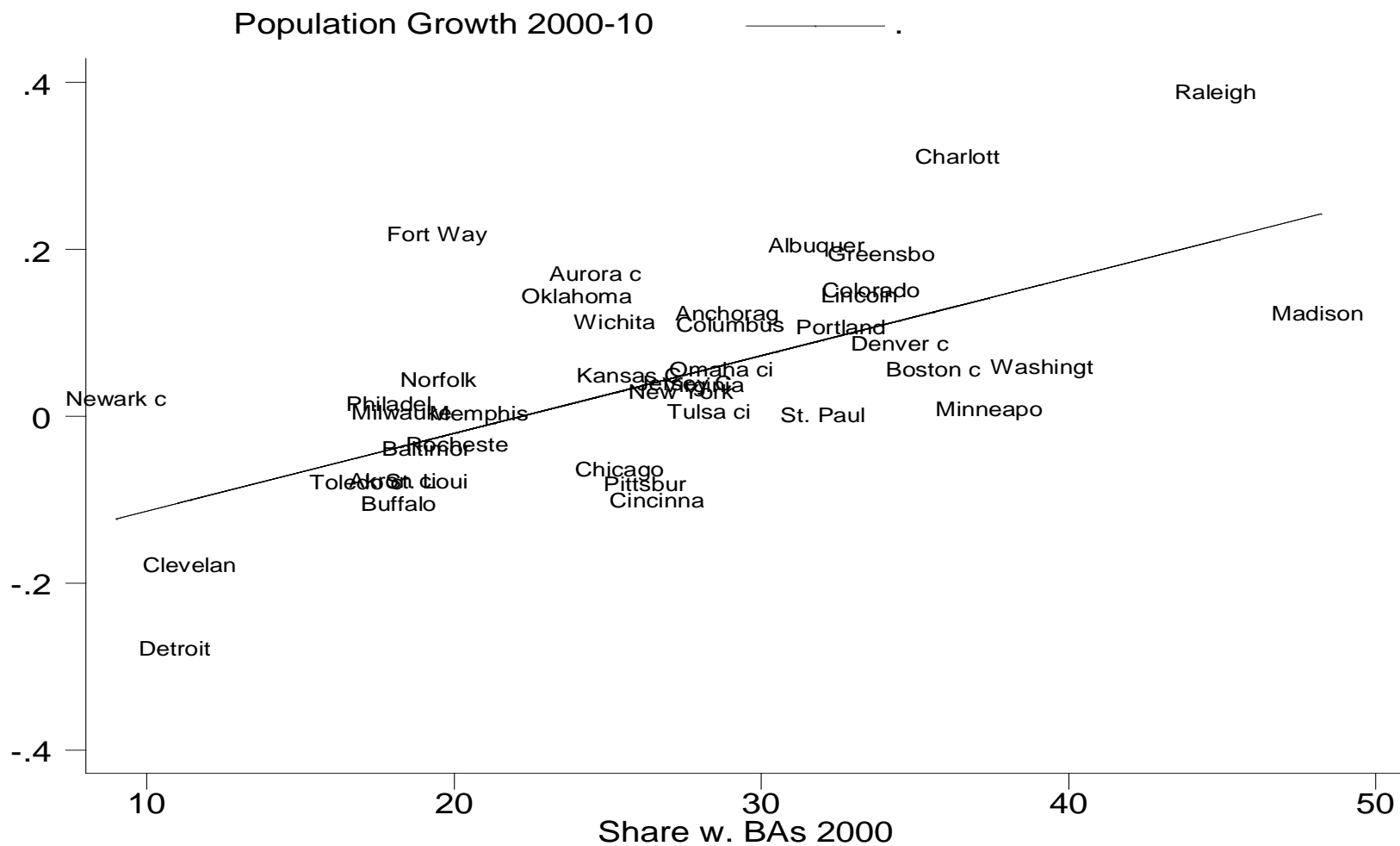
Data from the United States Census

Percent of Population with a BA (1970)

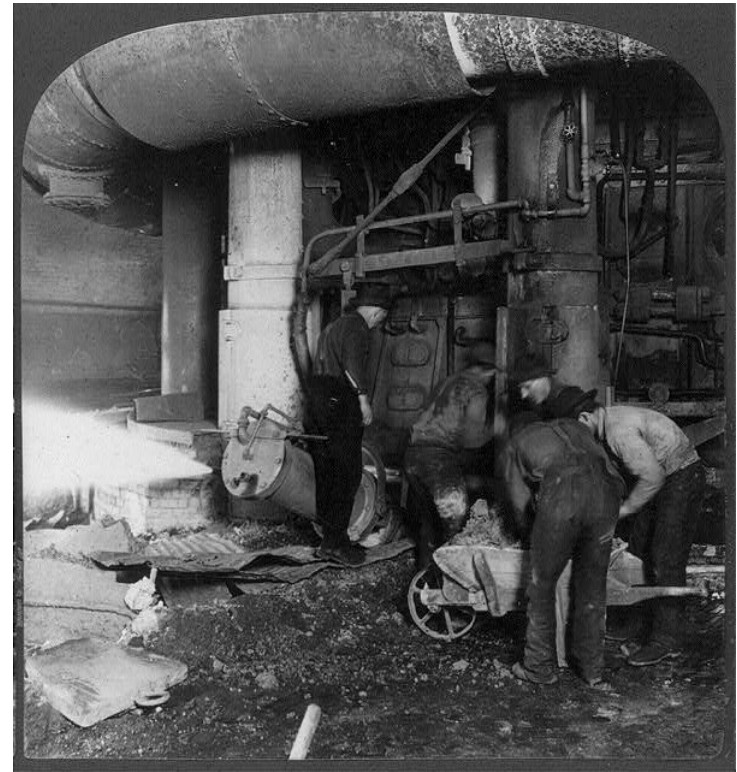
Average Population Growth by Share with BA in 2000
(Quintiles)



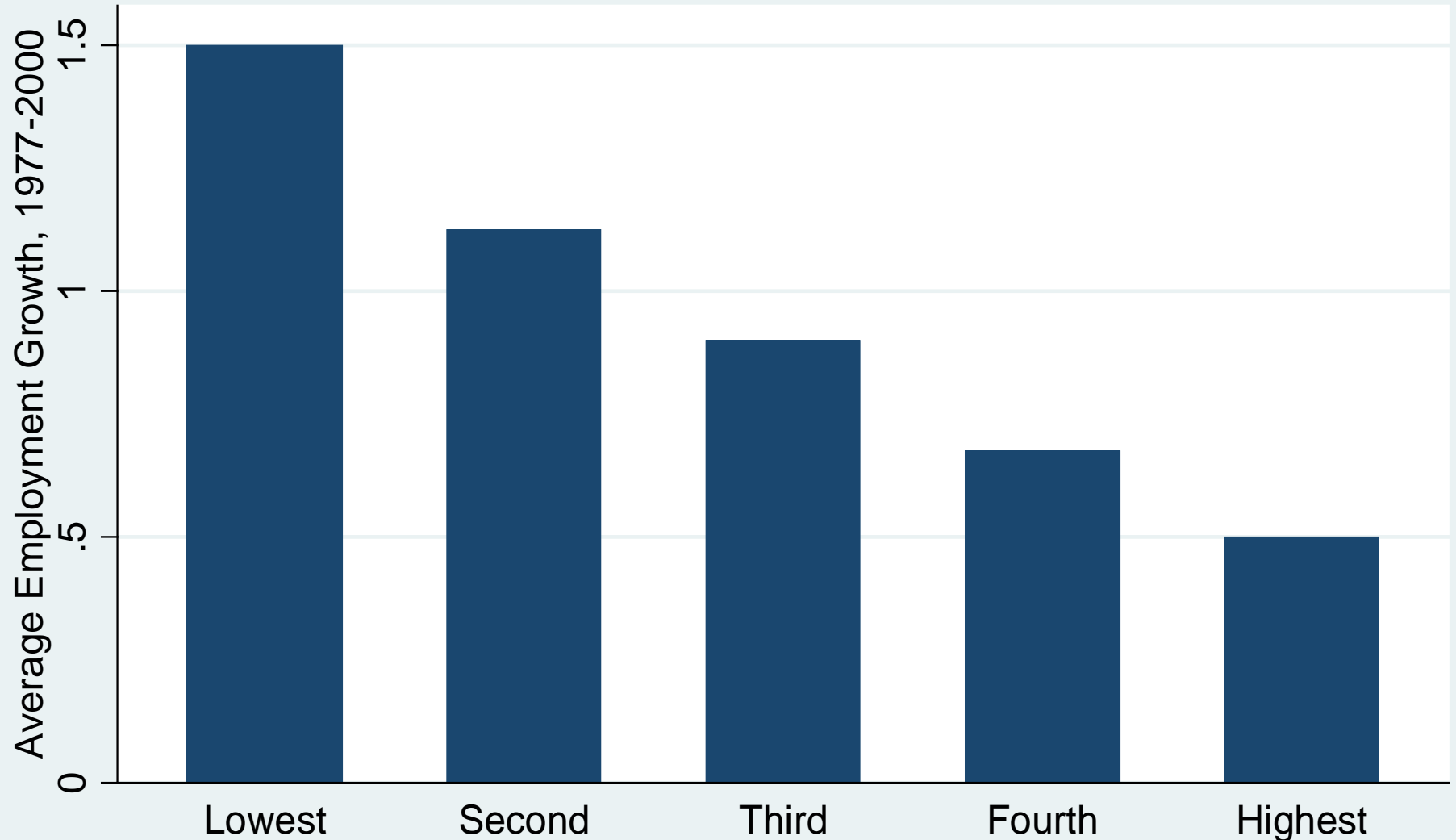
College Education and Growth in Larger (over 200k), Colder Cities



Chinitz: Contrasts in Agglomeration: New York and Pittsburgh

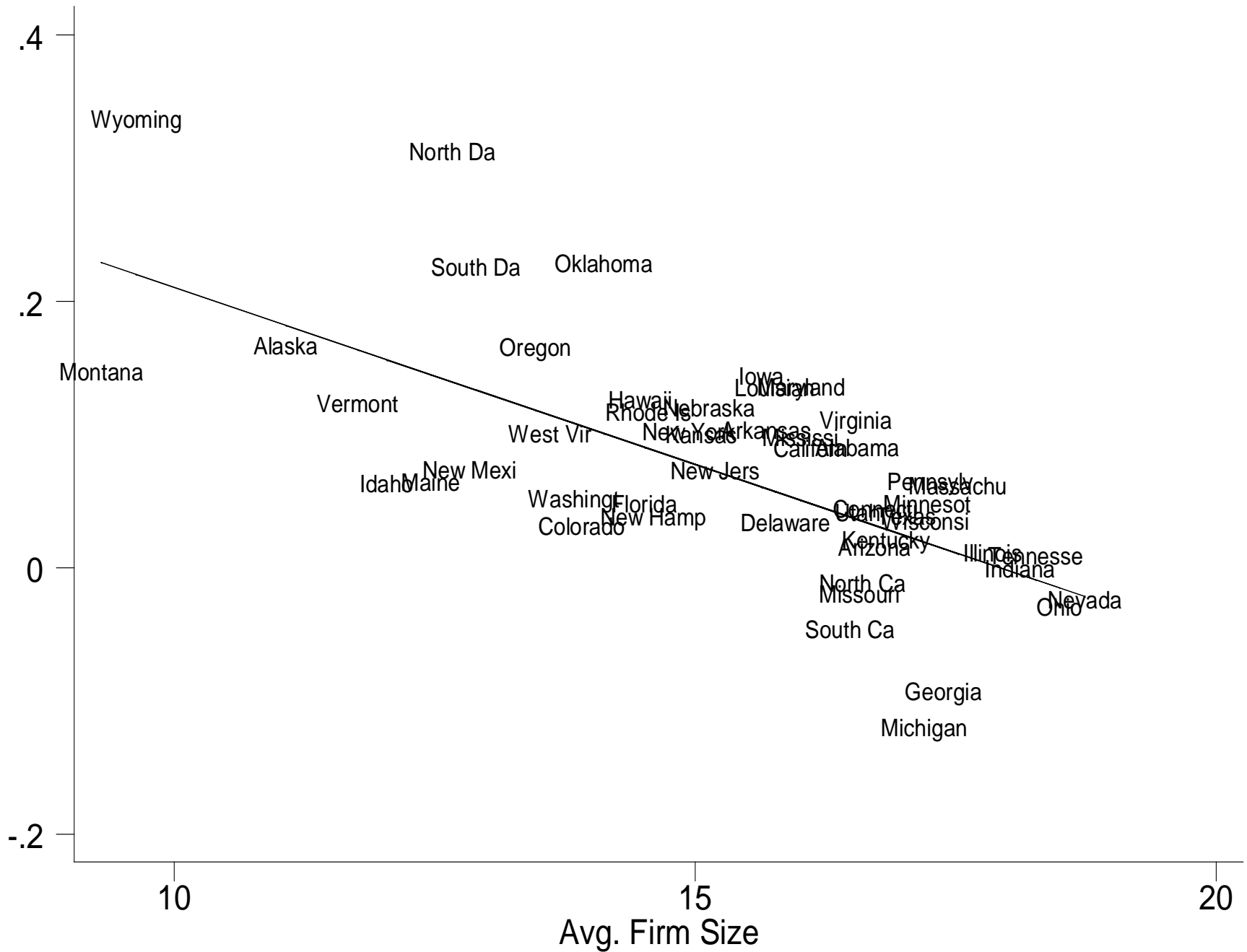


Average Employment Growth, 1977-2000 by Quintile of Average Firm Size, 1977



Source: County Business Patterns, 1977 and 2000

Change in P.C. GDP 2000-2009



What Does the Model Teach Us?

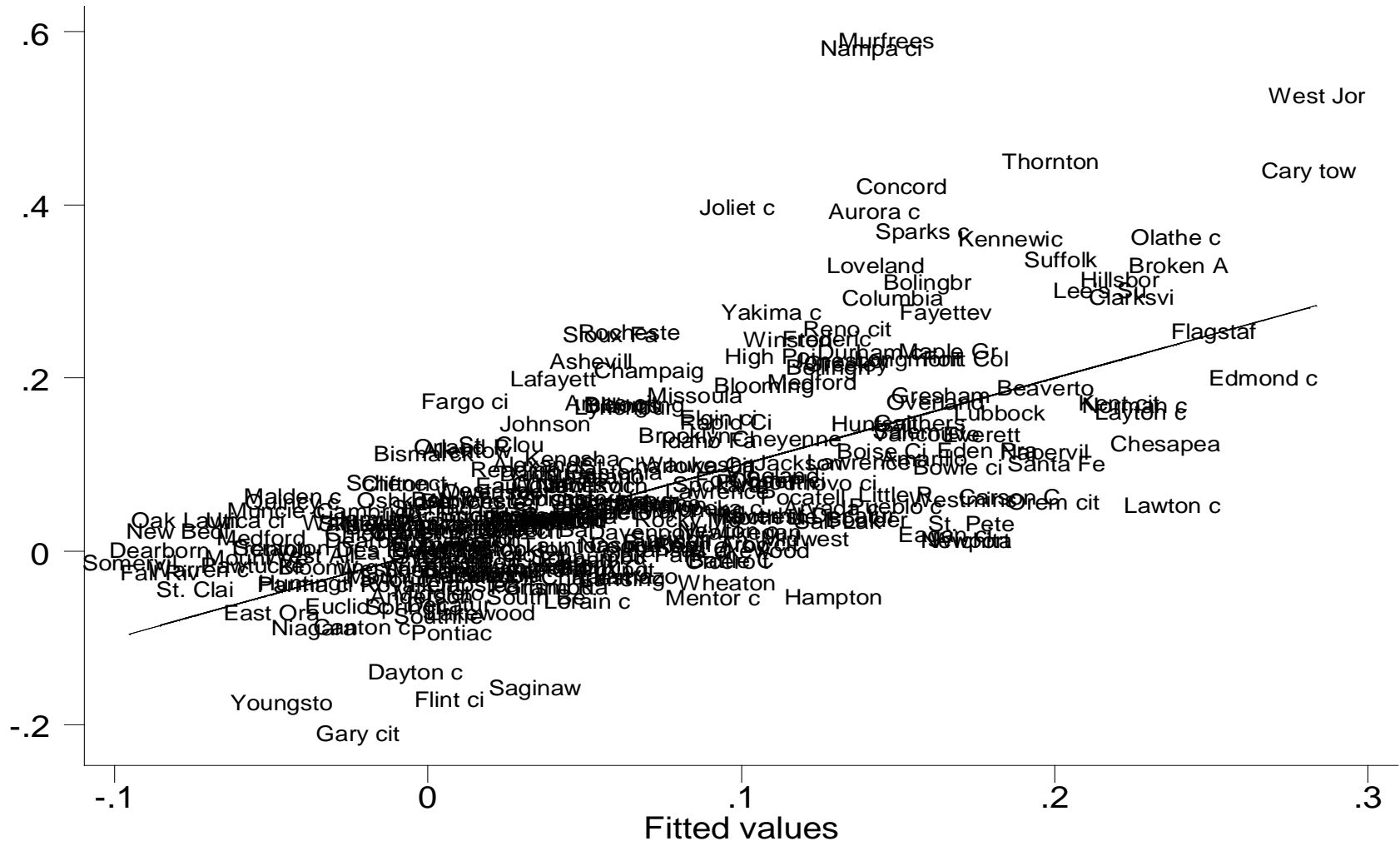
Five variables explain about 40 percent of the growth rates in colder (under 40 degrees), smaller (under 200k) cities.

- January Temperature still matters– 10 degrees, 5 percentage points more growth.
- Share with HS degrees– 10 percentage points is 6.1 percentage points more growth.
- Also,
 - Households with kids (positive),
 - Latin American (positive), and
 - Density (negative).

A Statistical Model of Cold, Small City Growth

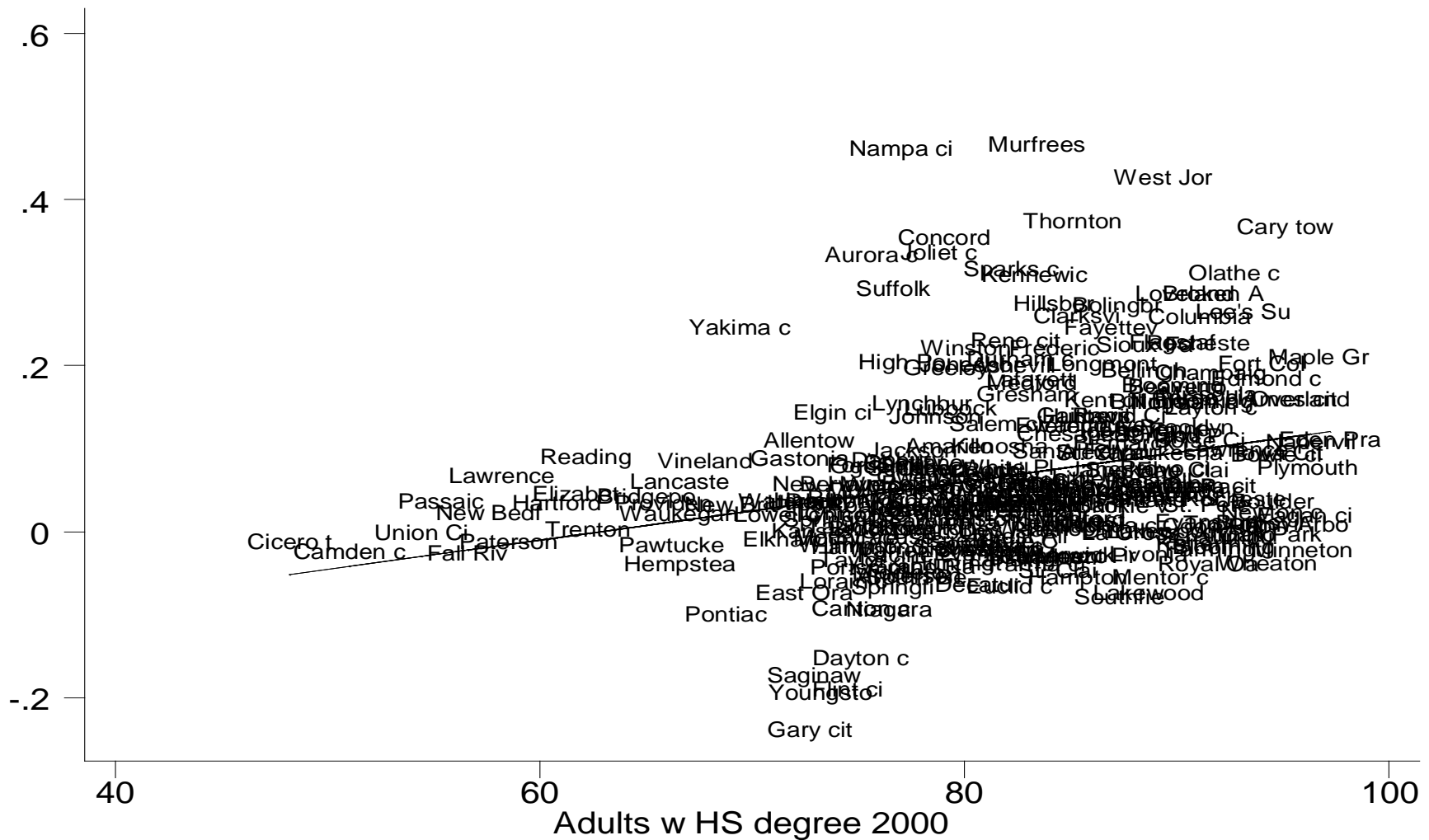
Percent Growth 2000-10

Fitted values

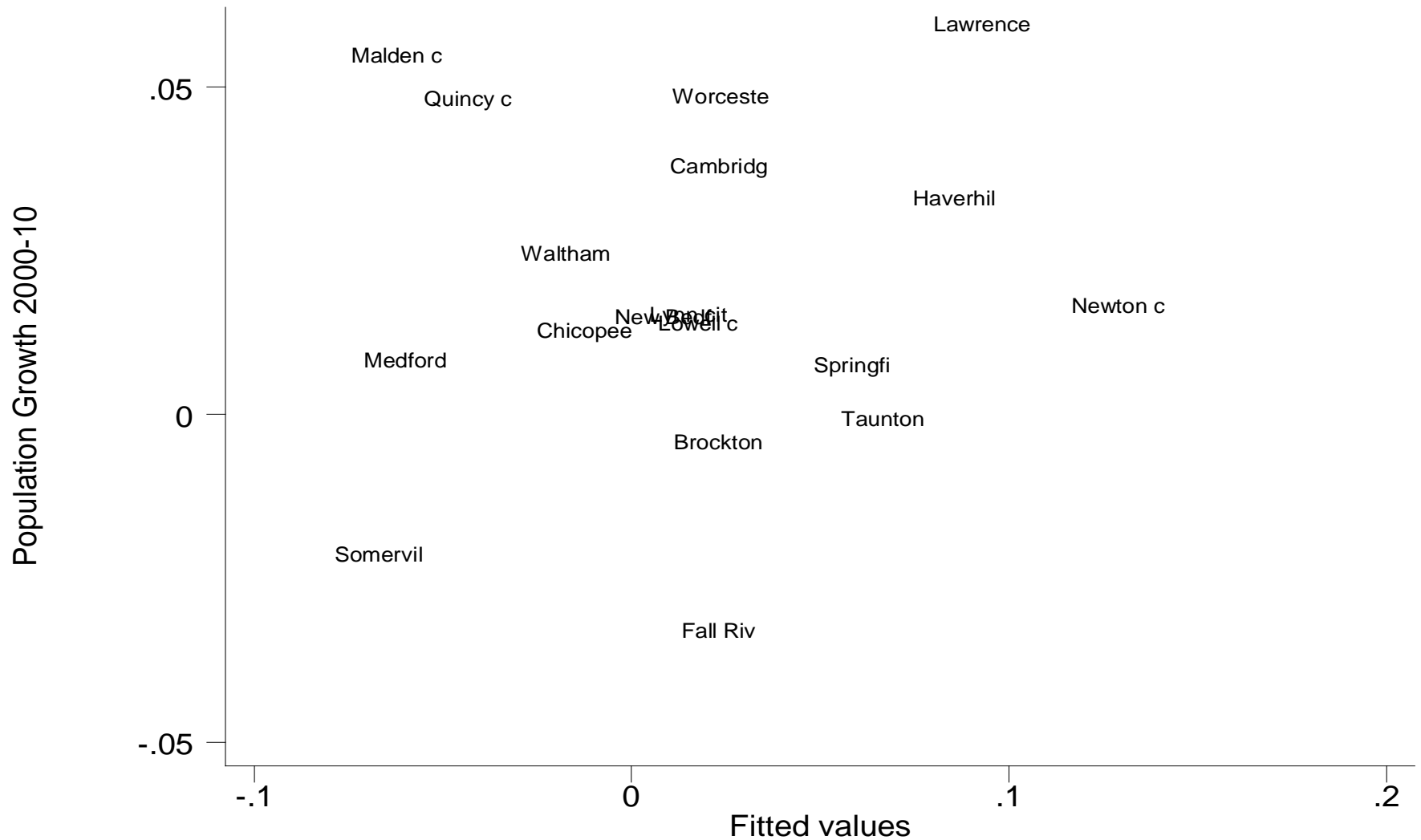


HS Graduation and Growth: Smaller, Colder Cities

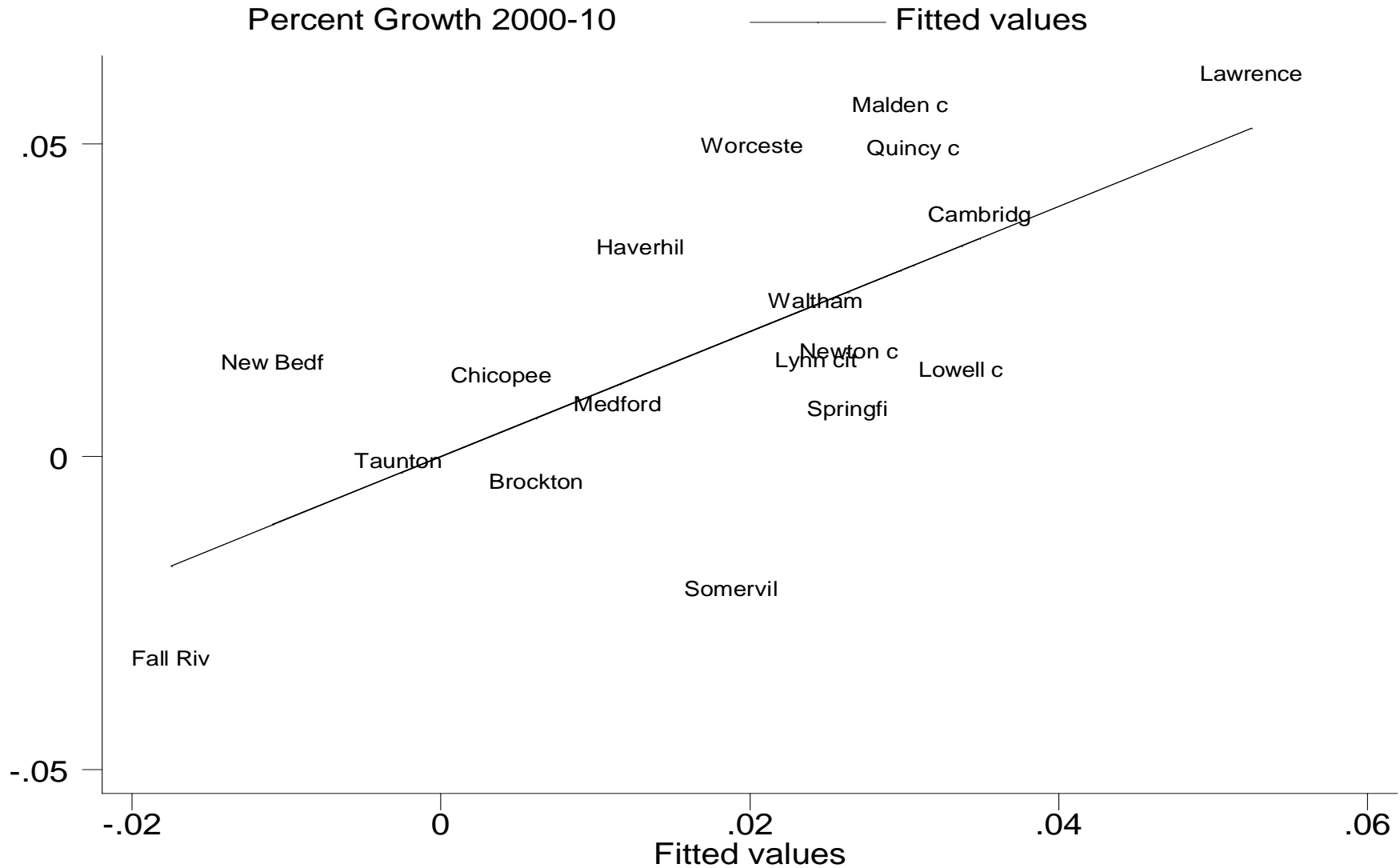
Population Growth 2000-10



The Massachusetts Misfit



The Massachusetts Model



Just Three Variables

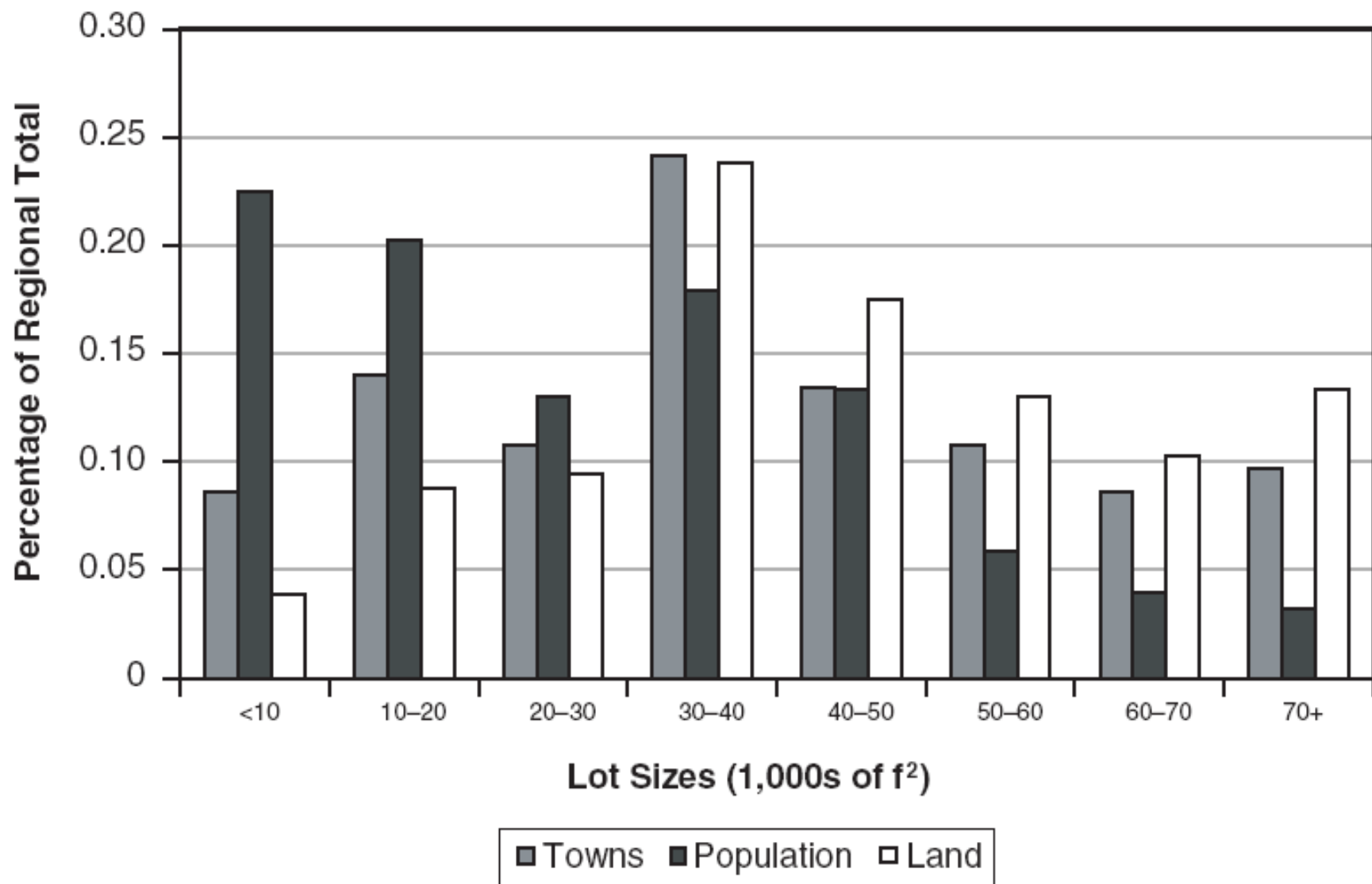
- Share with HS degree– 10 percentage points higher is one percent more growth.
- Share that is Latin American– ten percentage points higher is 1.7 percent more growth.
- Share that is Asian American– ten percentage points higher is 1.2 percent more growth.
 - Little impact of households with kids or density or January temperature (within MA).

A very immigrant-heavy story.

Why Don't The Other Variables Matter in Massachusetts?

- In much of America, the lower density cities are growing as part of the ongoing growth of sunbelt sprawl. There is sprawl in MA but not within cities.
- Temperature doesn't matter that much between Lowell and Worcester.
- But immigration is crucial— cities remain gateways and Boston's high prices make entry more difficult.

DISTRIBUTION OF SINGLE-FAMILY MINIMUM LOT SIZES, GREATER BOSTON AREA, 2000



Policies for Healthy Small Cities

- Skills
- Entrepreneurship
- Attracting people– often immigrants– who have a healthy demand for urban options.
- Quality of Life is an Economic Development Policy
- Housing policy matters.
- Smokestacks or currently hot industrial options (green jobs) typically are failures.