

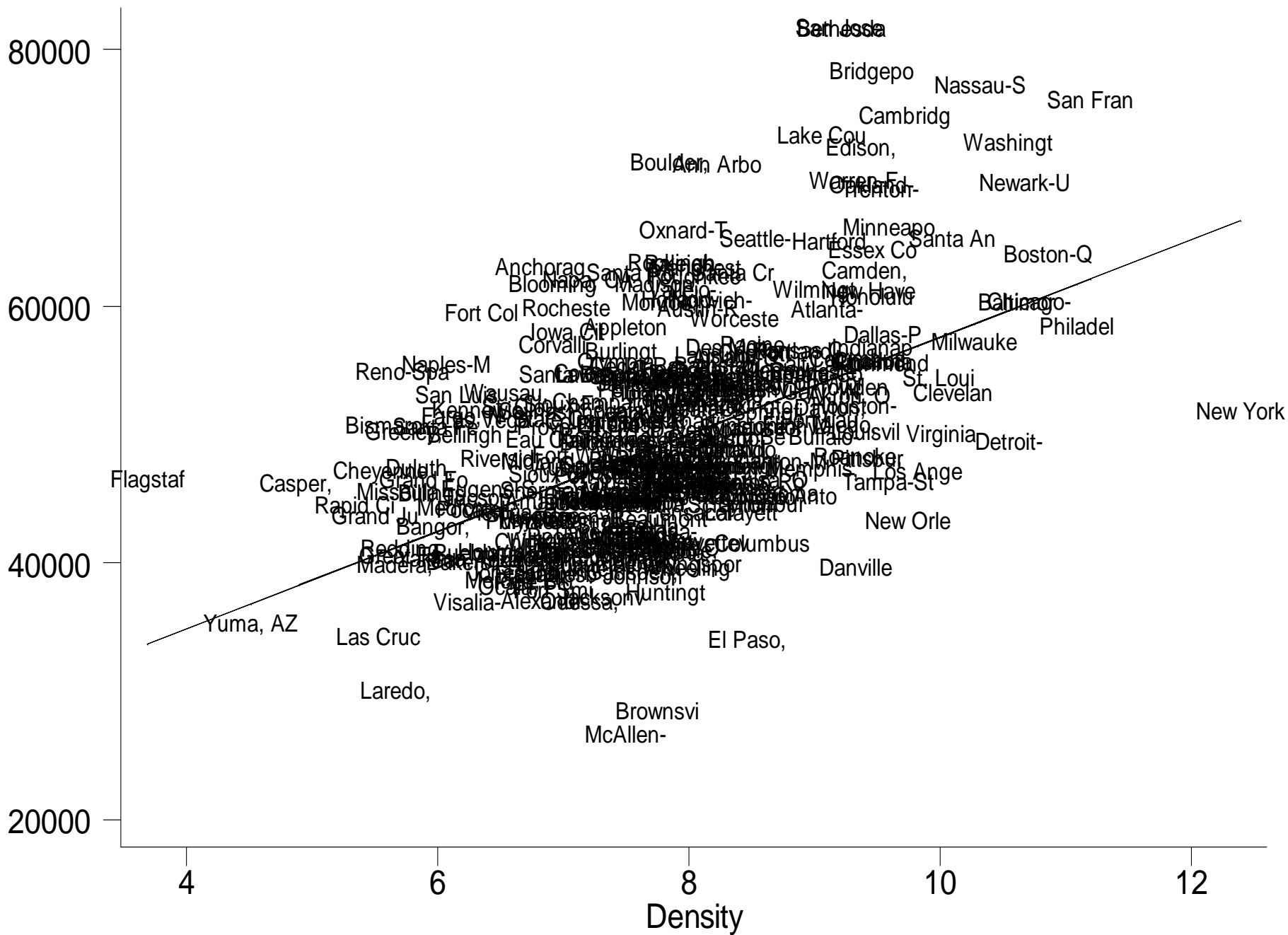
# Our Urban Future

Ed Glaeser

# The Central Paradox

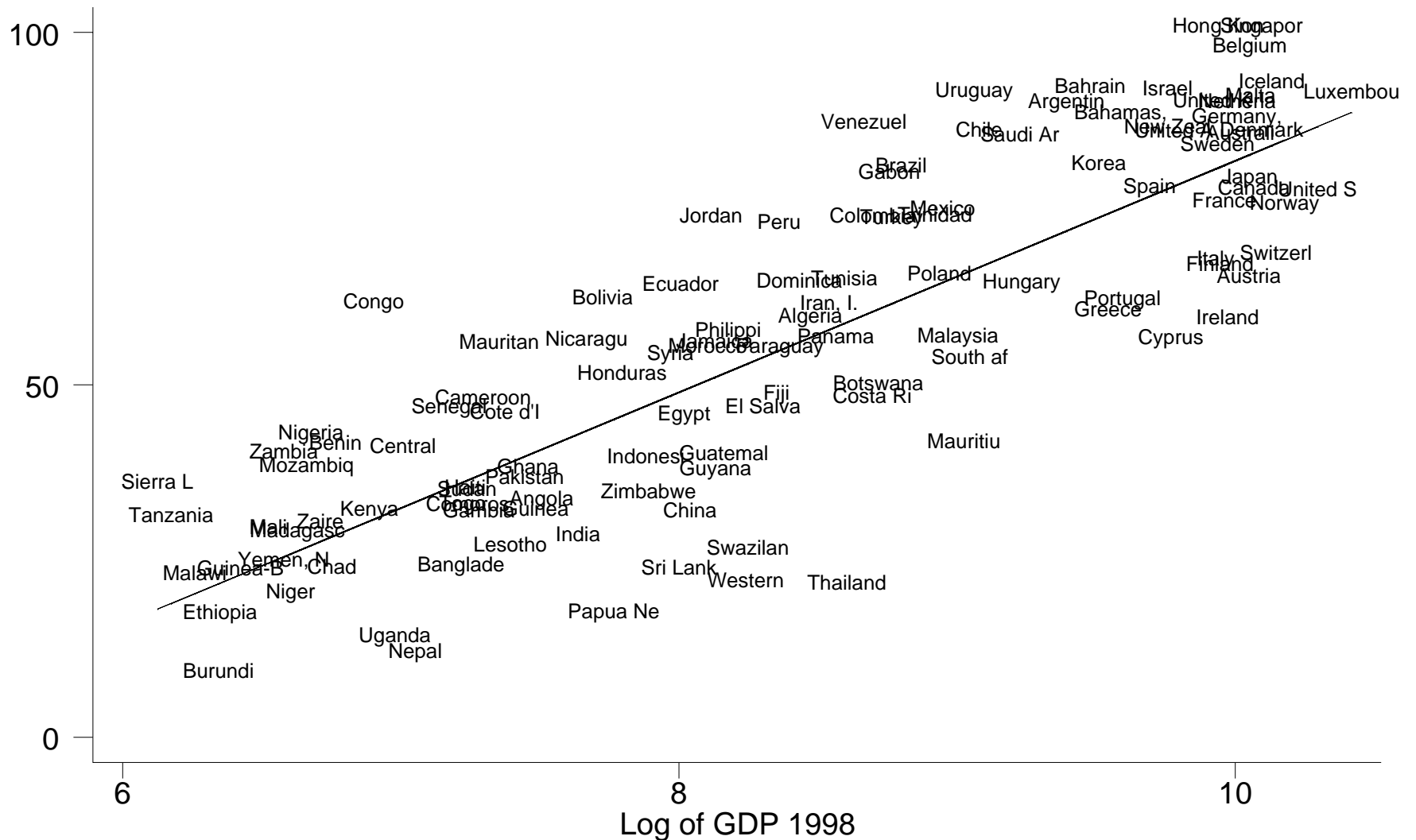
- Why is it that in an era in which transportation and communication costs have virtually vanished, cities have become more important than ever?
- Urban resurgence is visible in high income levels, robust housing prices, and a concentration of innovation in urban areas.
- This is even clearer in the developing world.

Families: Median family income



# Urbanization Across the World

% population urban 1998, WDI200 ——— Fitted values



# The Hypothesis

- One major effect of globalization has been an increase in being smart.
- You become smart by being around other smart people— we are a social species.
- Cities, like Boston and New York and London and Bangalore make that possible.
- The same death of distance that did so much to hurt Detroit helped save Boston and NYC.

# Reflections on Singapore

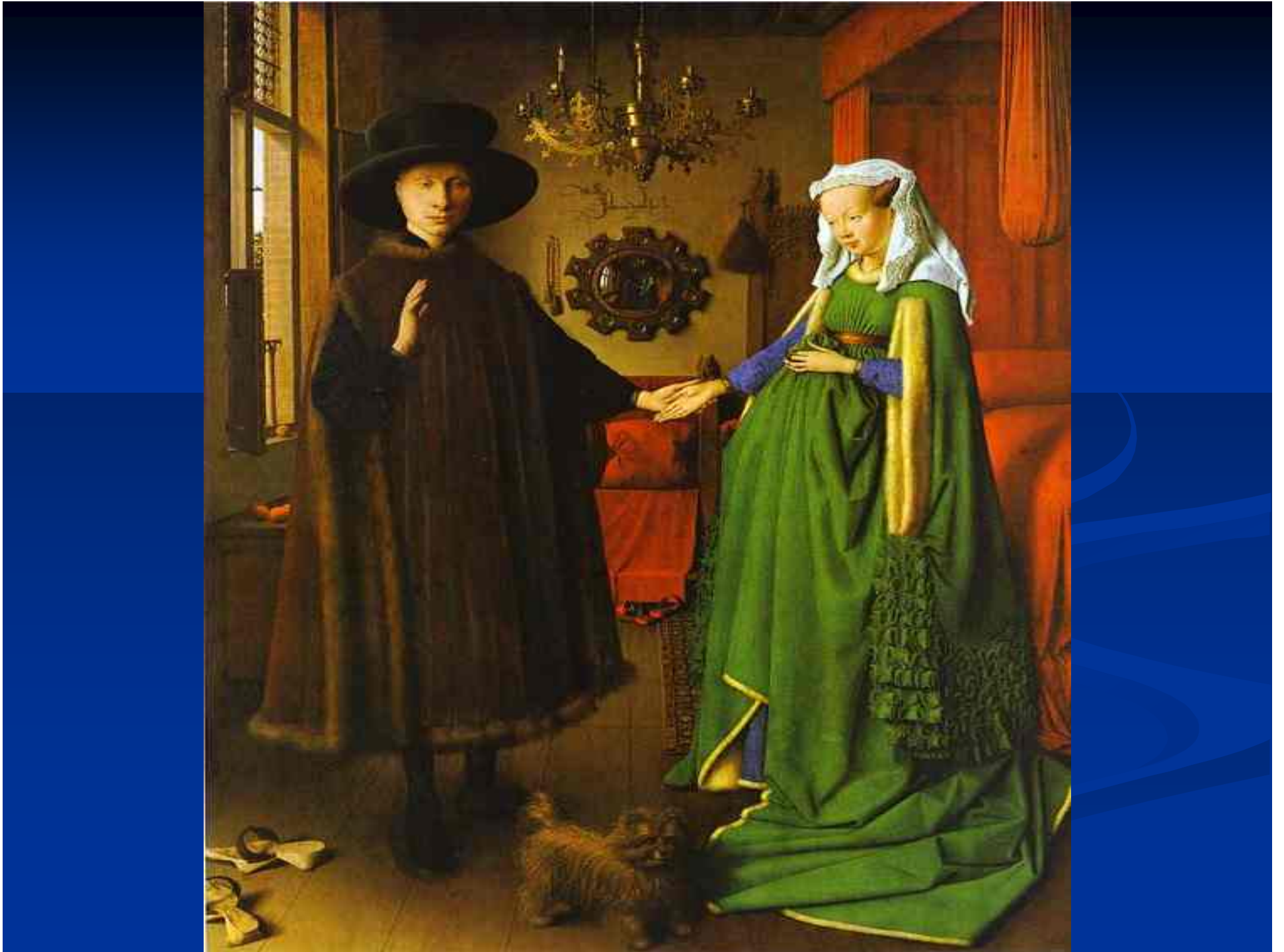
- First, any American in Singapore must come to learn more than to teach.
- An example of the power of cities to innovate and produce— and a model of leadership
- Will future change be top down or bottom up?
  - Small firms
  - Industrial Diversity
  - Human capital

# The Fight for Talent

- Singapore is extremely good at producing its own talent, but will it be able to retain and attract enough going forward.
- The difficulties of climate and limited land area.
- Making housing more affordable— which means making supply more efficient.
- The challenges of providing public space
- Air conditioning and climate change

# The Urban Role in Civilization

- Start with the basics: clothing and food.
- By the time you get to our own country, it is cheap enough to ship food that you get “food cities,” but 1,000 years, cities like Bruges and Florence were “clothing cities” specializing in wool.
- Urban density enabled markets to work and spread human capital and shared machines.



# The Gifts of Urban Density

- Art in Flanders (van Eycks, Campin, Memling)
  - Commercial patrons and learning
- Religion
  - The Brethren of the Common Life (Adrian IV, Erasmus, Martin Luther)
- Education and Literacy
  - Caxton and Gutenberg
- Political unrest and democracy (Coninck)

# Chicago History

- America has an enormously fertile hinterland, but it is extremely expensive to access.
- In 1816, cost of moving goods 32 miles is more expensive than moving across the Atlantic.
- The big story of the 19<sup>th</sup> century is the construction of a transport network— water and rail that allows access to the hinterland.

# Chicago Continued

- Chicago is the creation of two canals: Illinois and Michigan and Erie, and then rails.
- First exporting live beef and salted pig.
- Pigs are corn with feet, and Chicago is allowing access to high productivity Iowa land (about 50 percent more fertile than Kentucky).
- Then as transport costs fall (and refrigeration) there is a move to dressed beef and wheat.



# Buenos Aires

- Buenos Aires is also a port that moves agricultural products to eastern markets.
- Starts with lower value, but highly durable goods (hide and tallow trade).
- Steam and frigorificos make it possible to shift chilled beef and mutton.
- As rail got more effective, grain came to supplement the animal stocks.

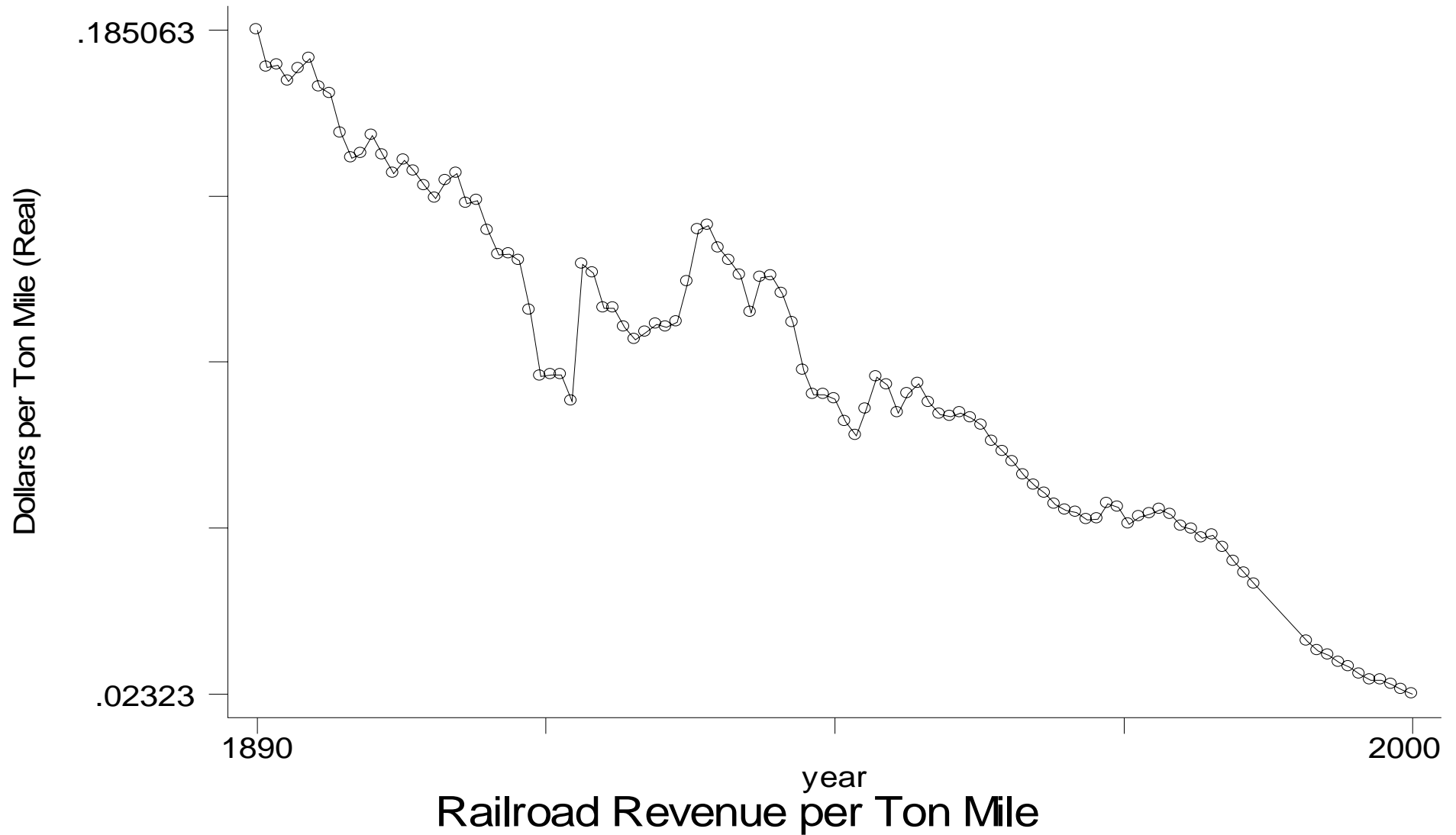
# Why Does Chicago Stay Rich and Buenos Aires Decline?

- Levels of Physical Capital
  - In 1914, Capital per worked is 2.25 times higher in Chicago than in BA; value added is 2.5 times higher
- Levels of Human Capital
  - In 1895, literacy rate of native born in BA is 75 percent; in Chicago it is 98 percent.
- Technology
  - Chicago is on the cutting edge (cars, skyscrapers)
- Political Institutions

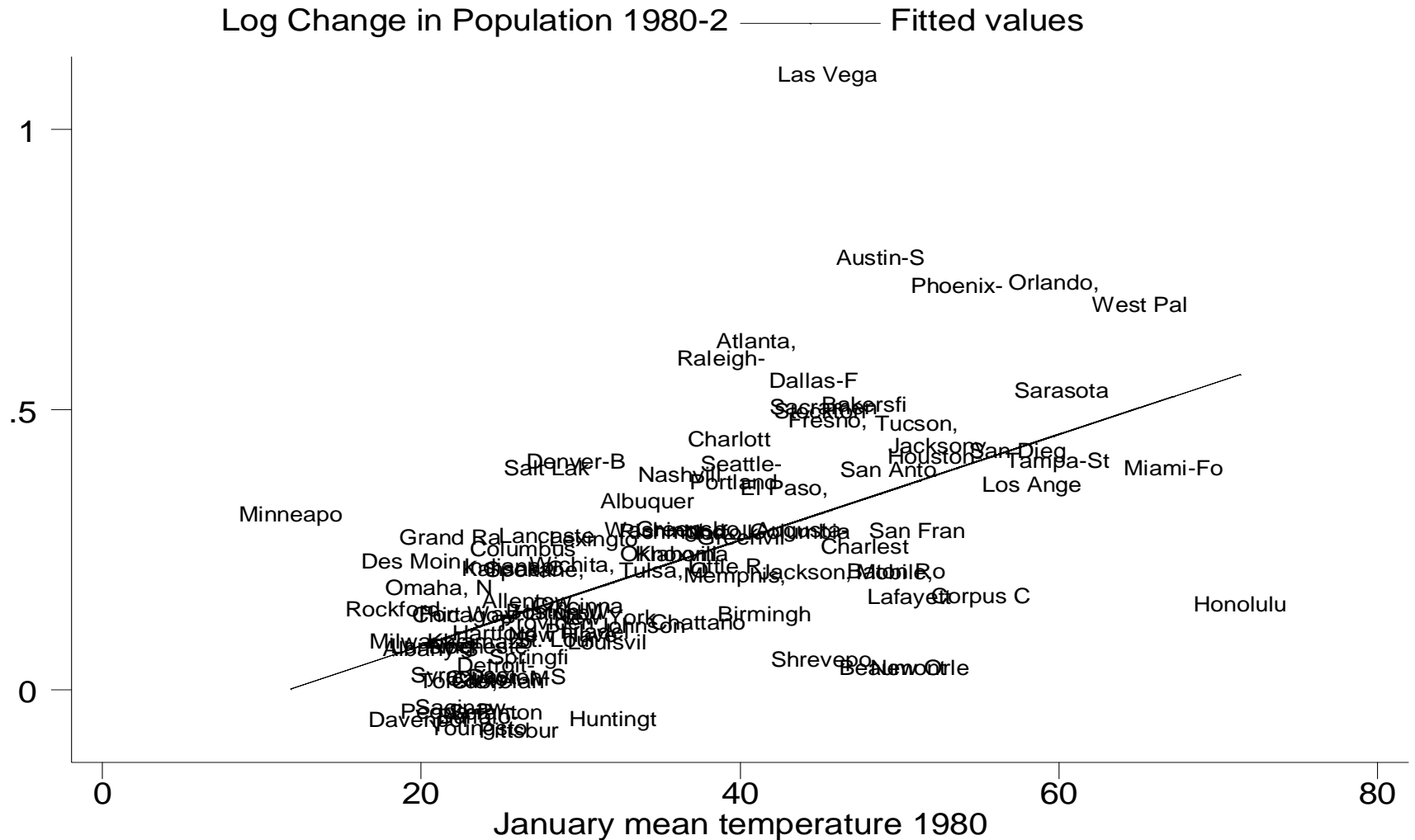
# The Problematic 20<sup>th</sup> Century

- The Automobile made public transportation oriented cities seem somewhat obsolete.
- The truck freed manufacturing from needing to cluster around ports and rail stations.
- Declining transport costs created a rise in consumer cities over cities oriented around productive advantages like waterways.

# The Decline of the Costs of Moving Goods



# The Move to Warmth





# Why Didn't New York and London Die?

- In 1900, the fundamental business of American cities was producing and moving goods around by rail and water.
  - Chicago and hogs
  - New York and sugar, cotton, books
- Making stuff on waterways had a huge cost advantage, but this was killed by the 20<sup>th</sup> century.
- The result was the crisis of the 1970s

# The Rebirth of Boston, NYC

- Idea-oriented industries rose in places that were once centers of manufacturing.
- New York's early industries are sugar refining, publishing (stolen books) and garments
- Finance in New York and an urban chain of ideas
  - Understanding risk and return with data
  - The sale of riskier assets (Milken)
  - The use of risky assets to restructure companies (KKR)
  - The nationwide sharing of risk (Ranieri and MBSs)
  - The sale of data tools (Bloomberg)

# Reinventing Boston

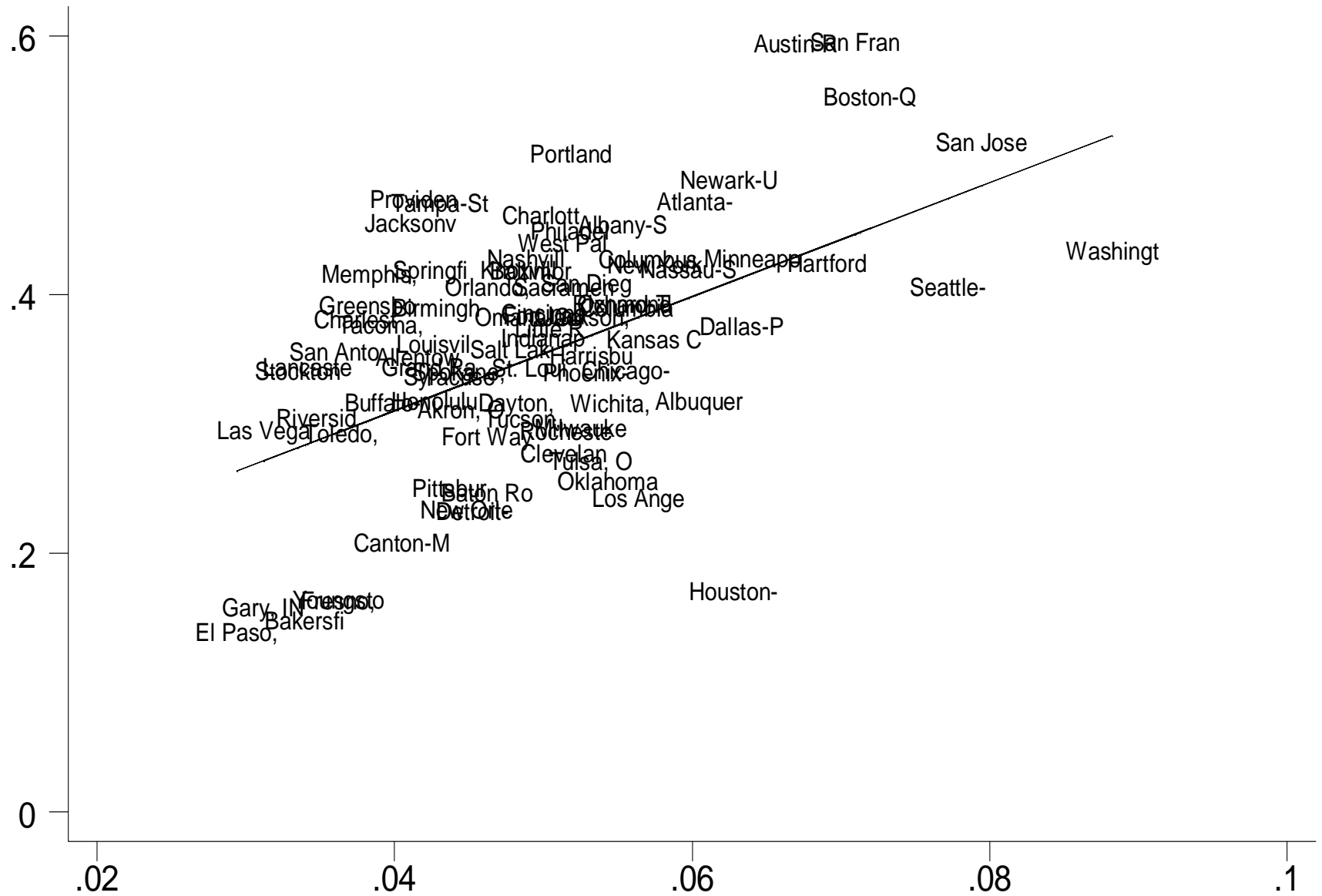
- A consistent lack of comparative advantage
- The colonial era ponzi scheme
- The 1648 Bahama food crisis and the move to exporting livestock, grain and wood south
- The 18<sup>th</sup> century crisis and the reinvention as the center of a global shipping network (China)
- The 20<sup>th</sup> century reinvention with first computers and then biotechnology

# Cities during Distress

- Given the central role of cities in credit markets, credit blights occur when cities fall— too much optimism followed the reverse.
- Yet cities have often done well in the depths of the recession that they caused (1930s Los Angeles; New Yorkers innovating, like Value Line, and ).
- Today, NYC is doing remarkably well.

# Change Income 1980-2000

———— Fitted values



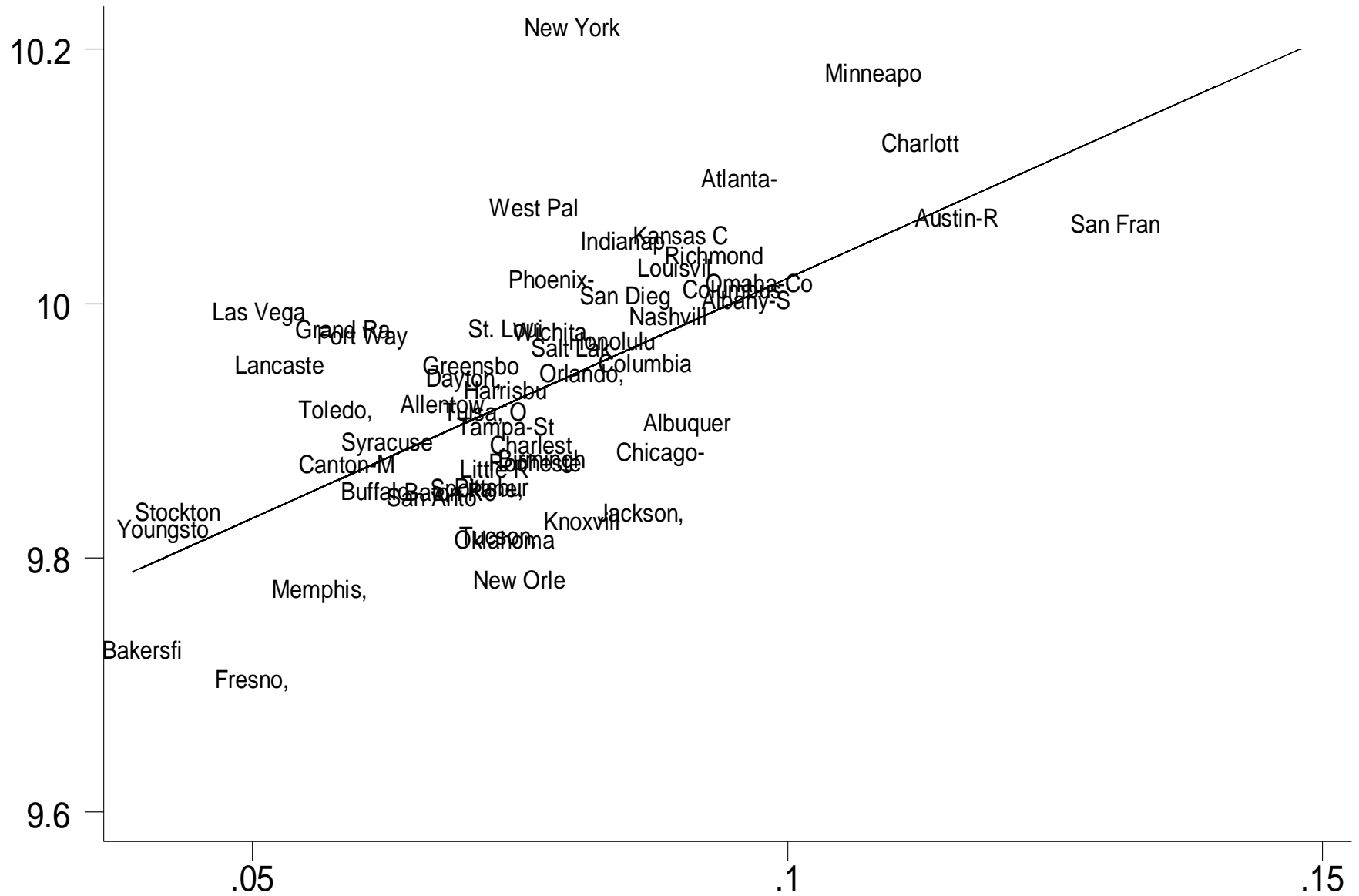
1980 Share of Skilled Workers

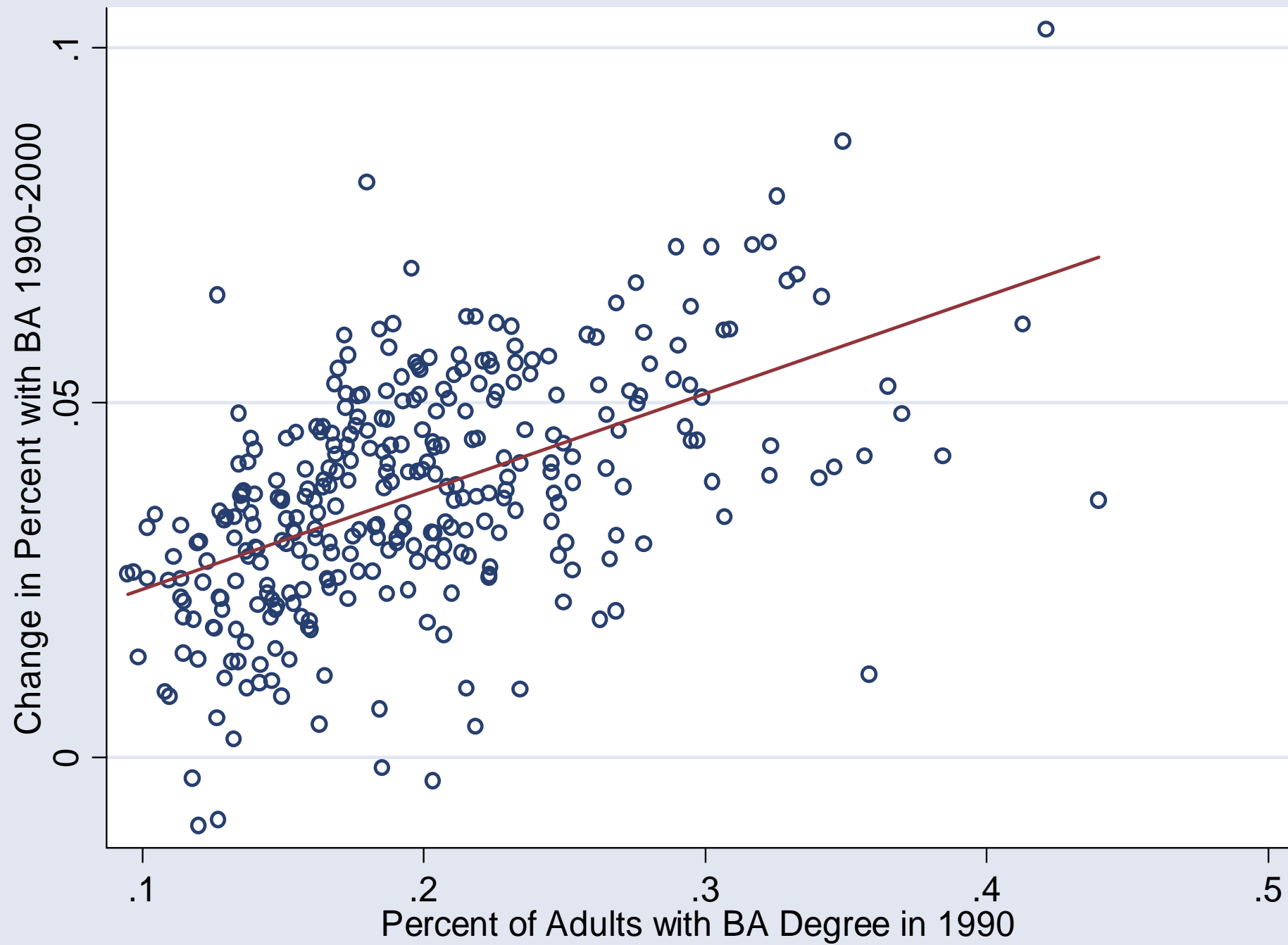
## Figure 5



# Log Wage Residual 2000

— Fitted values





# Other Determinants of Economic Success

- Strong correlation between growth and an abundance of small firms.
- Detroit goes from being a highly productive city of small entrepreneurs to being stagnant.
- A weaker correlation between industrial diversity and later growth.
- Few strong correlations with particular industries (except for healthcare which is -);,m

# Reinvention in the West

- In the old world, Milan thrives and Turin fades.
  - Weaving becomes fashion.
  - Chains of ideas (Nino Cerruti, Armani, others).
- Minneapolis excels and Cleveland doesn't.
- Birmingham reinvents itself (it always was an intellectual polis); Manchester doesn't.
- And of course, then there is Boston.
  - Technology, medicine, finance.

# Urban Intercontinental Gateways

- Athens as importer of ideas from the Greek Diaspora.
  - Anaxogoras, Prodicus came to Athens-> Socrates
- Baghdad is importer of ideas from India, Persia, and Greece.
  - Jafar is a Barmakid— probably a Brahmin from Kashmir— aided the Abbasid takeover
  - Academy of Gundishapur, Sindhin, Al-Khwarizmi
- Cordoba, Venice and the transmission west.



# Singapore and Others

- The Most Successful Cities today continue to be gateways across civilizations– conduits for the flow of ideas.
- Bangalore in India and software services
- New York-London-Singapore financial nexuses.
- Hong Kong and the connection to China
- Singapore and the Pacific.
- Flat world has increased their importance.

# What is good about urban poverty?

- Cities tend to contain a large number of poor people, but that reflects urban strengths more than urban weaknesses.
- In places like Boston, there is opportunity, ethnic networks, and life without cars.
- Cities aren't making people poor, they are bringing them in.
- Policies that are good to poor people in cities will attract more of them and that is o.k.— the really problem is the artificial equality of suburbs.



# The Rise of the Consumer City

- While clusters of genius are more important than ever, they are no longer tied down by productive amenities like rivers and ports
- Increasingly, cities have formed in places where people want to live.
- At the same time, more attractive older cities have become increasingly attractive to people who want to live in a dense environment.

# When are high real wages bad?

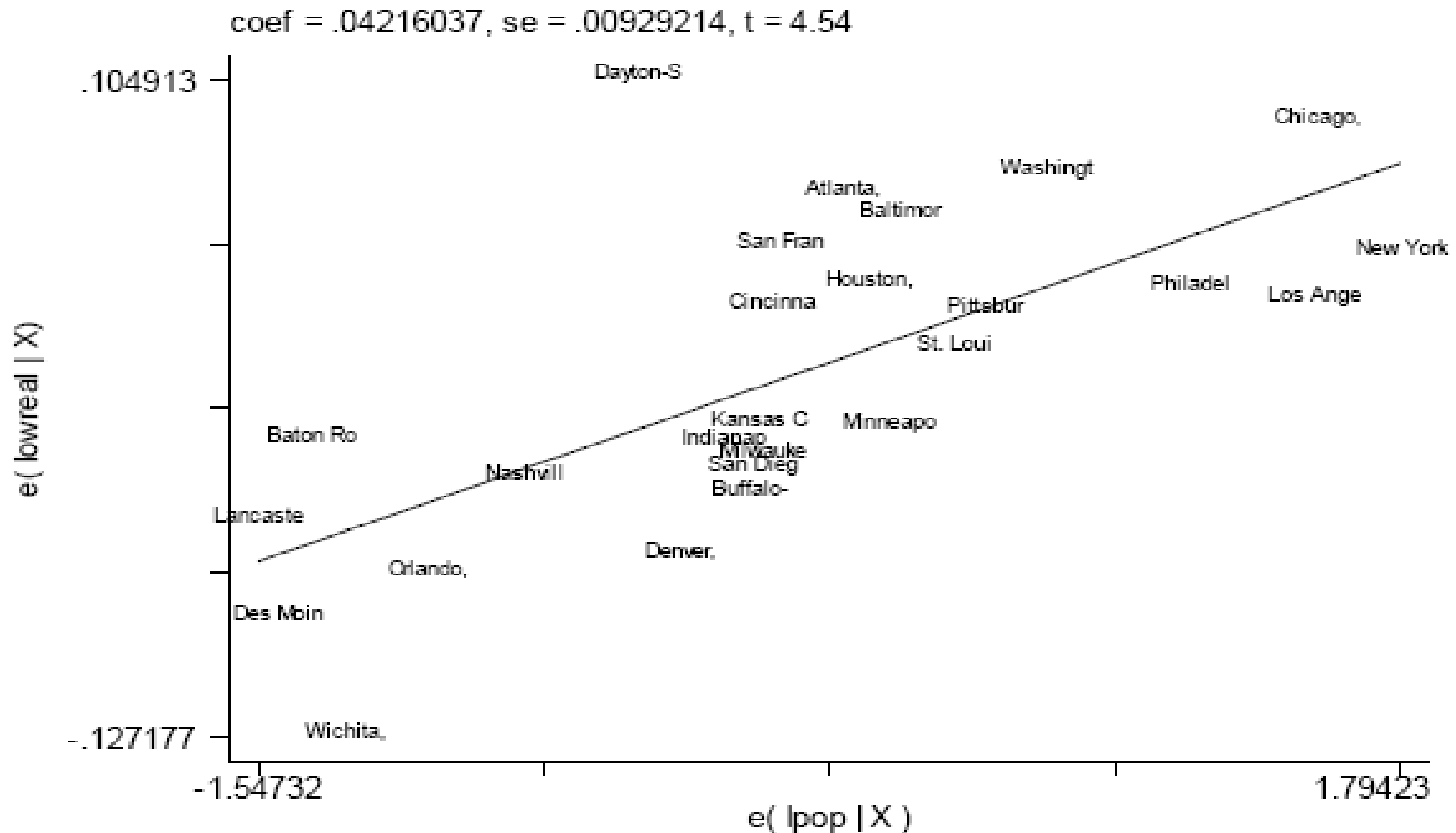


Figure 3: Log of Real Wages and City Size, 1970

# Declining Real Wages and the Rise of the Consumer City

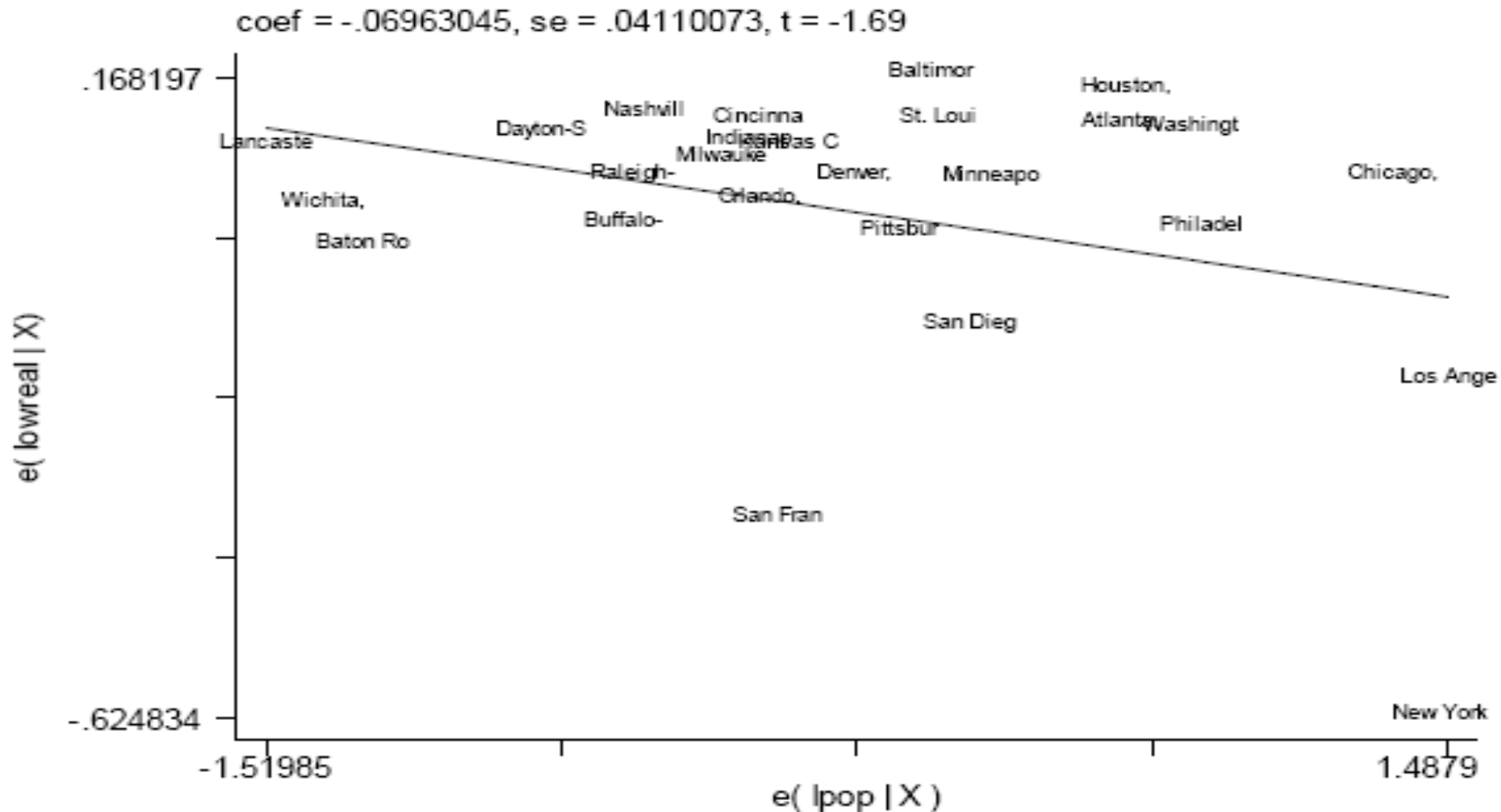


Figure 4: Log of Real Wages and City Size, 2000

## Ranking of Top and Bottom US MSA's, according to Estimated Amenity Value

---

---

### *Metropolitan Statistical Area (MSA)*

#### **Highest**

#### **Lowest**

---

Honolulu, HI

Stamford, CT

Santa Cruz, CA

Norwalk, CT

Santa Barbara-Santa Maria-Lompoc, CA

Anchorage, AK

Salinas-Seaside-Monterey, CA

Rochester, MN

Los Angeles-Long Beach, CA

Detroit, MI

San Francisco, CA

Midland, TX

San Jose, CA

Trenton, NJ

Santa Rosa-Petaluma, CA

Minneapolis-St.Paul, MN

Oxnard-Ventura, CA

Nassau-Suffolk, NY

San Diego, CA

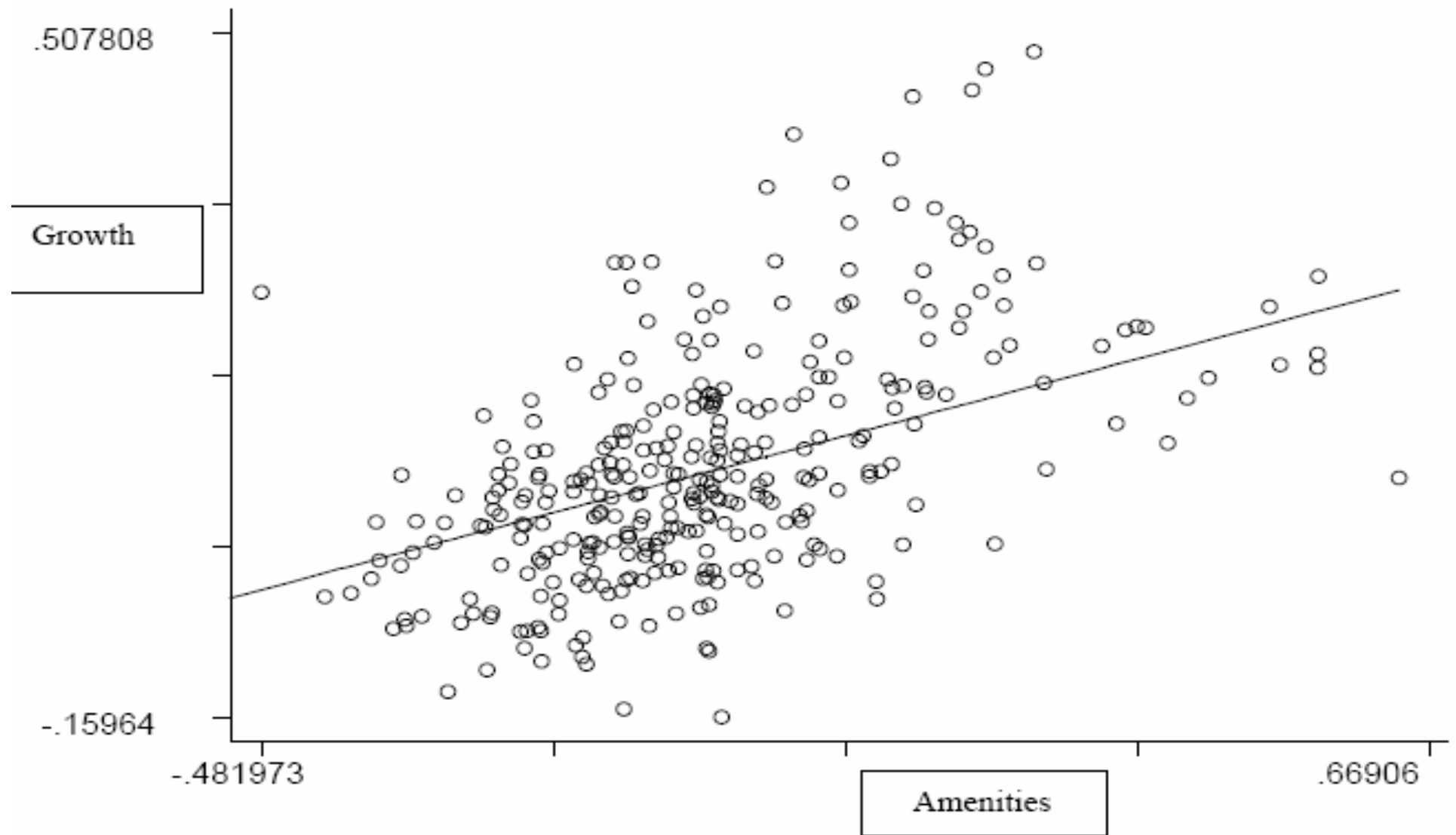
Bloomington-Normal, IL

---

---

*Notes* : Estimated Amenity Value measured as residual from an OLS regression of log median house value on log median income in 1990.

# Growth and Amenities in the US

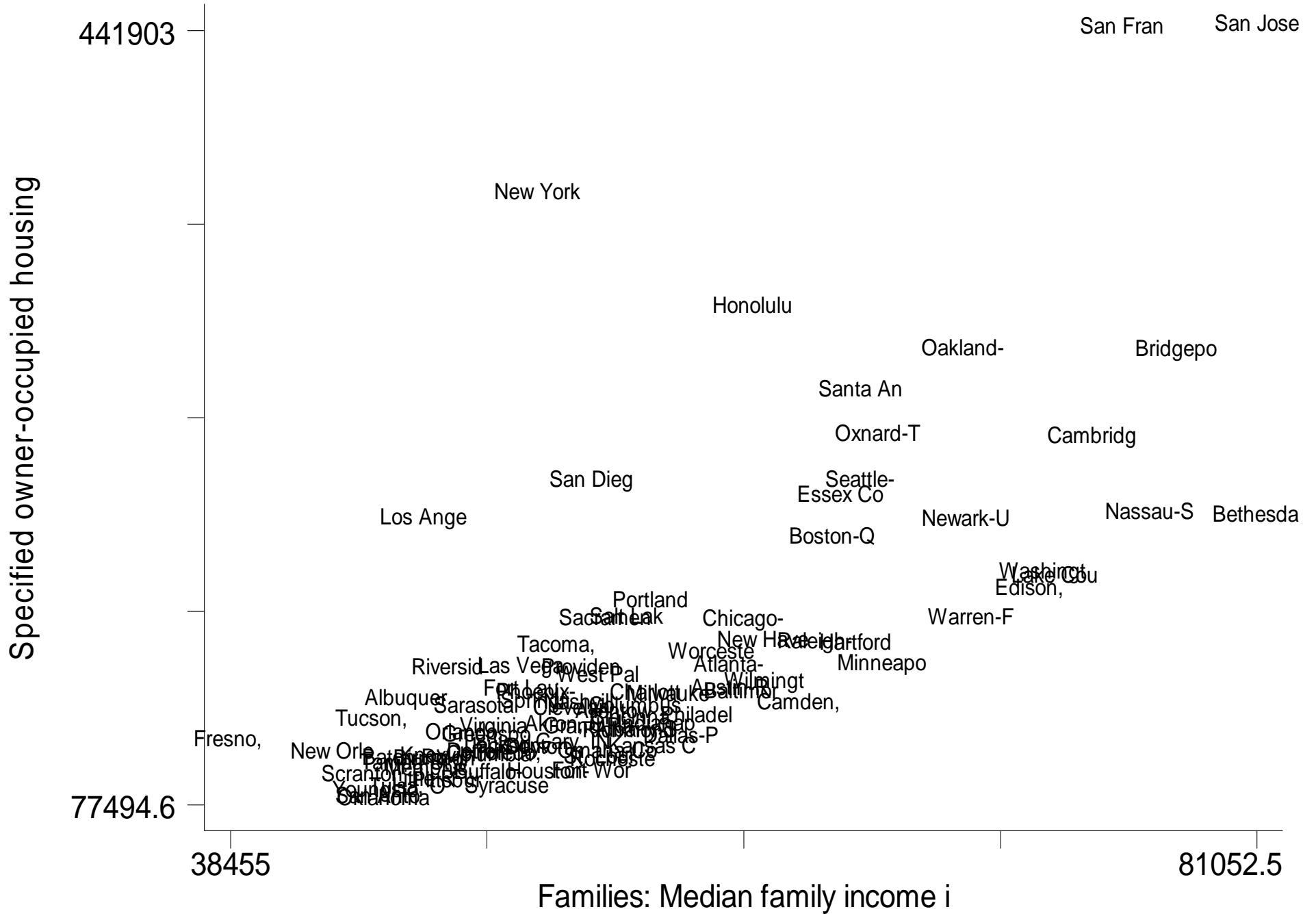


# Singapore as a Consumer City

- As a nation, Singapore has more ability to retain talent than a standard city but it still must fight.
- Quality of life as an economic development strategy– greening of Singapore.
- Good schools, fast commutes, safe streets
  - Congestion pricing and mass transit
- Other higher end consumer amenities
  - Great restaurants, but an ongoing climate battle

# Why are so many people still in the rustbelt?

- The rustbelt was built on manufacturing around the waterways.
- Erstwhile creative hubs like Detroit evolved into goods producing machines, but declining transport costs led manufacturing to move.
- Now there is little obvious comparative advantage to these places and the weather isn't great.



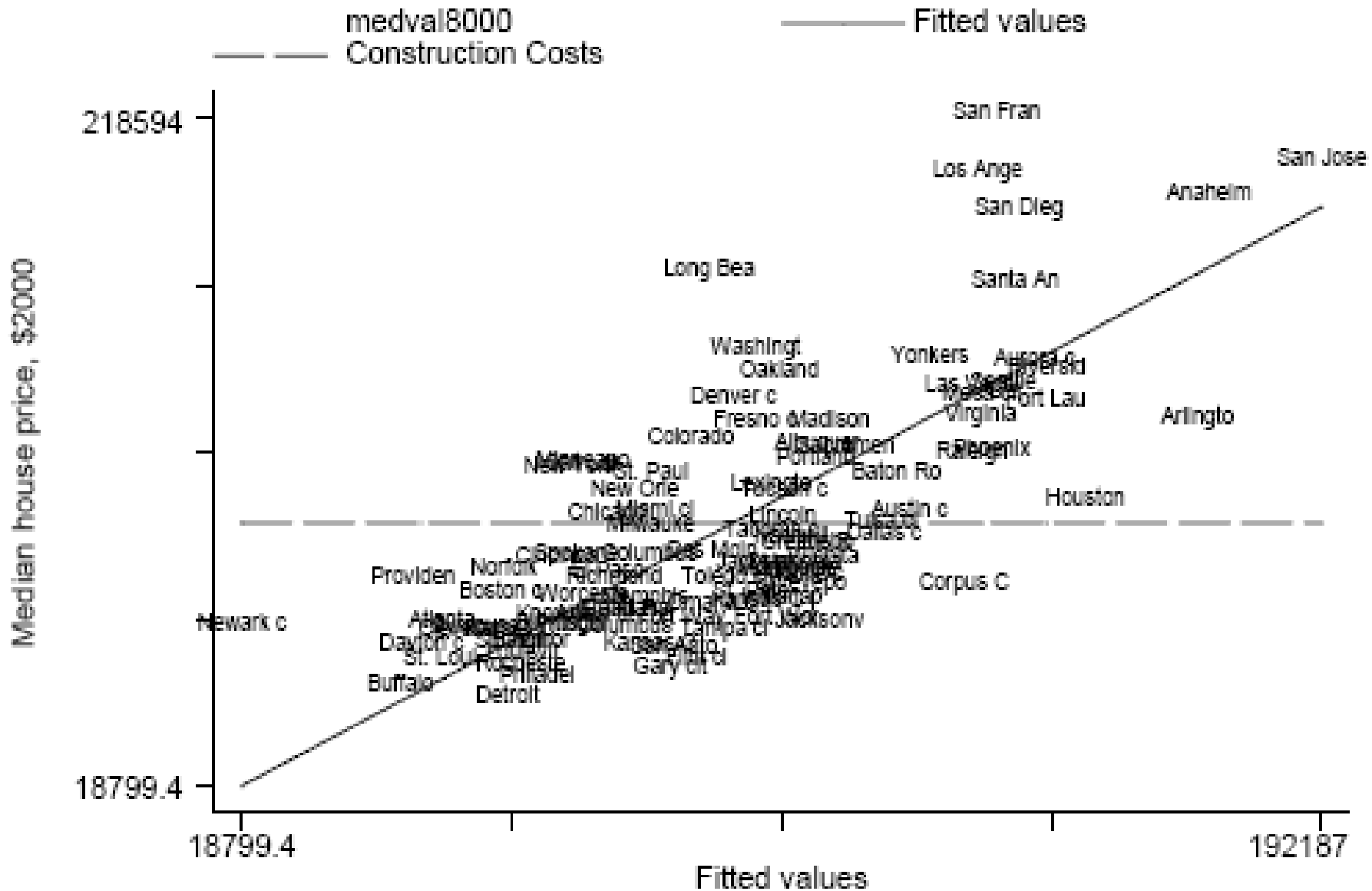


Figure 2: Median Price Regression and Construction Costs

# Are some cities becoming gateless gated communities?

- Over the past 40 years, there has been a revolution in property rights regarding development, some of this is good, some is bad.
- Suburbs, not cities, are the center of this.
- Still, a large number of cities are increasingly making it harder to build.
- This is where Jane Jacobs was wrong.





# What is good about sprawl?

- The four fastest growing American cities are Atlanta, Dallas, Houston and Phoenix.
- Their climates are not great and their wages are not high.
- They are car cities, and they are warm, but their biggest edge is in providing affordable housing.
- 200k buys you something pretty great in Texas.
- Families earning 60k are solidly middle class.

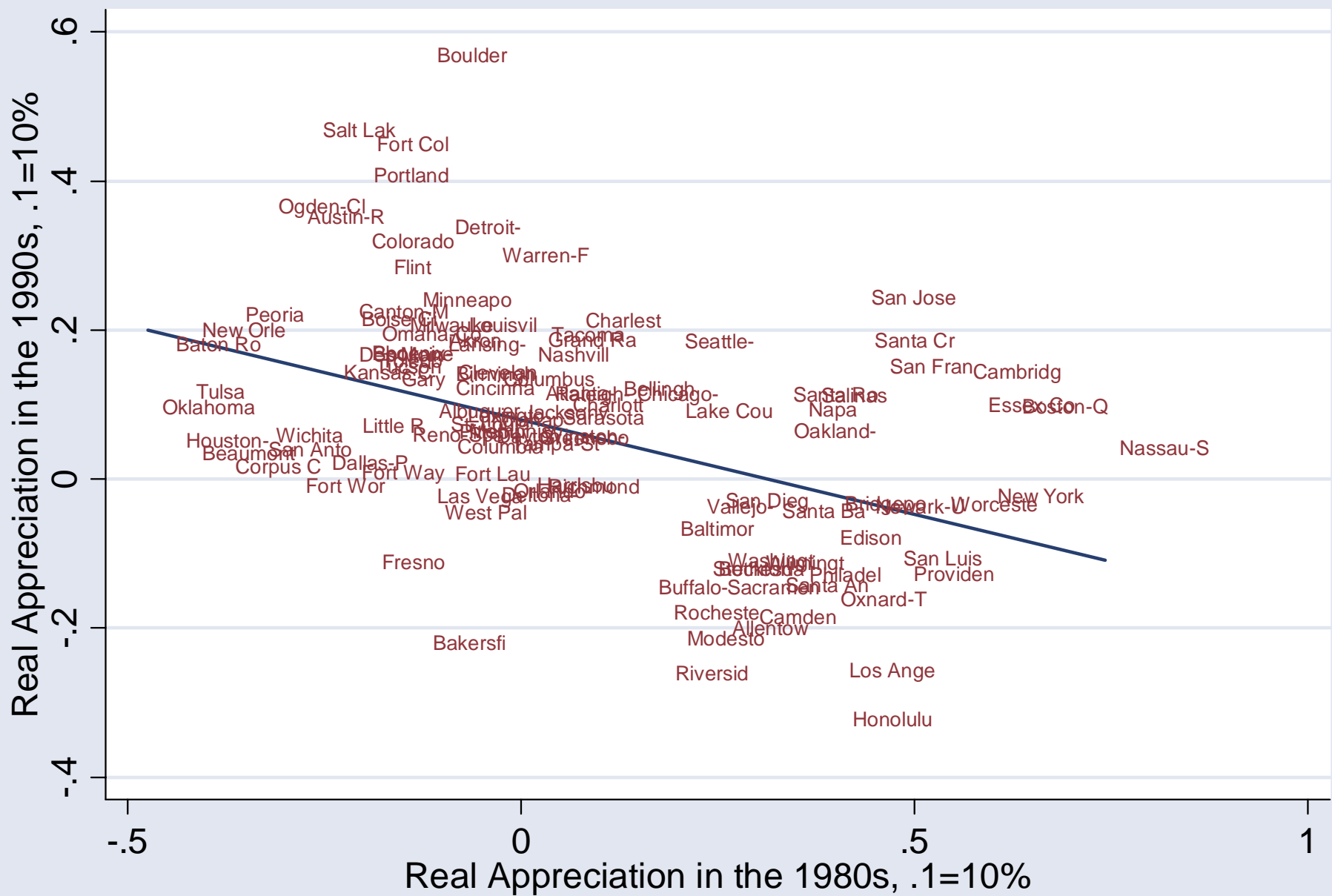
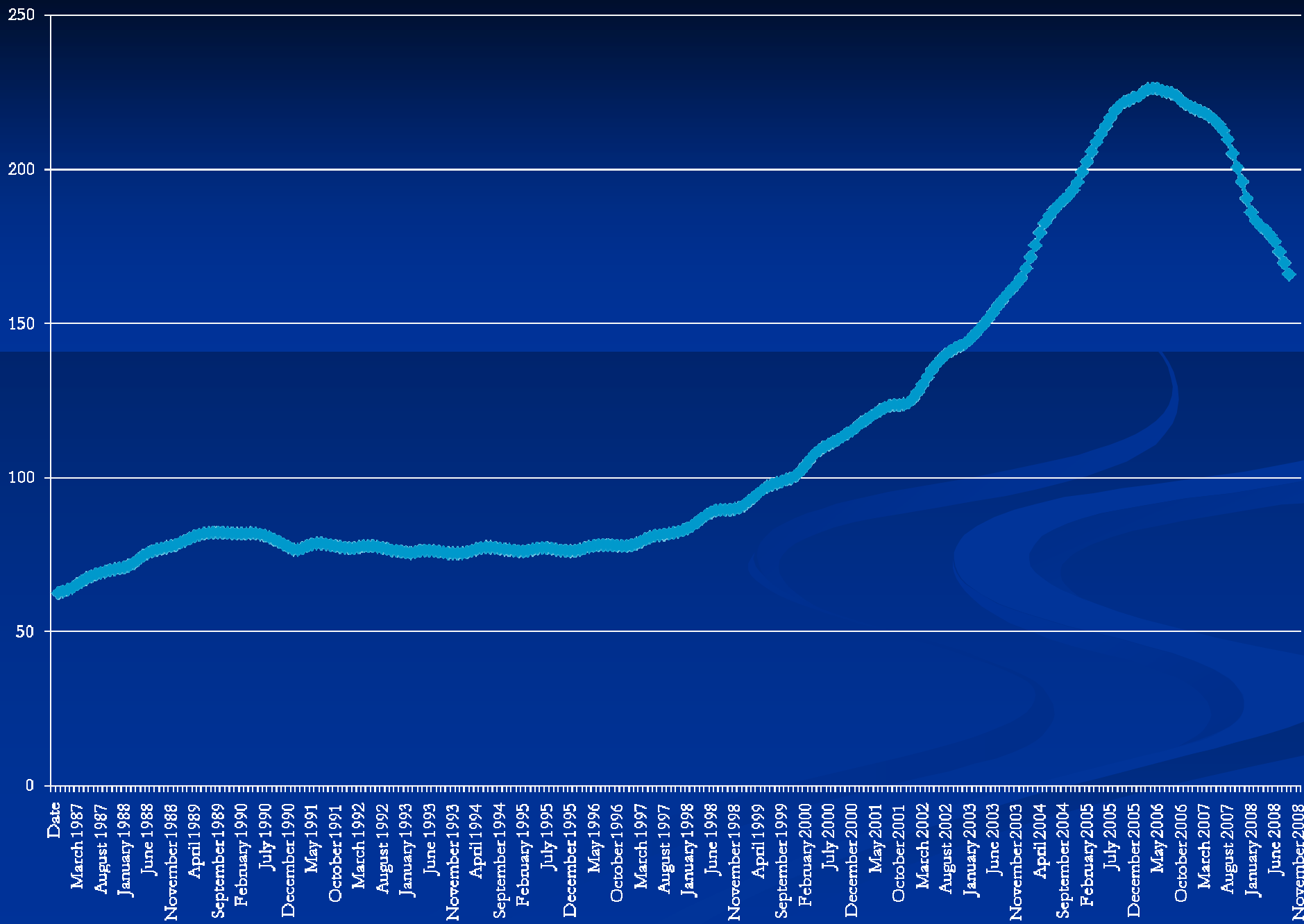


Figure 1: Real House Price Appreciation in the 1980s and 1990s

# Composite-10 Case Shiller Repeat Sales Index



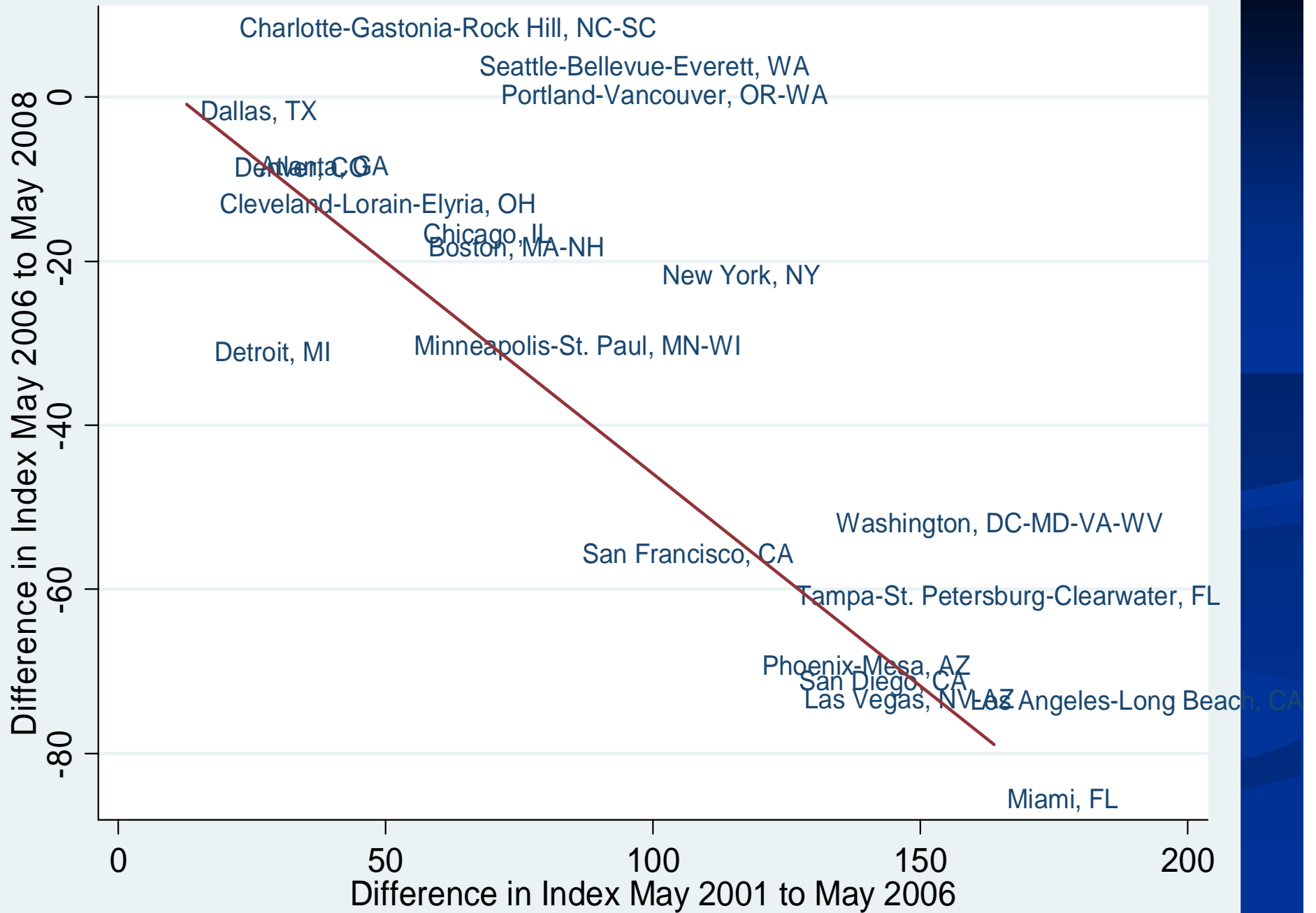
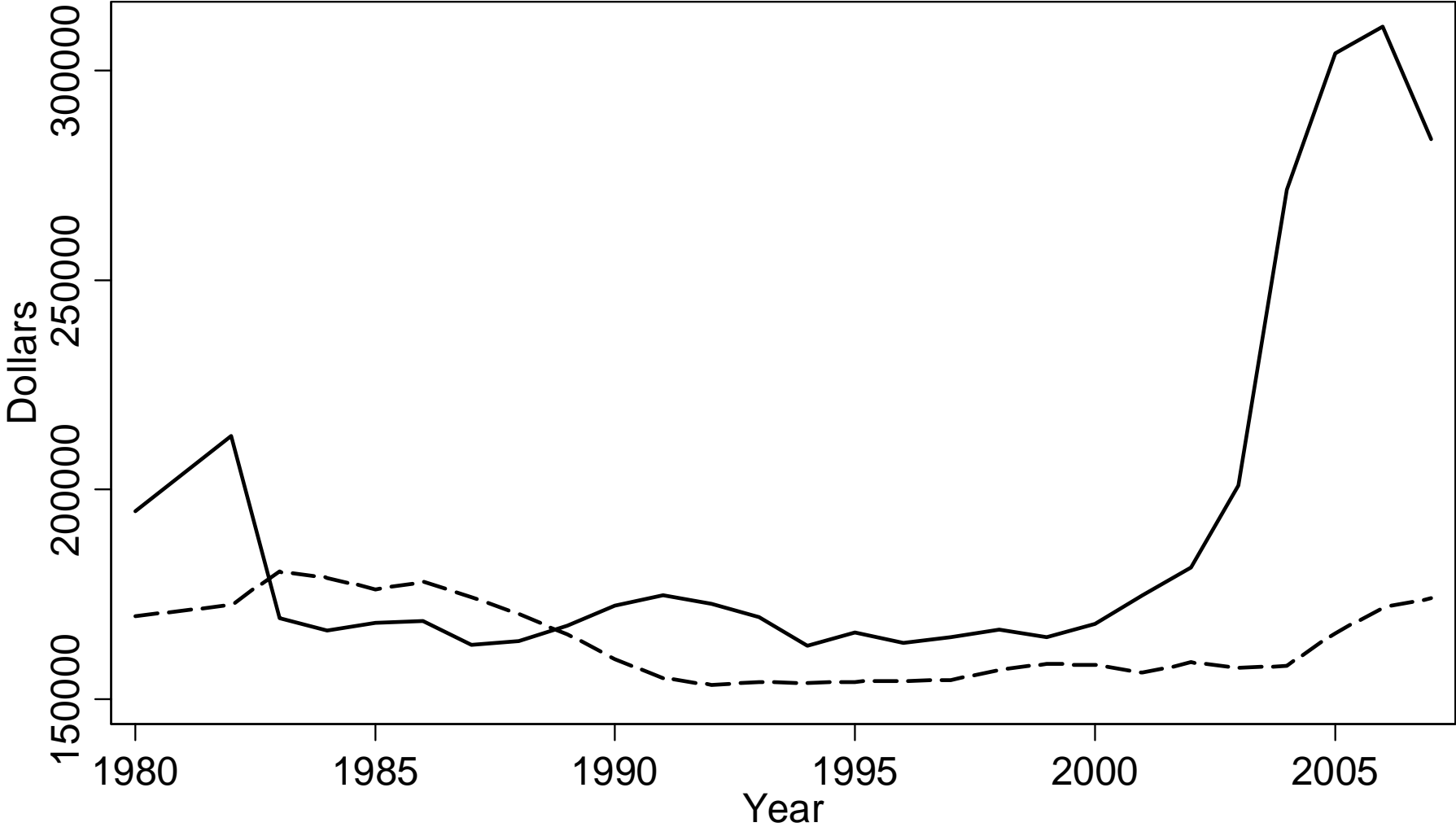
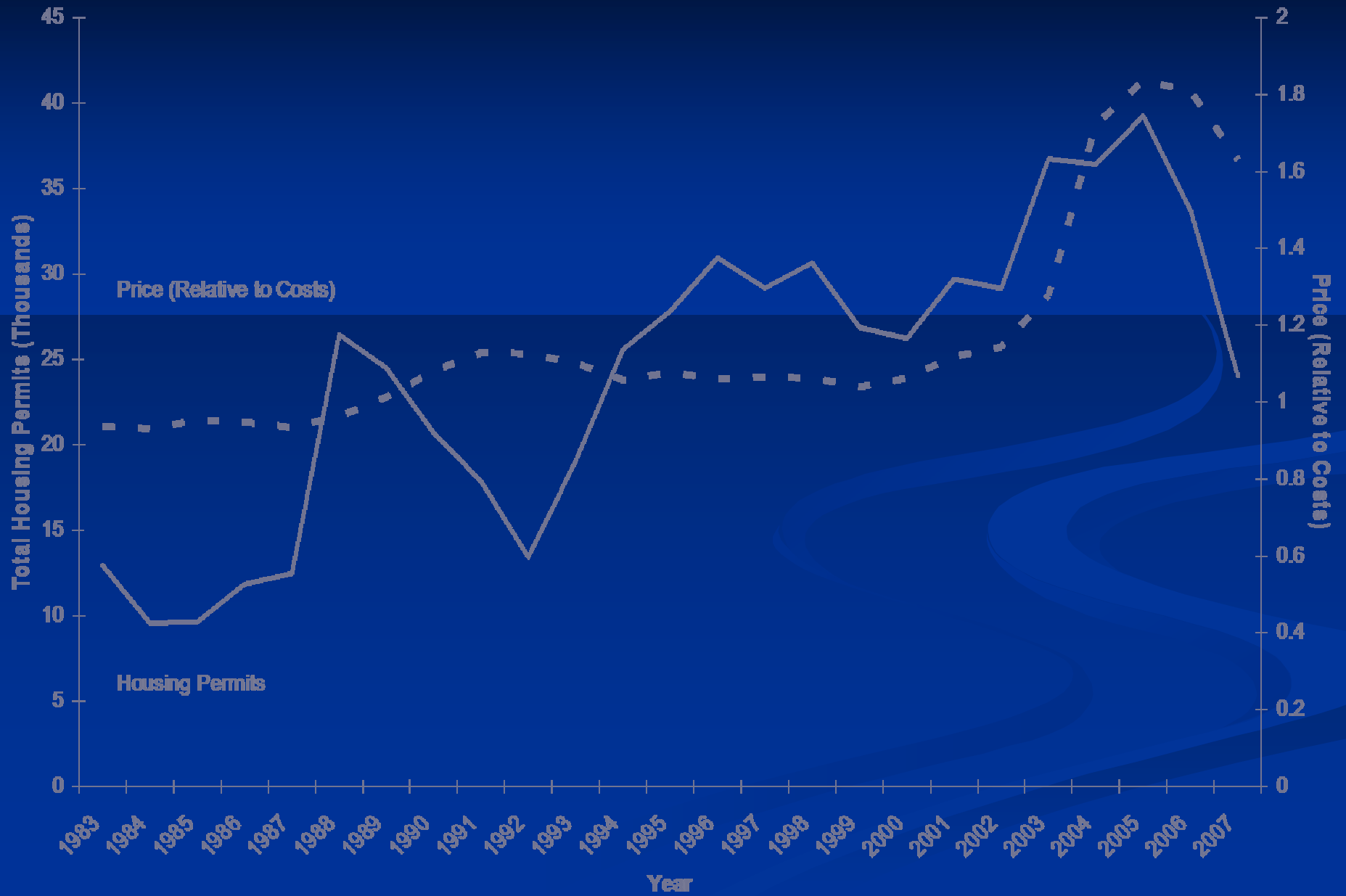


Figure 3: OFHEO Adjusted Housing Prices vs. Construction Costs, Las Vegas

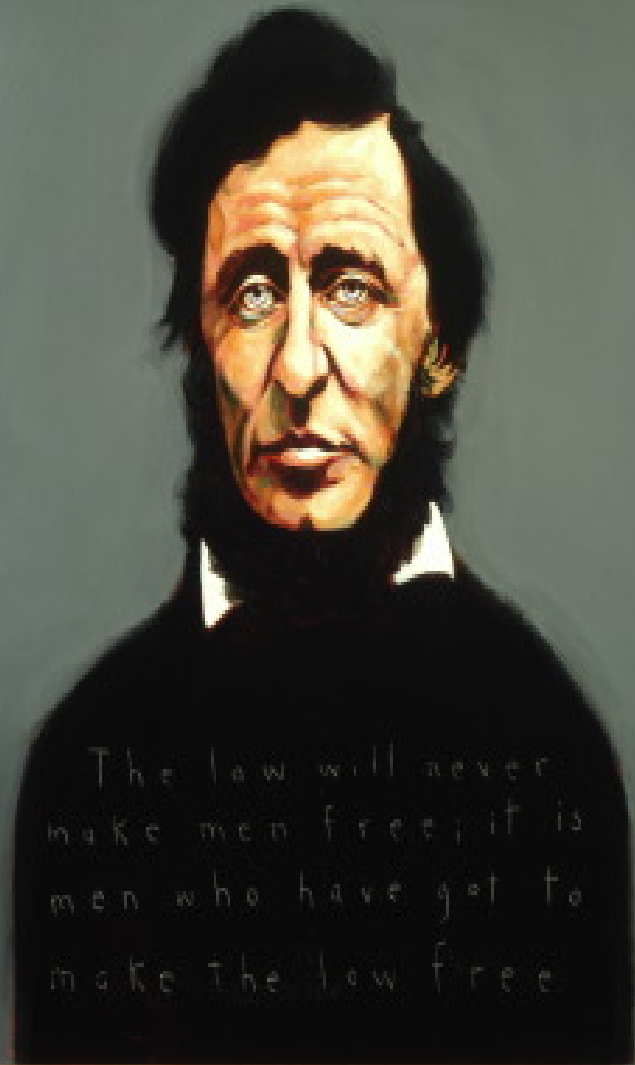


— OFHEO Adjusted Prices      - - - - Real Construction Costs

# Las Vegas



Henry David Thoreau



The law will never  
make men free; it is  
men who have got to  
make the law free.



# Sources of CO2 Emissions

- Private Gasoline Consumption (Cars)
- Public Transportation Emissions
- Home Electricity
- Home Heating: Natural Gas and Fuel Oil

# Green Cities

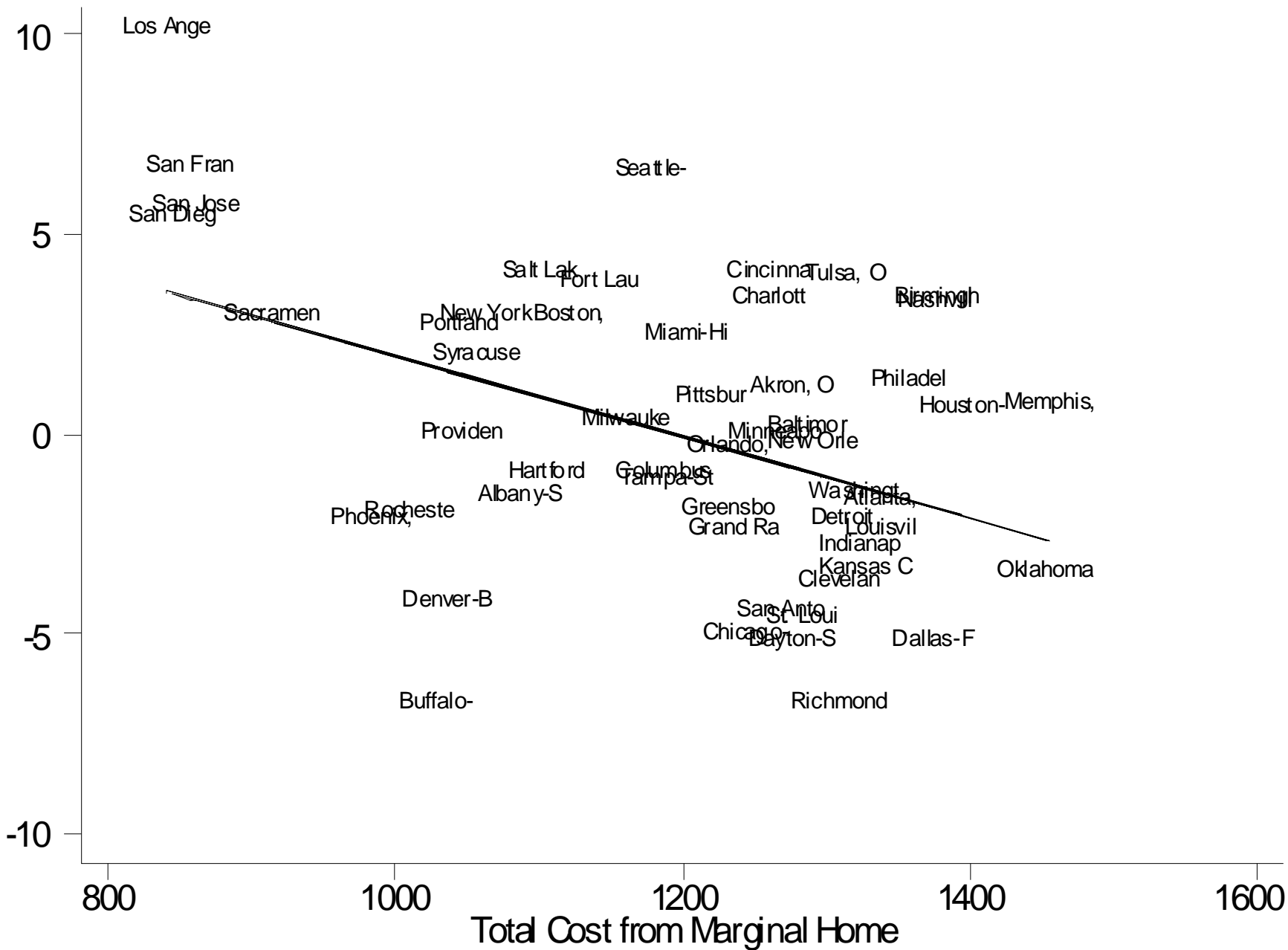
- Urban residents are much less likely to drive than their suburban counterparts.
- Urban residents live in smaller homes that use less energy.
- Since we don't tax carbon properly, this means that there are too few people in cities.
- The environmental consequences of environmentalism.

<b>MSA</b>	<b>Driving Emissions</b> (Lbs of CO2)	<b>Public Trans. Emissions</b> (Lbs of CO2)	<b>Home Heating Emissions</b> (Lbs of CO2)	<b>Electricity</b> (Megawatt Hrs)	<b>Comm. Energy Consump.</b> (Megawatt Hrs)	<b>NERC</b>	<b>CO2 Emissions Cost</b> (\$ per Year)
San Diego, CA	24,774	689	5,994	7.18	14.59	1,007	1,148
San Francisco, CA	23,970	1,675	6,784	7.03	14.00	1,007	1,152
San Jose, CA	23,649	2,058	7,030	7.75	14.00	1,007	1,175
Providence, RI	22,562	1,273	12,965	7.35	7.78	1,185	1,177
Los Angeles-Long Beach, CA	23,553	1,062	6,439	8.43	15.63	1,007	1,188
Sacramento, CA	25,534	458	6,875	9.07	15.44	1,007	1,237
Hartford, CT	23,092	1,539	13,752	8.09	8.15	1,185	1,239
Riverside-San Bernardino, CA	26,380	42	6,461	9.27	15.63	1,007	1,246
Boston, MA	22,870	2,276	14,019	7.92	8.22	1,185	1,253
Tucson, AZ	26,363	616	4,535	12.25	15.11	1,007	1,270



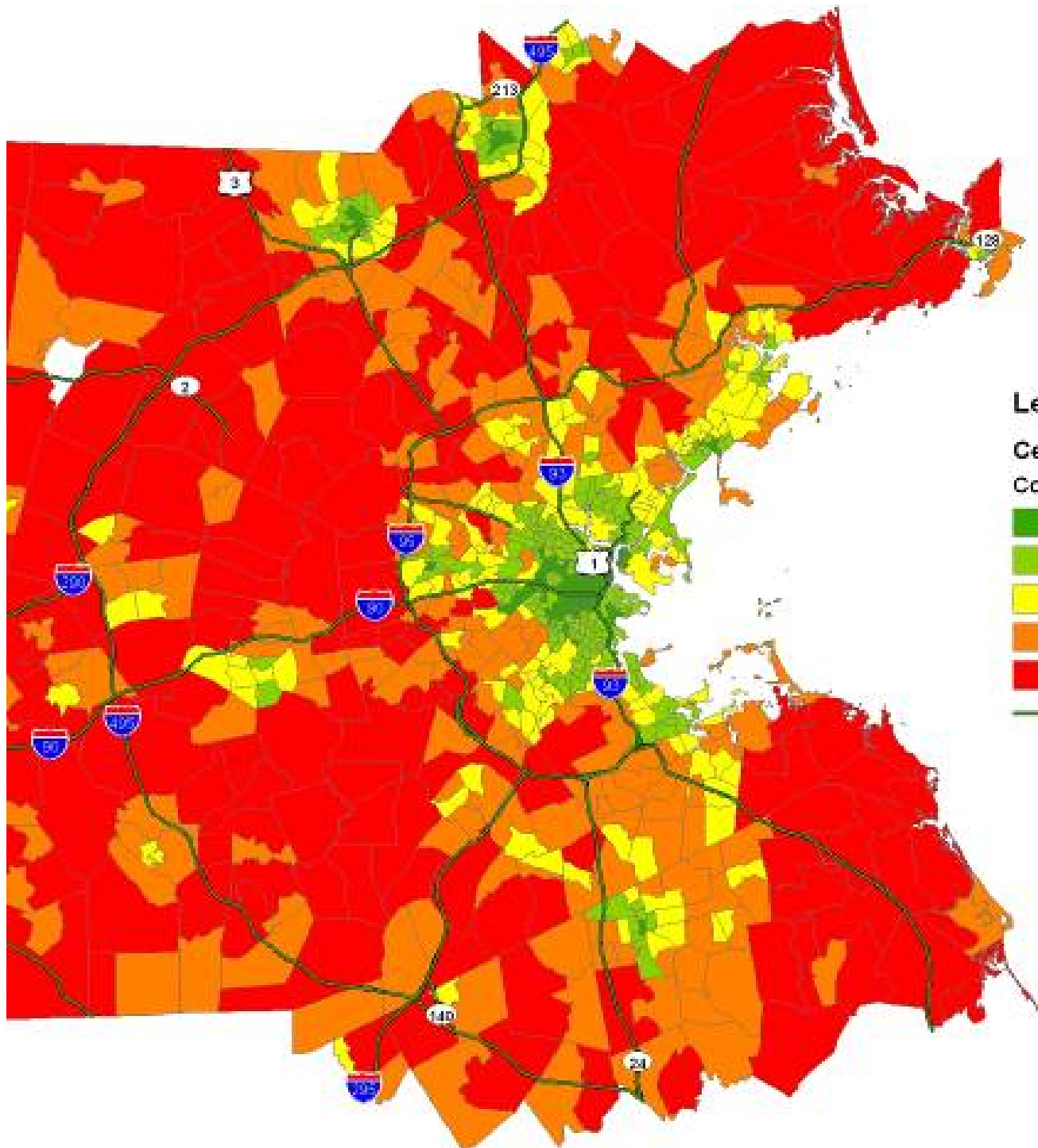
<b>MSA</b>	<b>Driving Emissions</b> (Lbs of CO2)	<b>Public Trans. Emissions</b> (Lbs of CO2)	<b>Home Heating Emissions</b> (Lbs of CO2)	<b>Electricity</b> (Megawatt Hrs)	<b>Comm. Energy Consump.</b> (Megawatt Hrs)	<b>NERC</b>	<b>CO2 Emissions Cost</b> (\$ per Year)
<b>Atlanta, GA</b>	<b>29,425</b>	<b>1,121</b>	<b>8,851</b>	<b>14.63</b>	<b>17.56</b>	<b>1,472</b>	<b>1,866</b>
<b>Minneapolis-St. Paul, MN-WI</b>	<b>27,427</b>	<b>143</b>	<b>10,990</b>	<b>10.12</b>	<b>16.41</b>	<b>1,819</b>	<b>1,866</b>
<b>Indianapolis, IN</b>	<b>29,222</b>	<b>534</b>	<b>10,665</b>	<b>12.80</b>	<b>16.56</b>	<b>1,614</b>	<b>1,888</b>
<b>Austin-San Marcos, TX</b>	<b>29,134</b>	<b>1,595</b>	<b>4,613</b>	<b>16.58</b>	<b>17.28</b>	<b>1,555</b>	<b>1,892</b>
<b>Dallas, TX</b>	<b>27,323</b>	<b>1,723</b>	<b>6,100</b>	<b>17.81</b>	<b>17.21</b>	<b>1,555</b>	<b>1,926</b>
<b>Houston, TX</b>	<b>27,333</b>	<b>1,447</b>	<b>5,344</b>	<b>18.74</b>	<b>17.11</b>	<b>1,555</b>	<b>1,932</b>
<b>Birmingham, AL</b>	<b>30,041</b>	<b>227</b>	<b>7,759</b>	<b>16.64</b>	<b>18.74</b>	<b>1,472</b>	<b>1,937</b>
<b>Nashville, TN</b>	<b>30,495</b>	<b>473</b>	<b>6,699</b>	<b>17.21</b>	<b>18.95</b>	<b>1,472</b>	<b>1,954</b>
<b>Oklahoma City, OK</b>	<b>28,953</b>	<b>332</b>	<b>8,710</b>	<b>16.41</b>	<b>17.10</b>	<b>1,649</b>	<b>2,005</b>
<b>Memphis, TN-AR-MS</b>	<b>28,440</b>	<b>1,073</b>	<b>8,438</b>	<b>18.70</b>	<b>19.19</b>	<b>1,472</b>	<b>2,015</b>

# Wharton Regulation Index



# City-Suburb Differentials

- For each metropolitan area, we can also calculate the difference between urban and suburban energy usage.
- Calculate gas usage by central city vs. suburb.
- Convert public transit by ridership using census figures.
- Calculate energy spending using the IPUMS for central city vs. suburb.



### 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

# Back to Singapore

- A well educated city that is well-positioned to thrive in the 21<sup>st</sup> century
- Plenty of diversity— a crossroads of culture.
- But will the quality of life issues hold up.
- How about the ability to deliver affordable, pleasant housing?
- These seem like the big challenges going forward.