

# Sustaining the Mass Economy: Housing Costs, Population Dynamics, and Employment

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Northeastern University**

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**Center for Urban  
and Regional Policy**



**Northeastern**  
UNIVERSITY

# Key Questions

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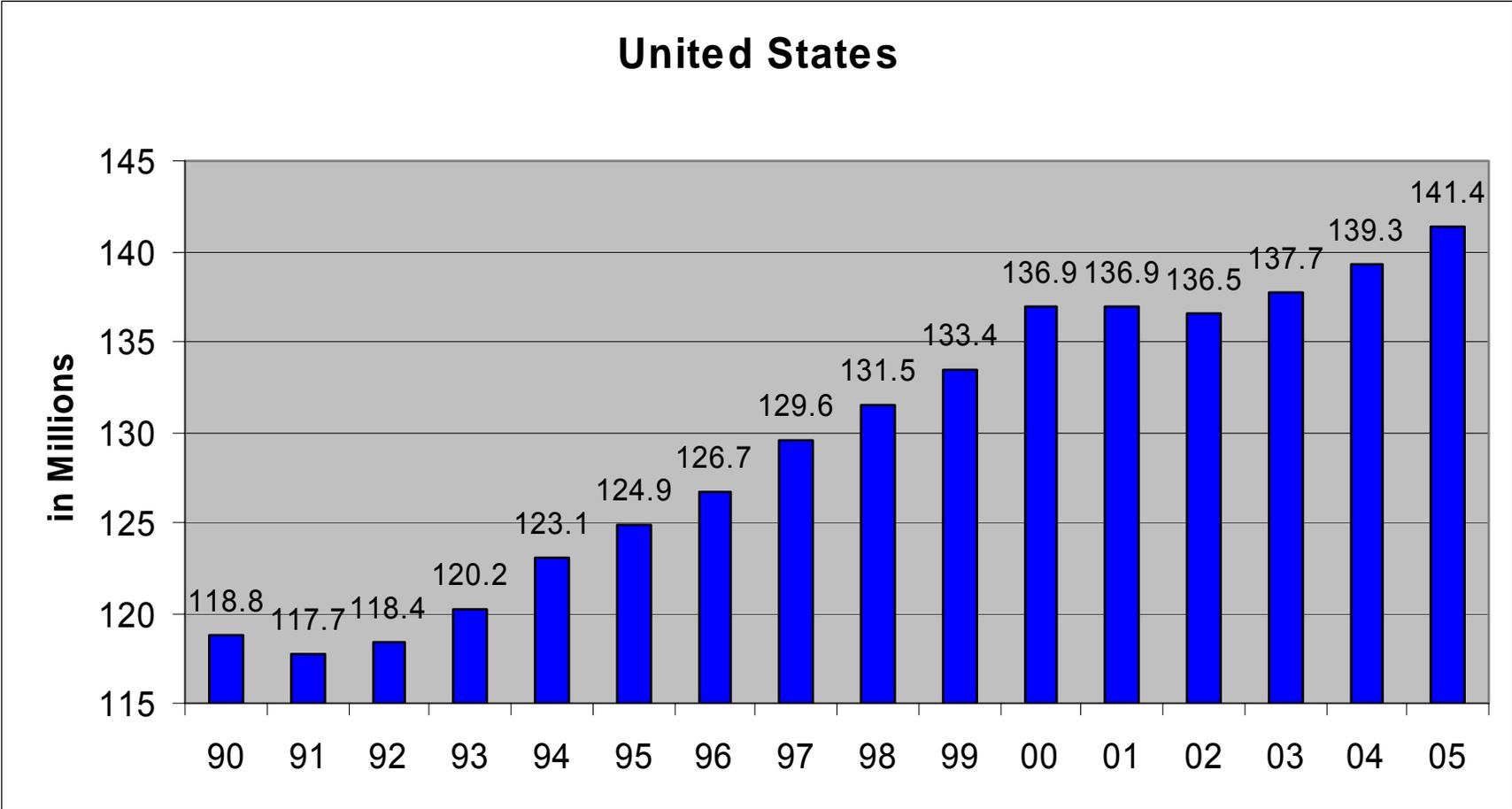
- Are the recent discouraging trends in Massachusetts employment and population related to the cost of housing?
  - Why should current homeowners in Massachusetts who have enjoyed double-digit appreciation in the value of their homes support an increase in housing supply?
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# Presentation Outline

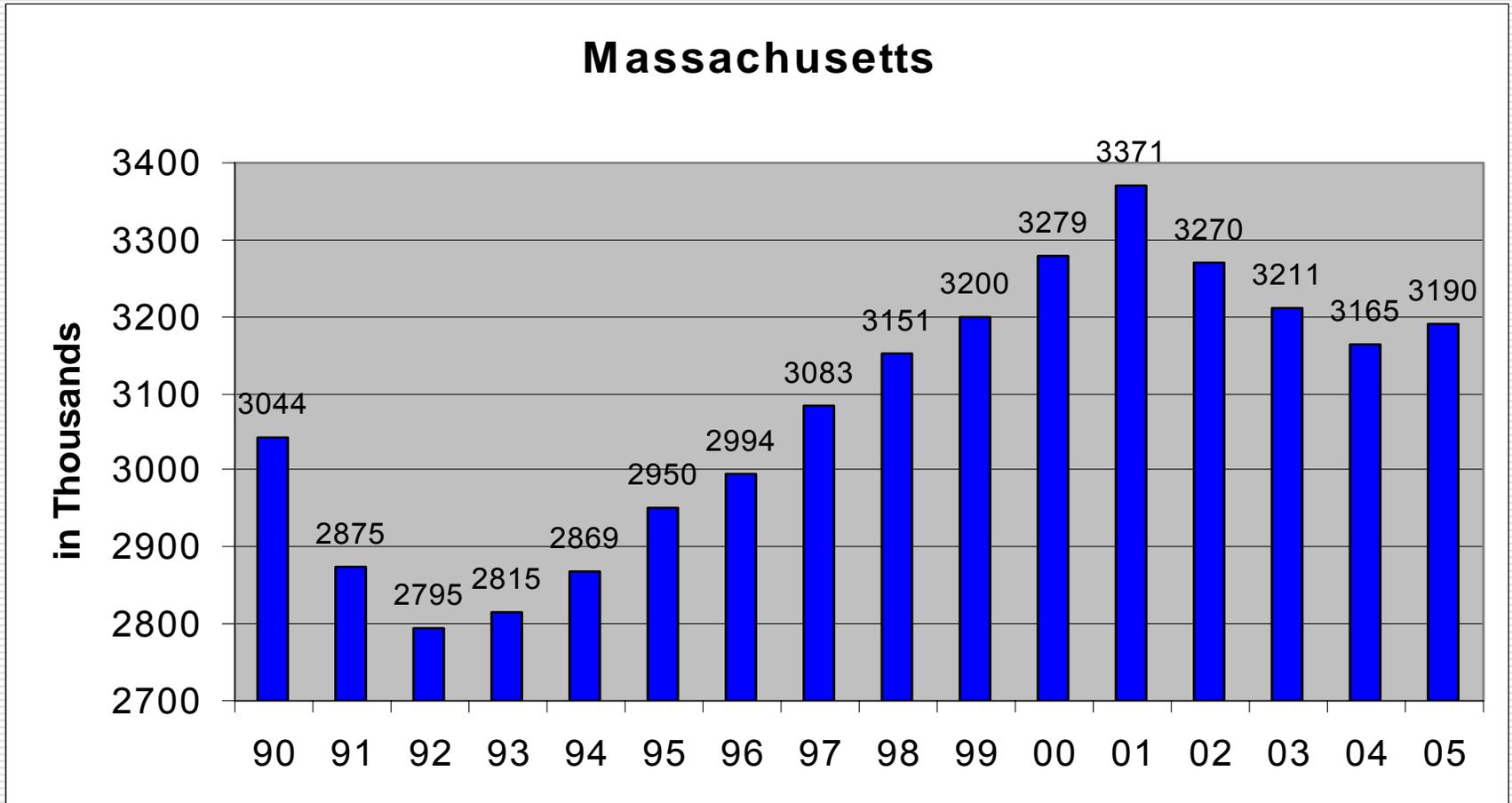
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- ❑ Employment Trends
  - ❑ Population Dynamics
  - ❑ Housing Prices
  - ❑ Cost of Living across U.S. Metro Areas
  - ❑ Impact of Housing Prices on Employment
  - ❑ Impact of Housing Prices on Migration
  - ❑ Housing Price/Vacancy Relationship
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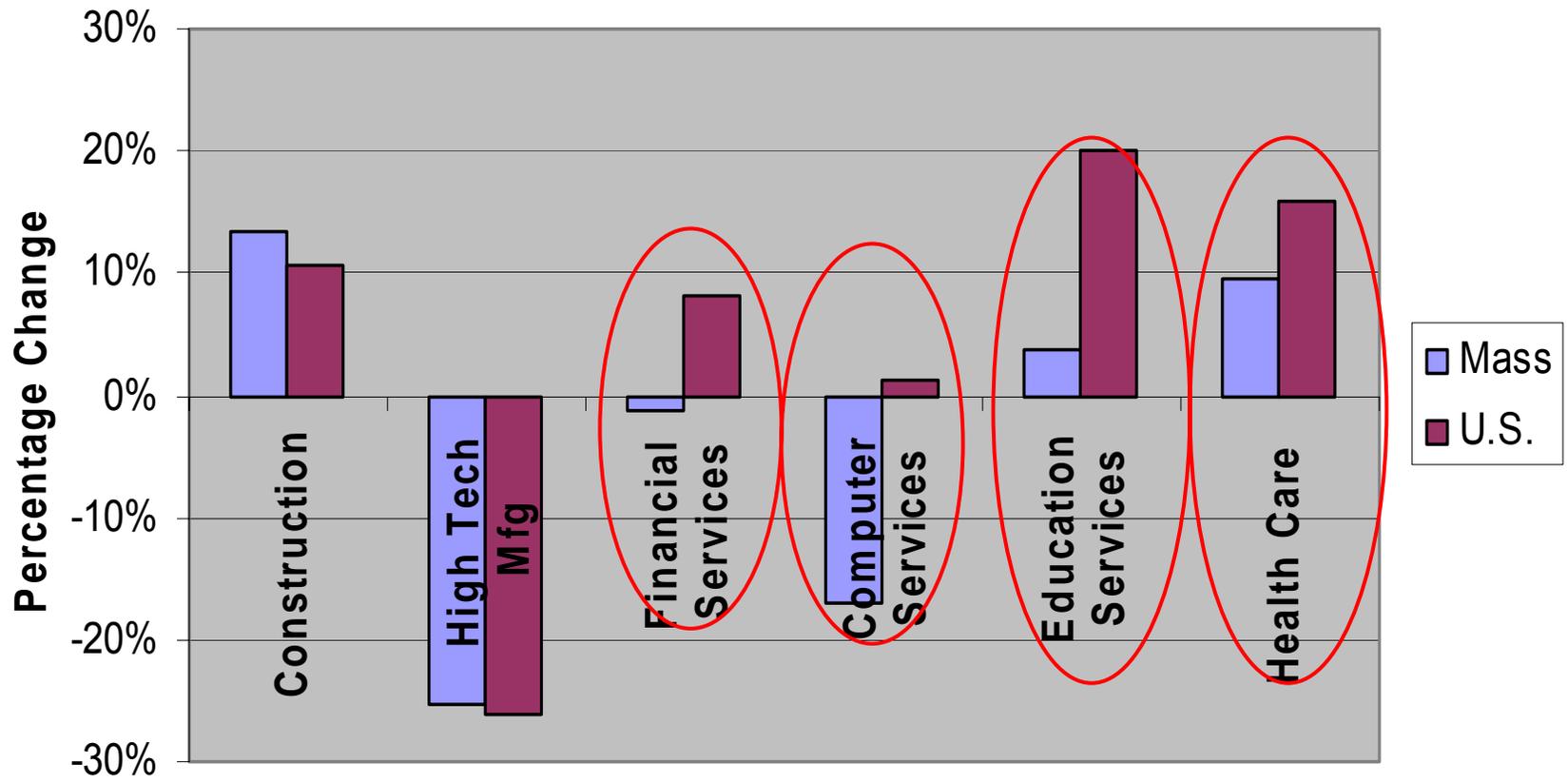
# Employment Trend – U.S.



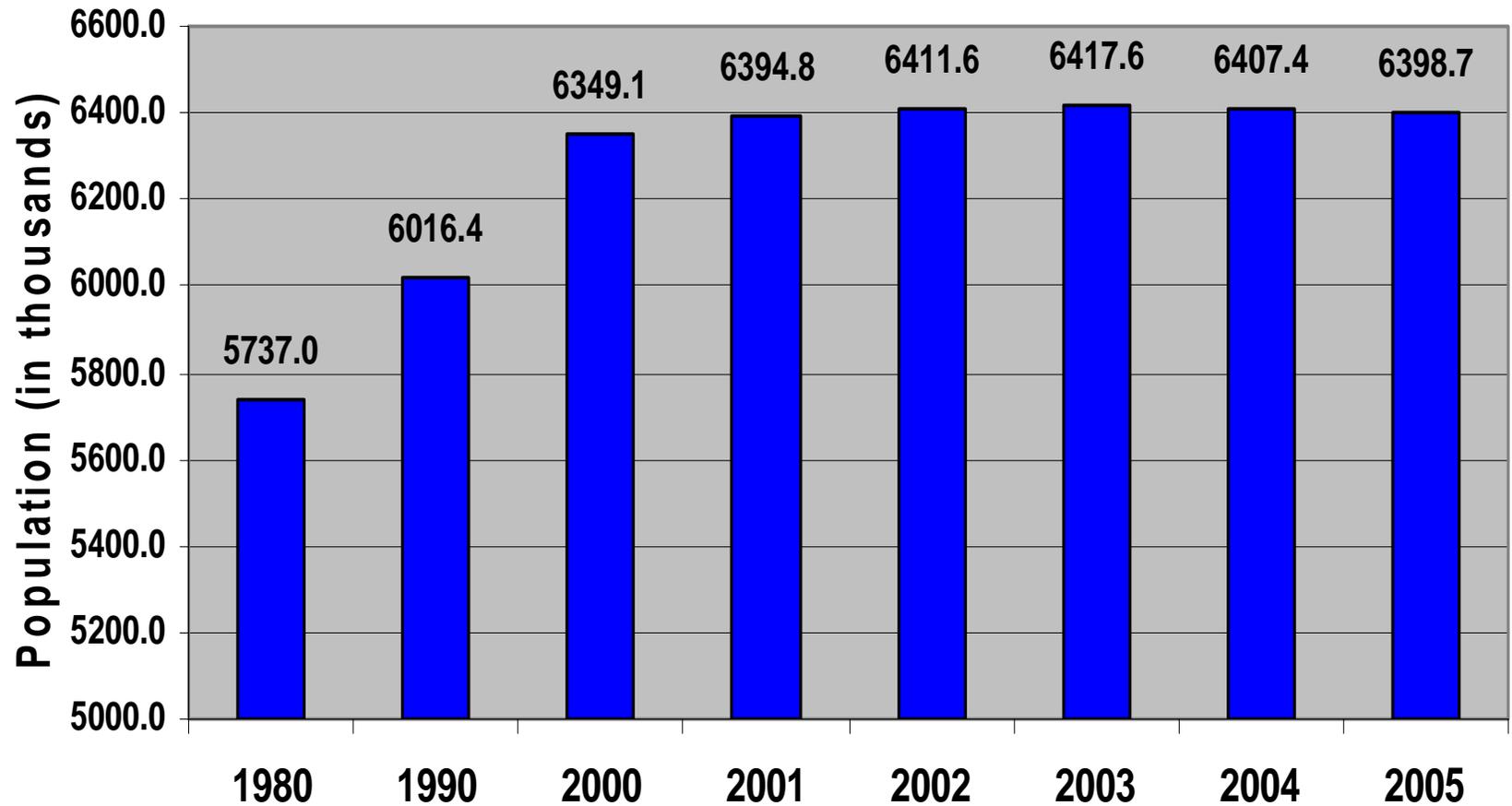
# Employment Trend - Massachusetts



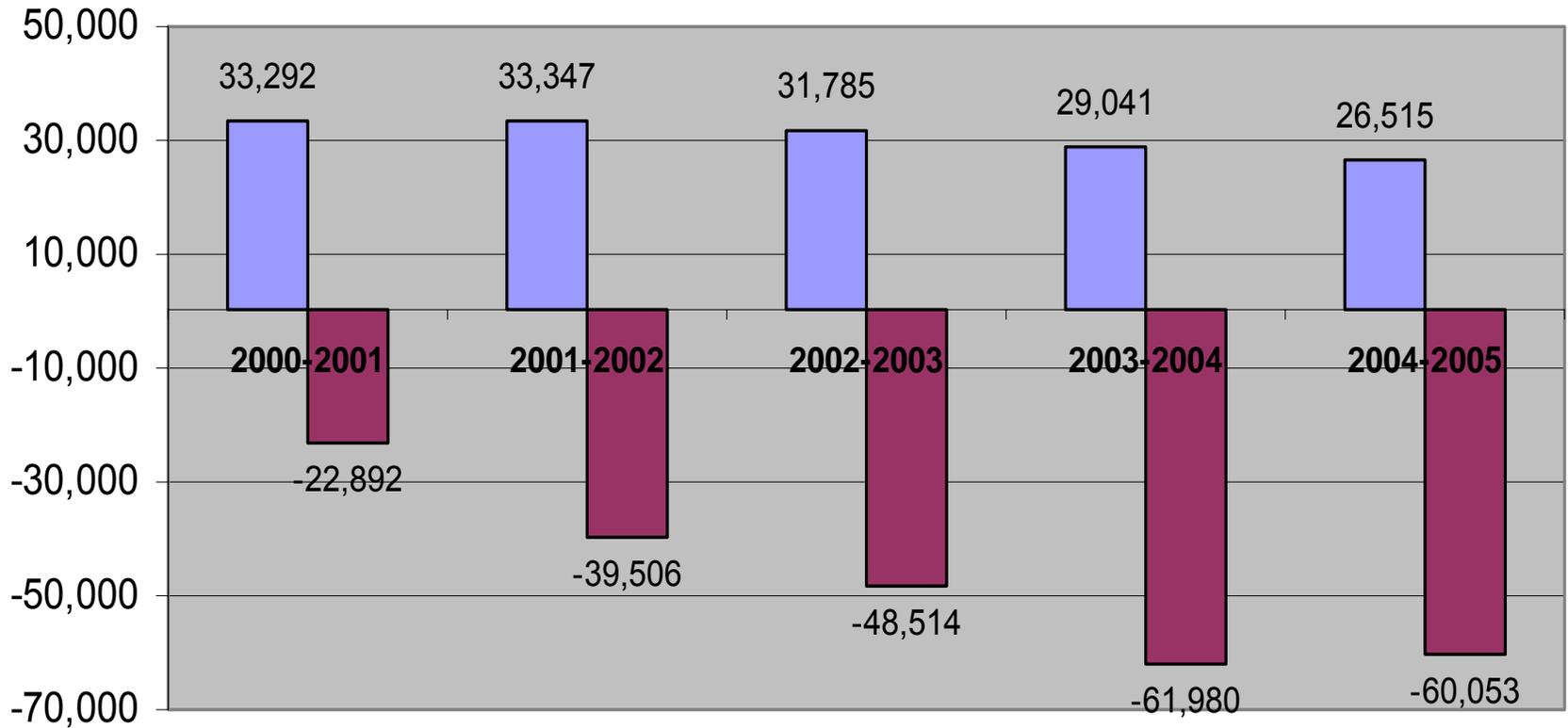
# Employment Growth (2000-2006) Massachusetts vs. U.S.



# Massachusetts Population

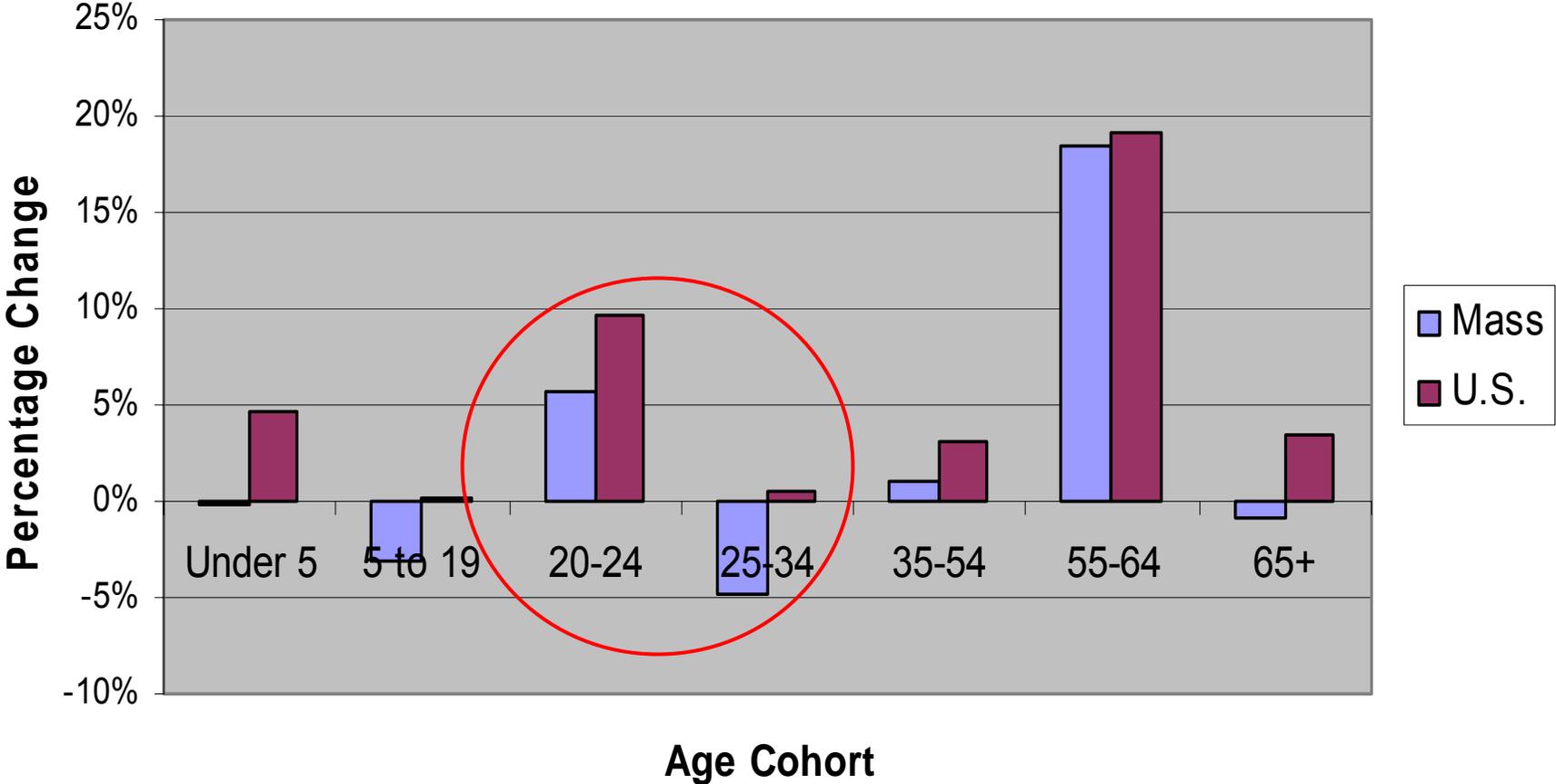


## Massachusetts Net Migration (2000-2005)

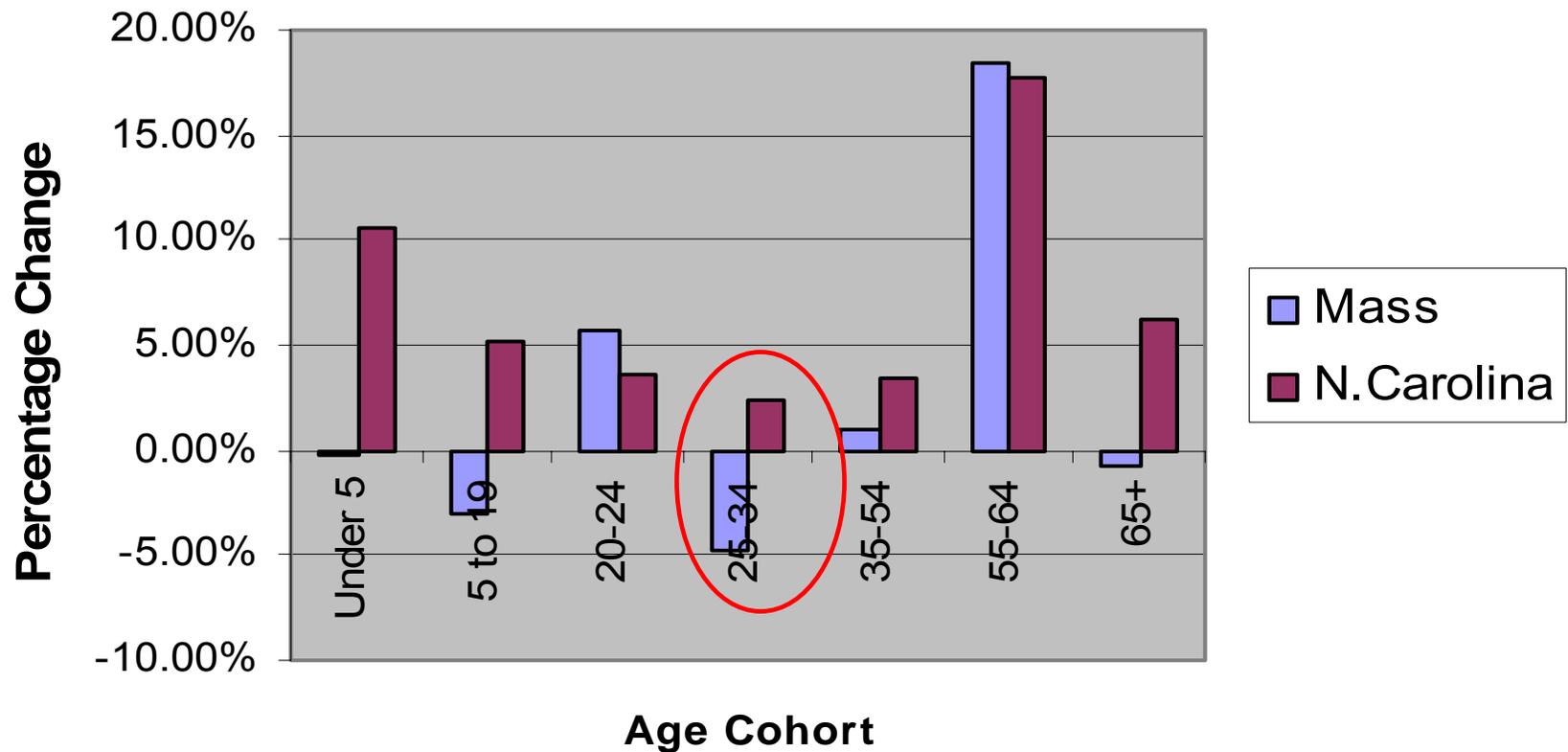


Foreign Immigration Internal Migration

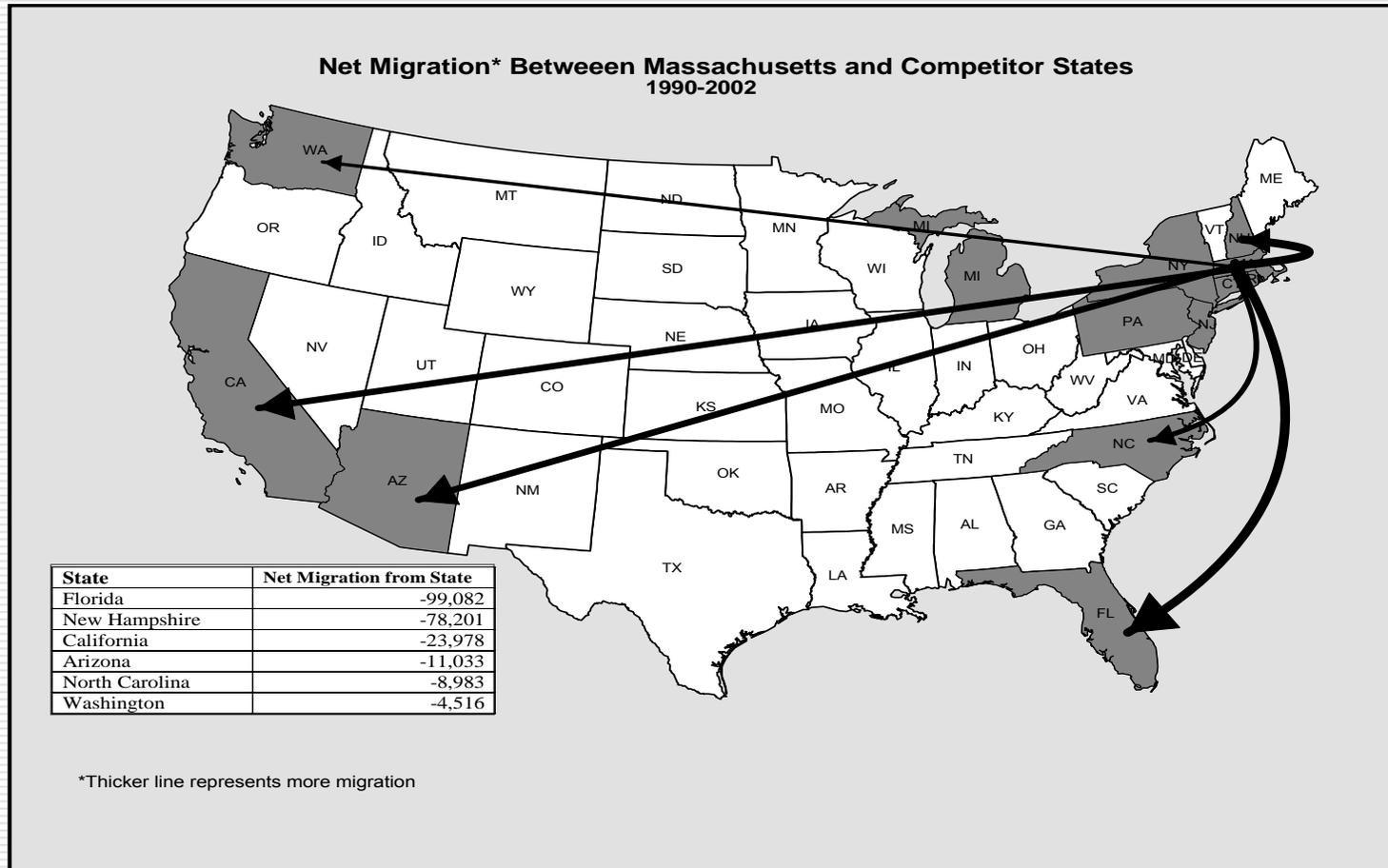
# Population Change by Age Cohort (2000-2004)



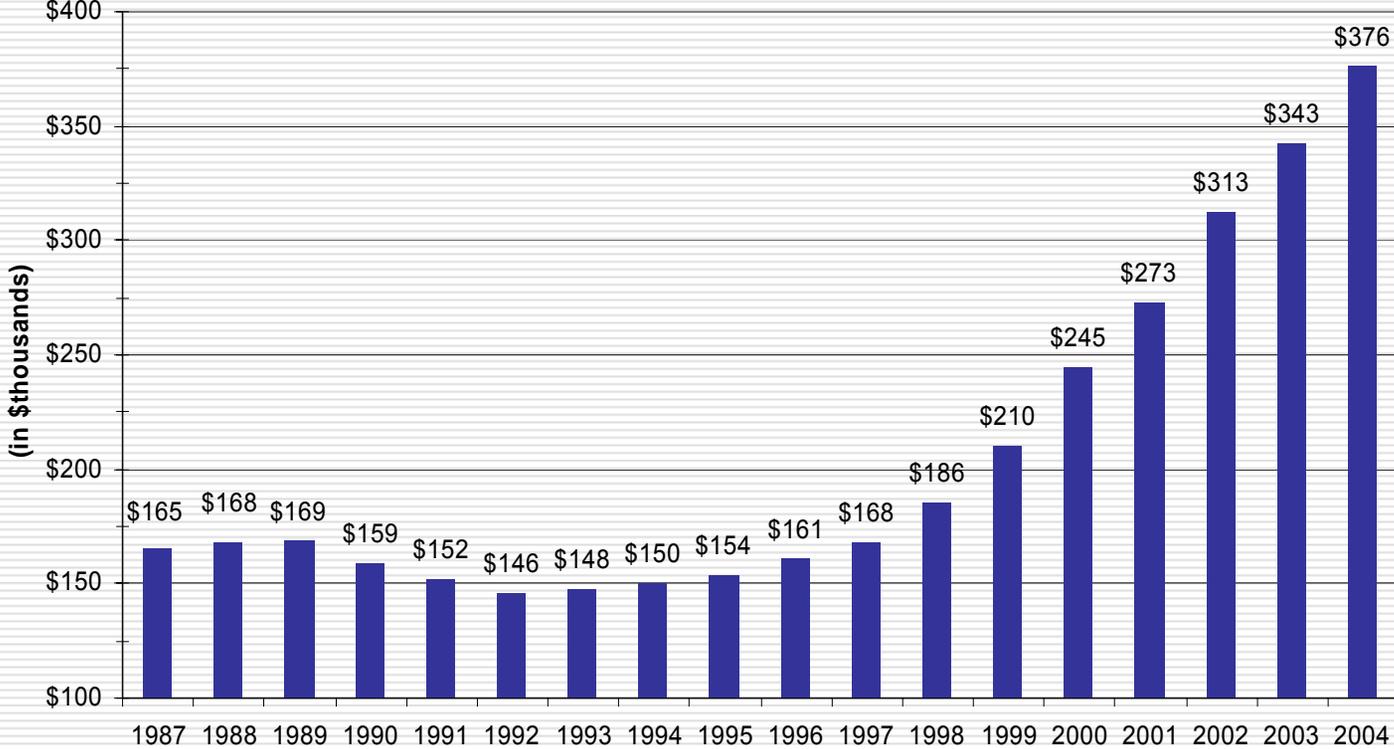
## Population Change by Age Cohort (2000-2004)



# Where did they go?

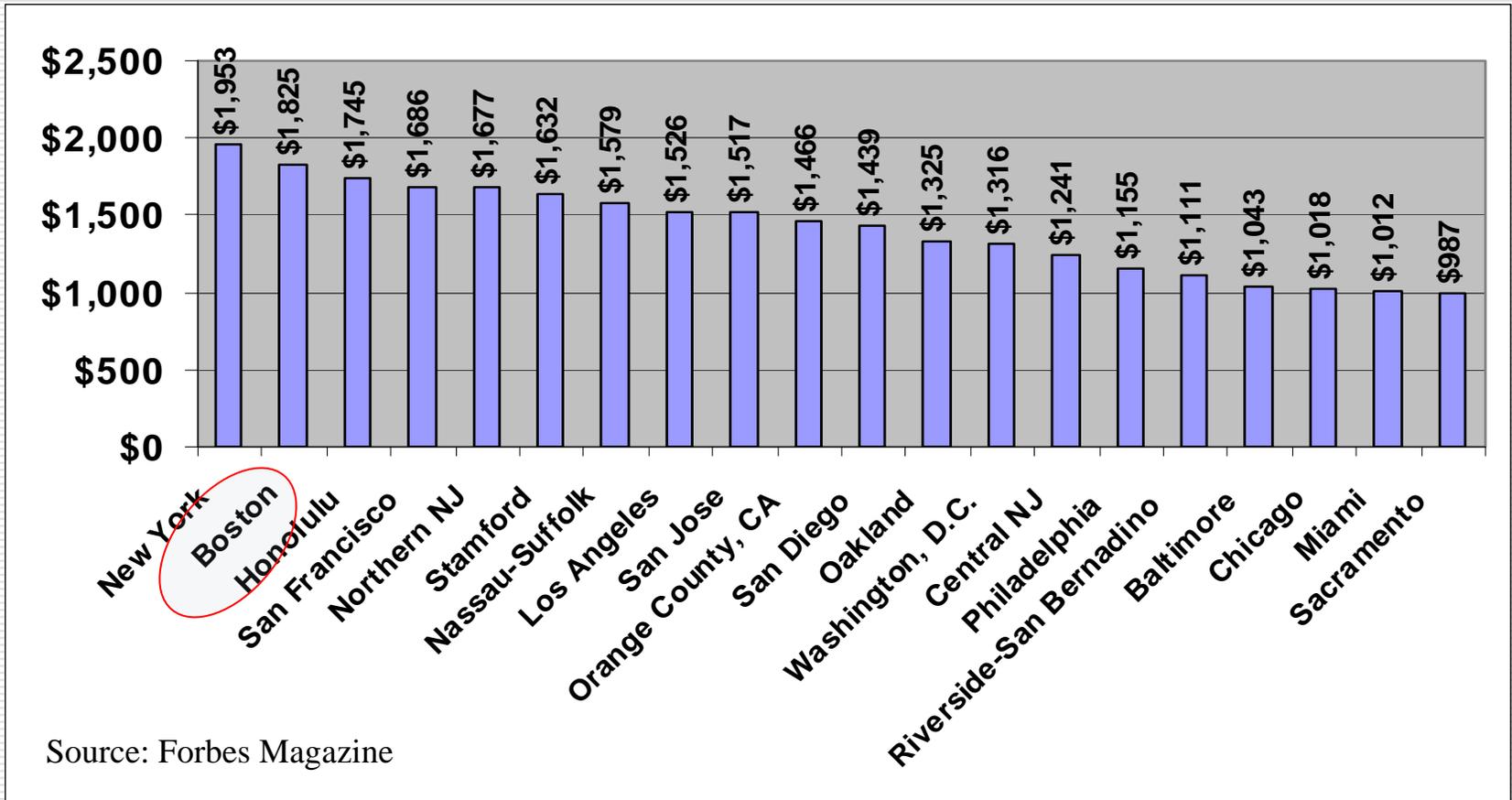


# Greater Boston Median Single Family Home Price 1987-2004



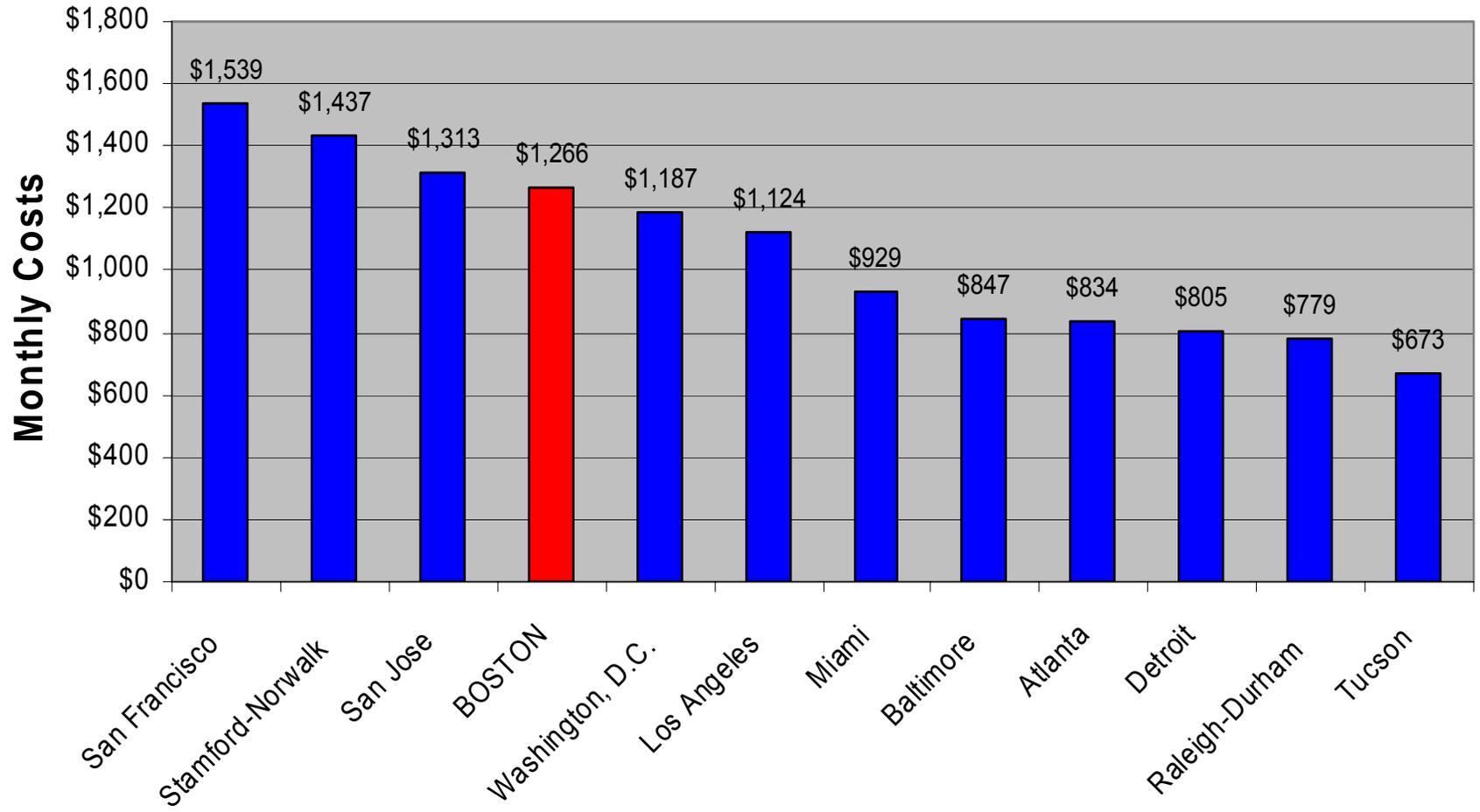
Source: The Warren Group Publications

# 2005 Class A Apartment Rents



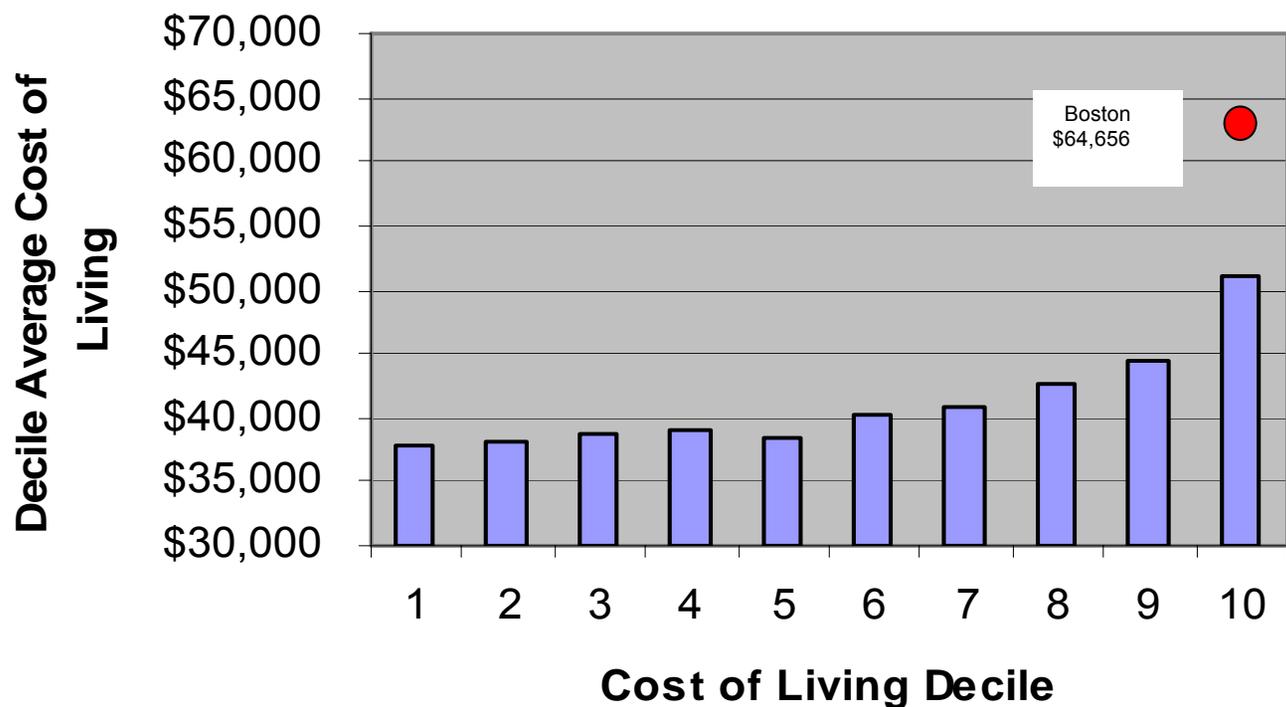
Calculations based on 900 Sq.Ft. Apartment

## Housing Costs - 4 Person Family



Source: Economic Policy Institute, "Family Budget Calculator, 2005"

# Annual Cost of Living: 4 Person Household



Universe: 304 U.S. Metro Areas

# Boston Family Budget – 4 Persons

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Among 304 U.S. Metropolitan Areas

- Housing Costs: 7<sup>th</sup> Highest MSA
- Child Care: 7<sup>th</sup> Highest MSA
- Health Care: 7<sup>th</sup> Highest MSA
- Personal Care: 6<sup>th</sup> Highest MSA
- Fed/State Tax: 2<sup>nd</sup> Highest MSA
  
- Total Cost: 1<sup>st</sup> Highest MSA

# Top Decile: Metro Area Cost of Living

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<b>Boston</b>	<b>\$ 64,656</b>	Monmouth-Ocean, NJ	\$ 50,736
Washington (D.C. portion)	\$ 61,440	San Diego, CA	\$ 50,088
Nassau-Suffolk, NY	\$ 60,780	Newark, NJ	\$ 49,992
Stamford-Norwalk, CN	\$ 60,720	New Haven-Meriden, CN	\$ 49,848
<b>Lawrence (Mass. portion)</b>	<b>\$ 59,280</b>	Honolulu, HI	\$ 49,824
New York, NY	\$ 58,656	Philadelphia (Pa. portion)	\$ 49,716
<b>Barnstable-Yarmouth, MA</b>	<b>\$ 58,236</b>	Boulder-Longmont, CO	\$ 49,596
San Francisco, CA	\$ 57,624	Bridgeport, CN	\$ 49,272
<b>Worcester (Mass. portion)</b>	<b>\$ 55,704</b>	Manchester, NH	\$ 49,152
<b>Springfield, MA</b>	<b>\$ 55,320</b>	Santa Rosa, CA	\$ 48,924
Minneapolis-St. Paul, MN	\$ 54,948	Albany-Schenectady-Troy, NY	\$ 48,900
Nashua, NH	\$ 54,852	Hartford, CN	\$ 48,684
Santa Cruz-Watsonville, CA	\$ 53,808	Trenton, NJ	\$ 48,576
Oakland, CA	\$ 53,412	Rochester, NY	\$ 48,540
San Jose, CA	\$ 52,800		
<b>Pittsfield, MA</b>	<b>\$ 52,632</b>		
Rochester, MN	\$ 51,288		

**Universe: 304 U.S. Metro Areas**

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# A Tale of Two Cities

## Boston

Monthly Housing	\$1,266
Monthly Food	\$ 587
Monthly Child Care	\$1,298
Monthly Transportation	\$ 321
Monthly Health Care	\$ 592
Monthly Other Necessity	\$ 500
Monthly Taxes	\$ 824
Monthly Total	\$5,388

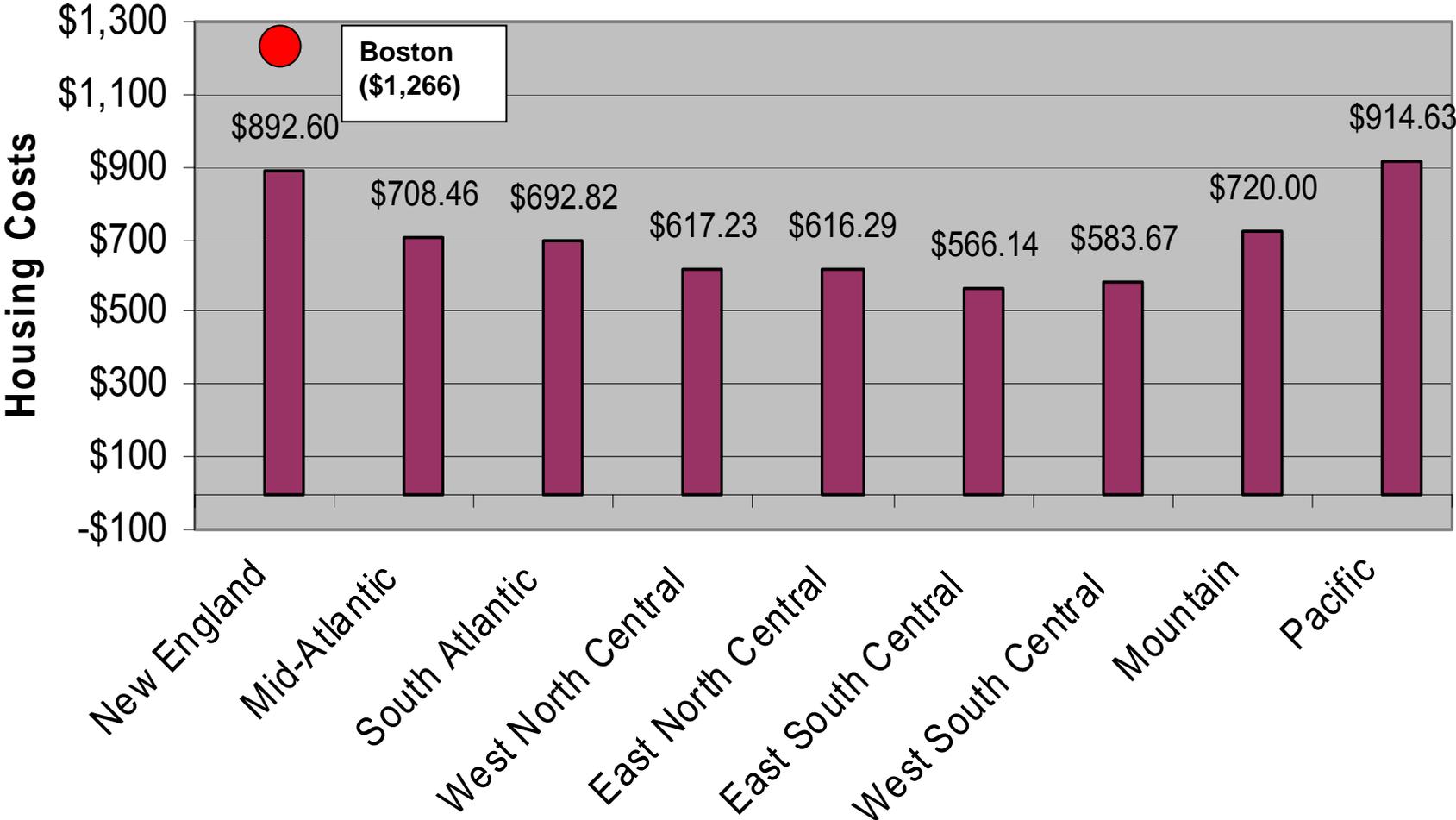
Annual Total **\$64,656**

## Raleigh-Durham- Chapel Hill

Monthly Housing	\$ 779
Monthly Food	\$ 587
Monthly Child Care	\$ 866
Monthly Transportation	\$ 358
Monthly Health Care	\$ 368
Monthly Other Necessity	\$ 369
Monthly Taxes	\$ 350
Monthly Total	\$3,677

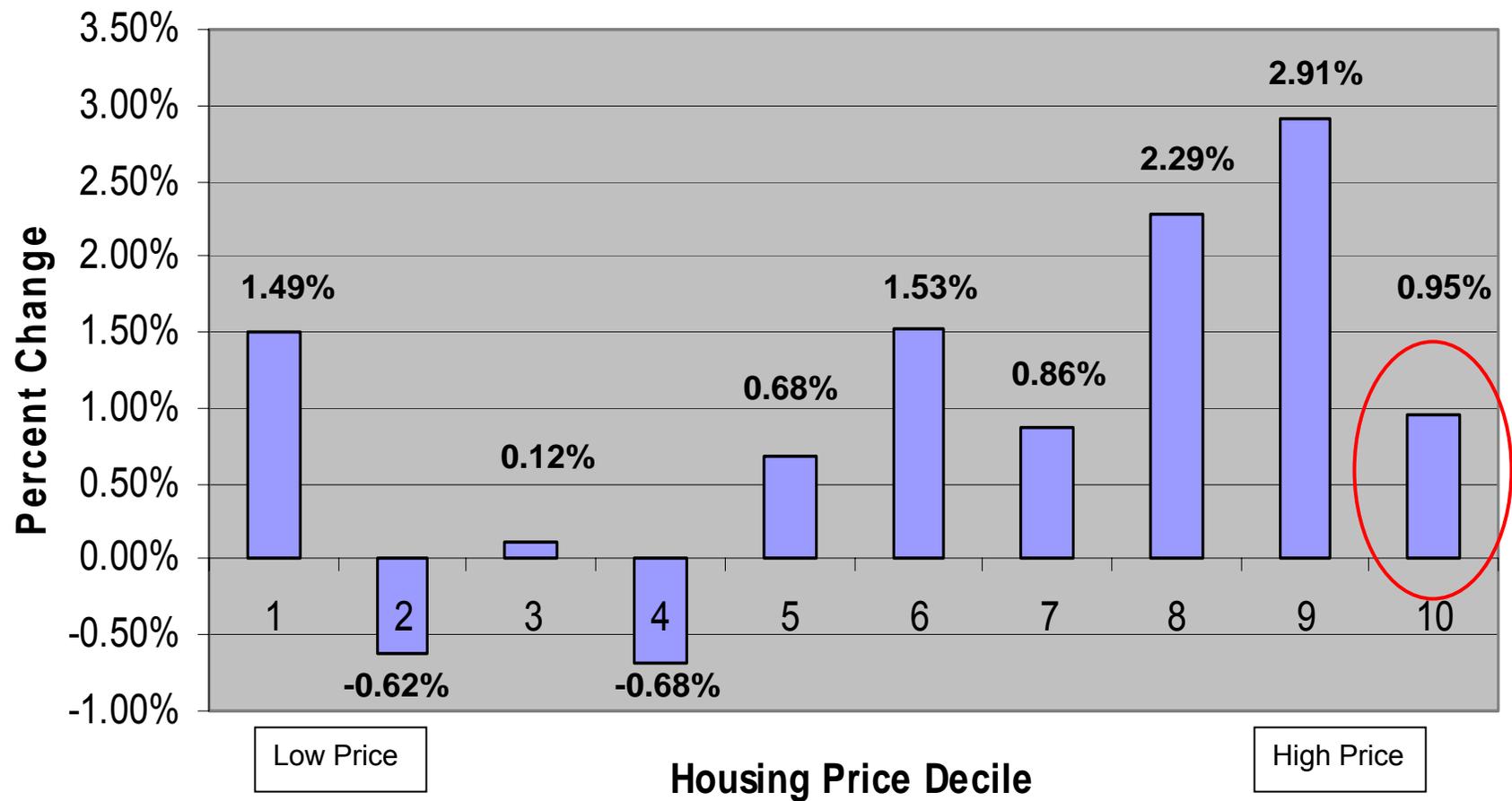
Annual Total **\$44,124**

# Regional Average Monthly Housing Costs (2004)



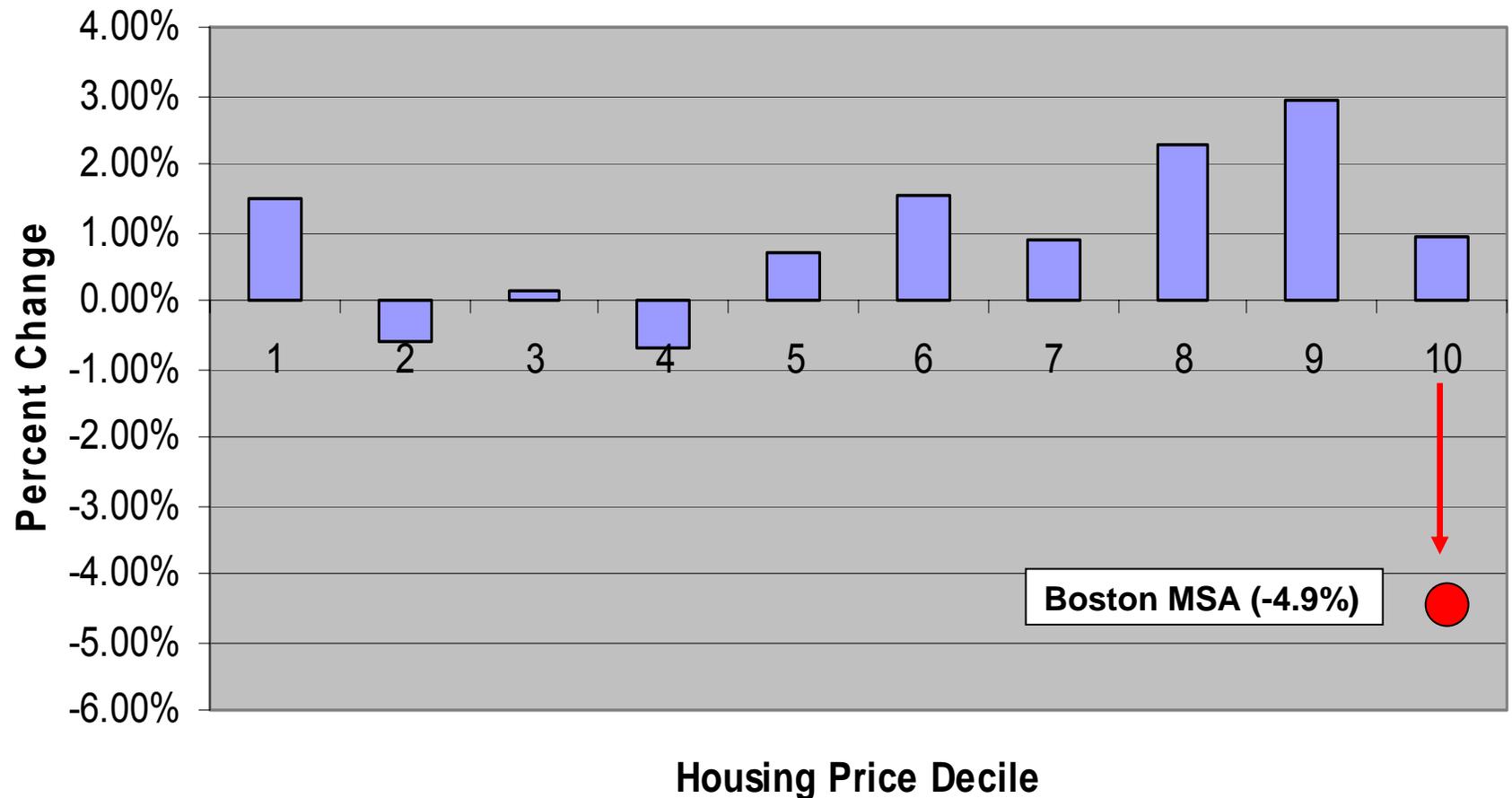
Source: Economic Policy Institute, "Family Budget Calculator, 2005"

# Employment Growth (%) (2000-2004)



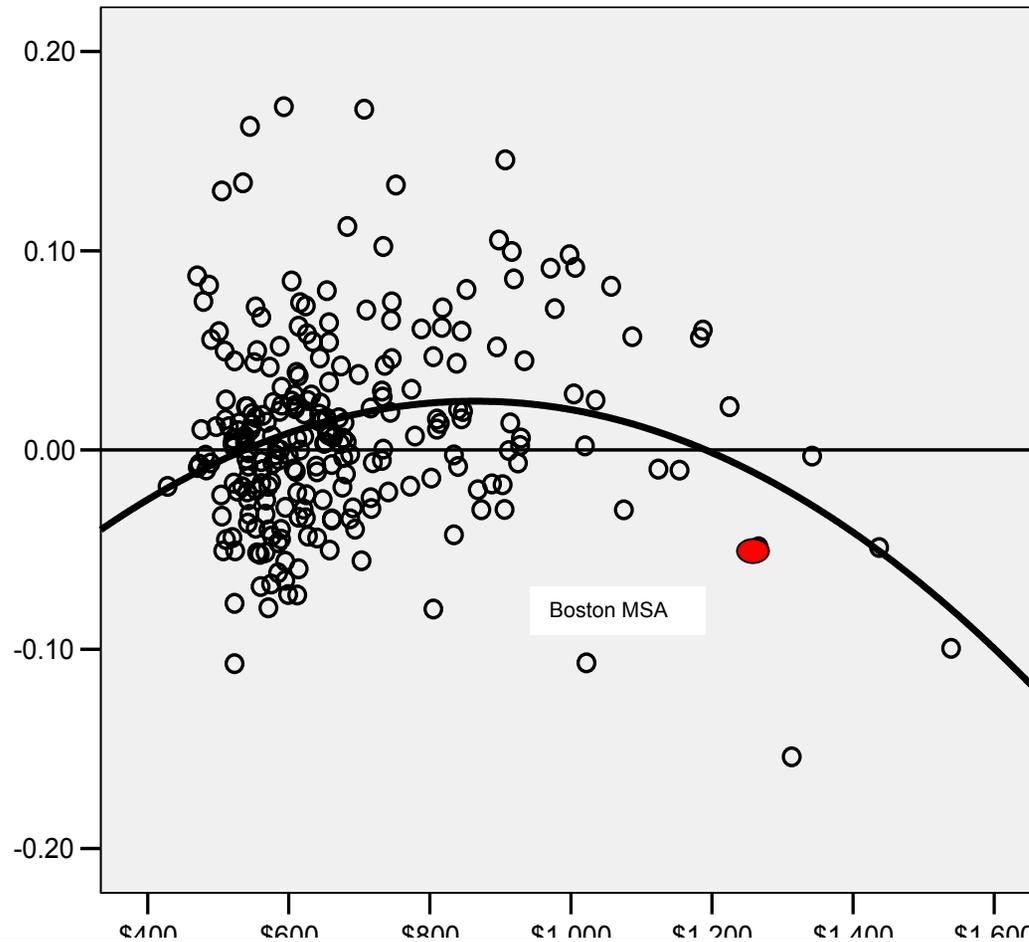
Universe: 245 U.S. Metro Areas

## Employment Growth (%) (2000-2004)



Universe: 245 U.S. Metro Areas

# Employment Change (%) (2000-2004)



○ Observed  
— Quadratic

$\% \Delta \text{Emp}(2000-2004) =$

$-.1466$

$+ .0000396 \text{ Housing Cost}$   
(4.07)

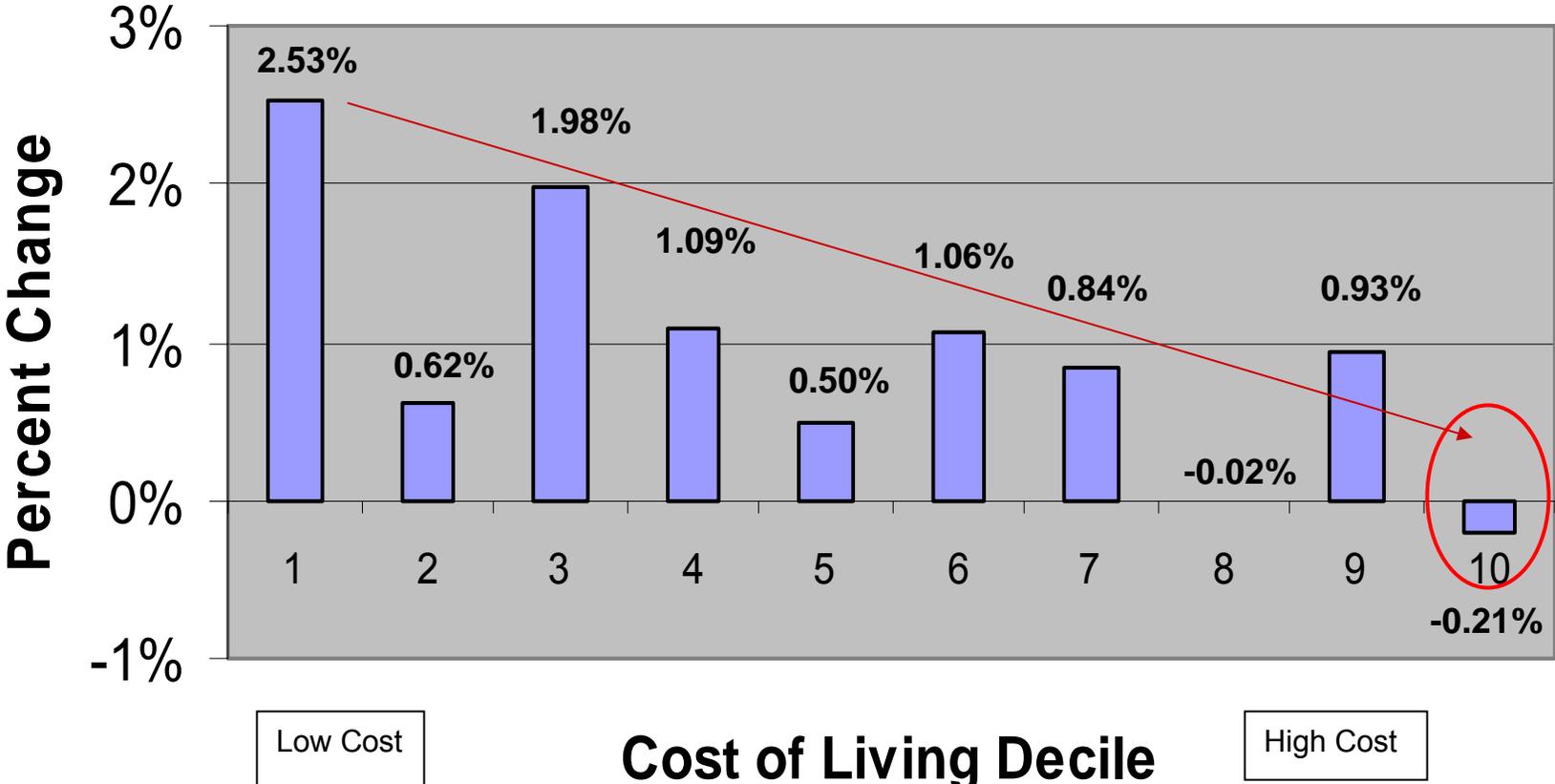
$- 2.291\text{E-}007 \text{ Housing Cost SQ}$   
(4.04)

$N = 245$

Adj. R Square = .056

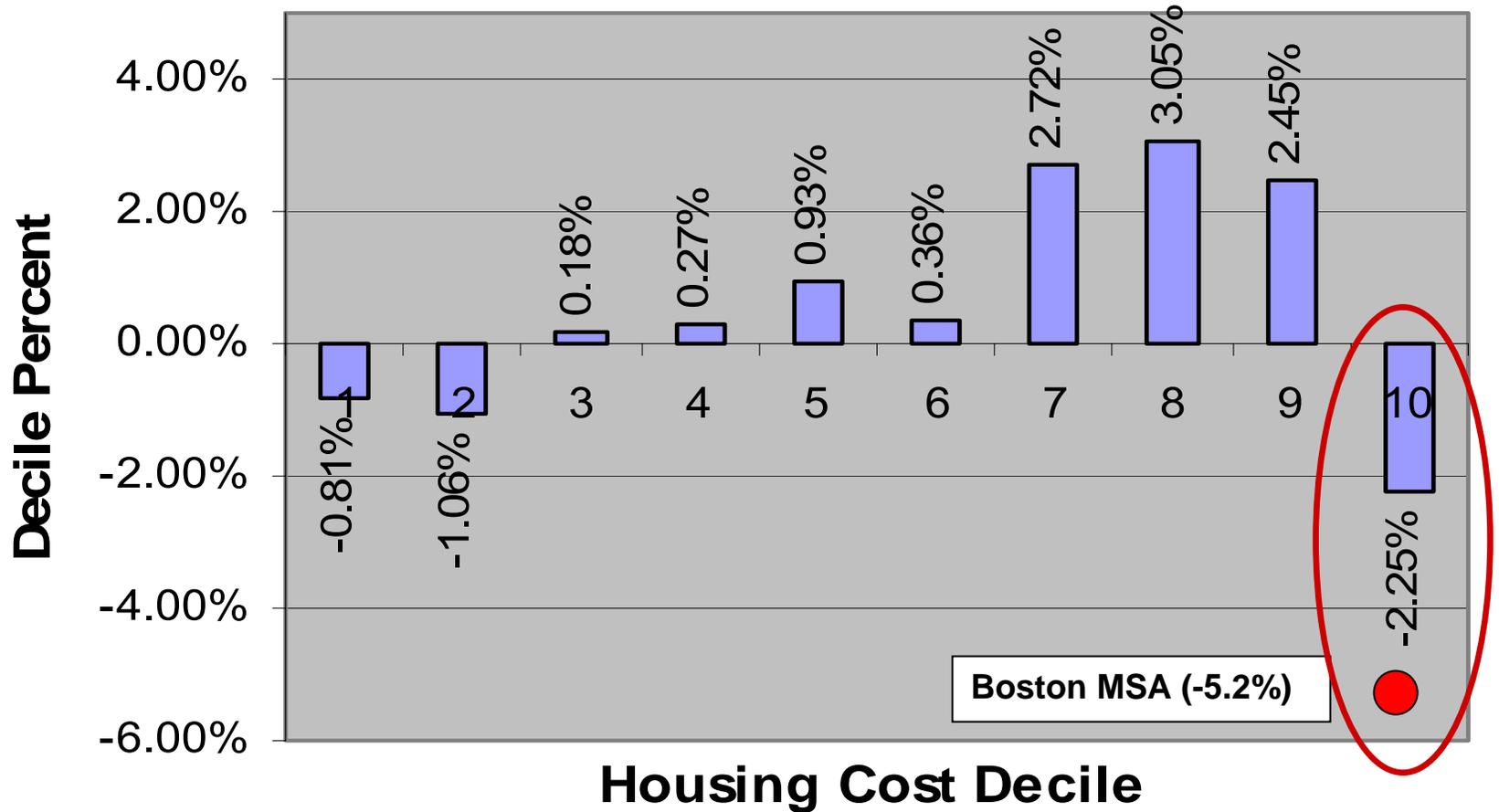
Monthly Housing Cost

# Employment Growth (%) (2000-2004)



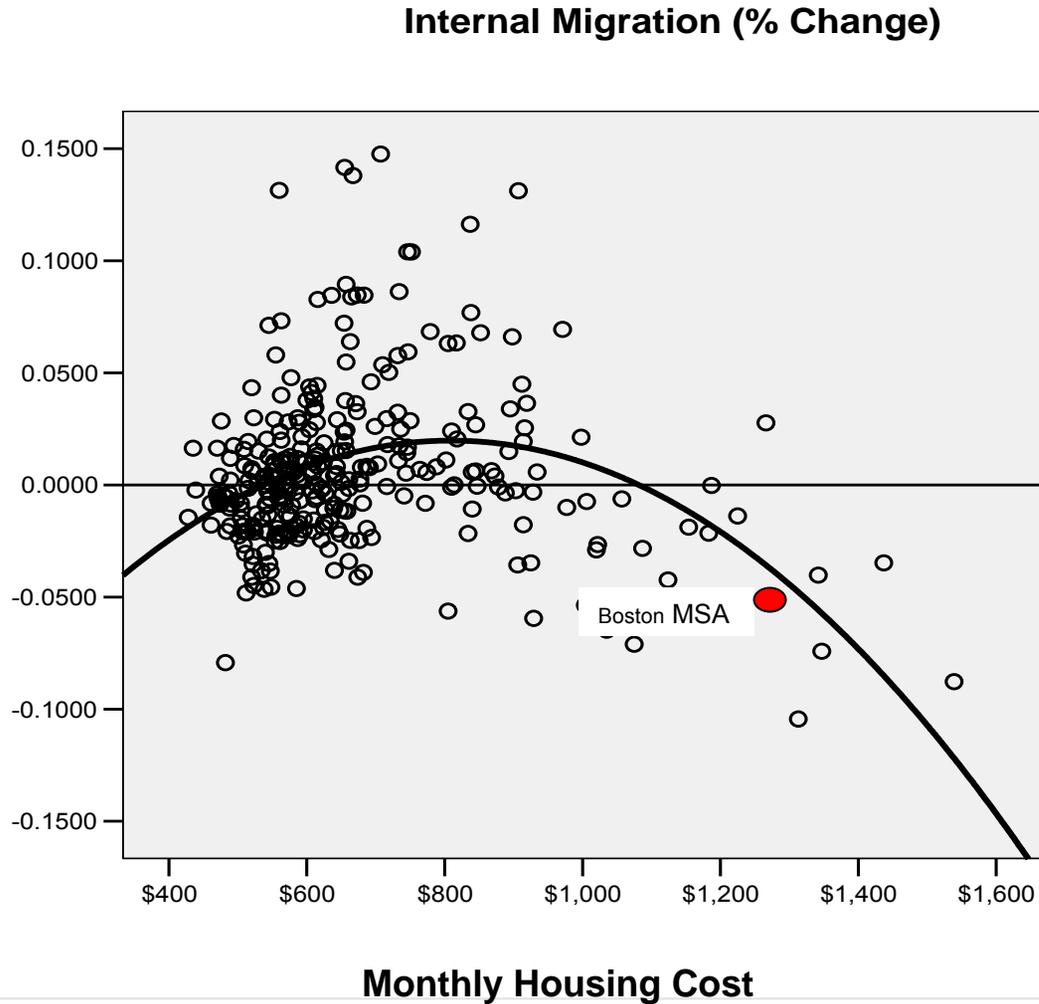
Universe: 245 U.S. Metro Areas

## Internal Net Migration (%) (2000-2004)



Universe: 304 U.S. Metro Areas

# Internal Migration (% Change)



%ΔInternal Migration =

- .1541

+ .00043 Housing Costs  
(7.03)

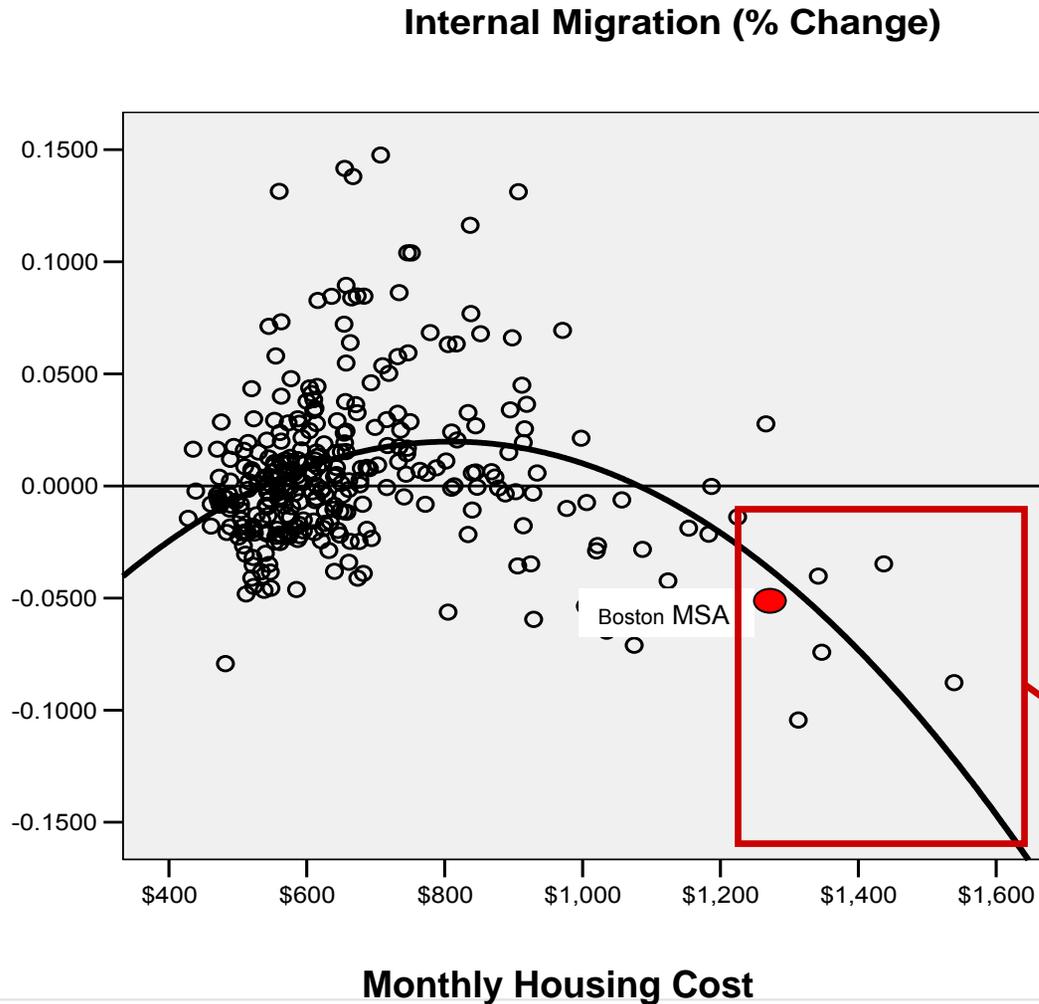
- 2.658E-007 Housing Costs SQ  
(7.39)

N = 304

Adj. R Square = .153

**Universe: 304 U.S. Metro Areas**

# Internal Migration (% Change)



$\% \Delta \text{Internal Migration} =$

- .146

+ .000399 Housing Costs  
(7.03)

- 2.475E-007 Housing Costs SQ  
(7.39)

N = 304

Adj. R Square = .153

- San Francisco
- Stamford-Norwalk
- San Jose
- Boston
- Oakland
- Nassau-Suffolk

## Simulation Results

### The Impact of Employment Growth and Housing Prices on Net Internal Migration (Northeastern States)

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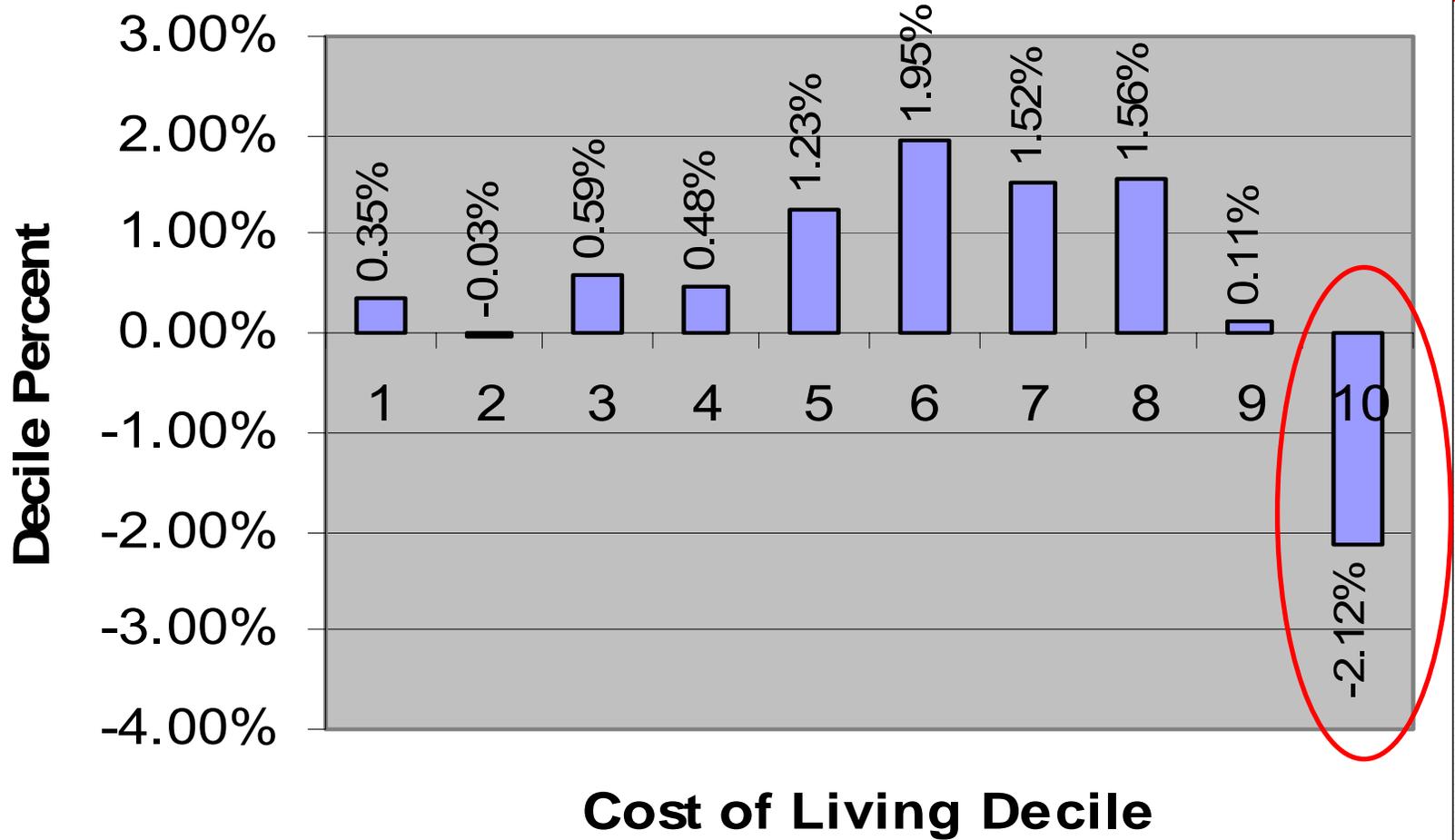
	<b>Monthly Housing Cost</b>	
<b>% Employment Growth</b>	<b>\$600</b>	<b>\$1,266</b>
<b>+5.0%</b>	<b>+ 2.27%</b>	<b>- 0.77%</b>
<b>+2.5%</b>	<b>+ 1.30%</b>	<b>- 1.74%</b>
<b>-4.85%</b>	<b>- 1.54%</b>	<b>- 4.58%</b>

Simulation based on Northeast Regression

The -4.85% employment loss and the \$1,266 monthly housing price refer to the values for Greater Boston, the former from the U.S. Bureau of Labor Statistics, the latter from the EPI Family Budget Calculator (4-Person Family with 2 Children)

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# Internal Net Migration (2000-2004)

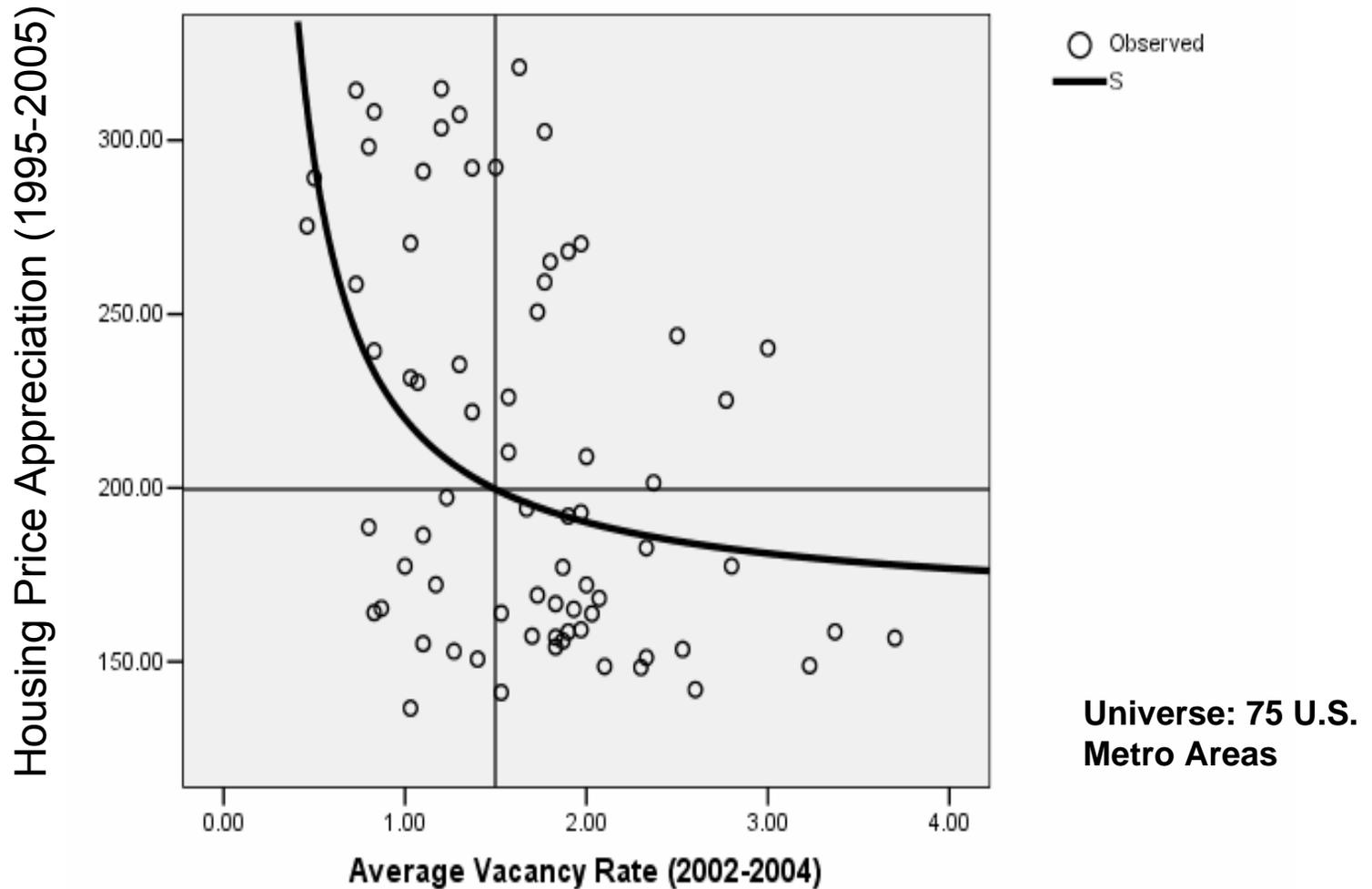


Universe: 304 U.S. Metro Areas

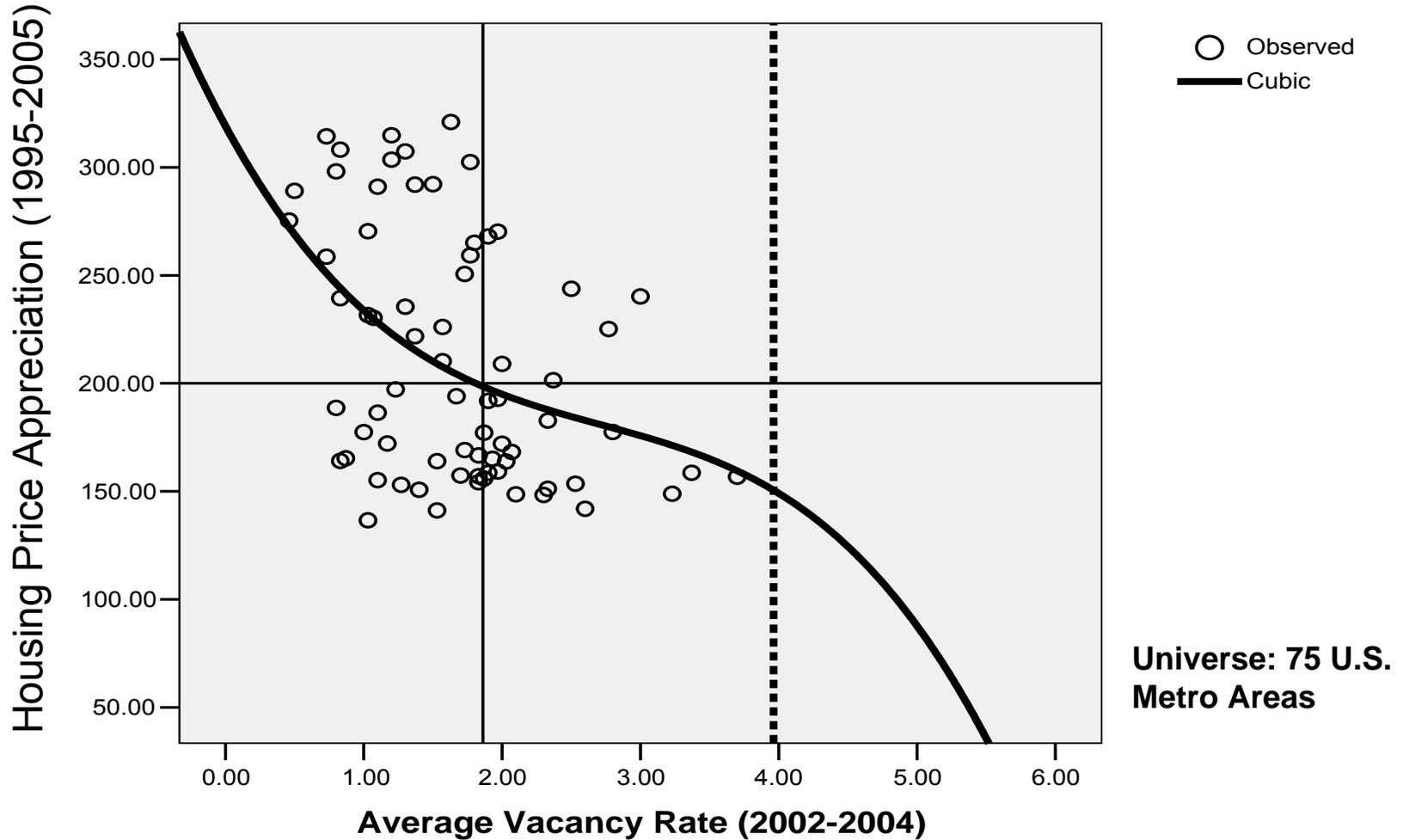
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**And, finally, what is the  
relationship between housing  
prices and housing supply?**

## Housing Price Appreciation vs. Vacancy Rates



## Housing Price Appreciation vs. Vacancy Rates

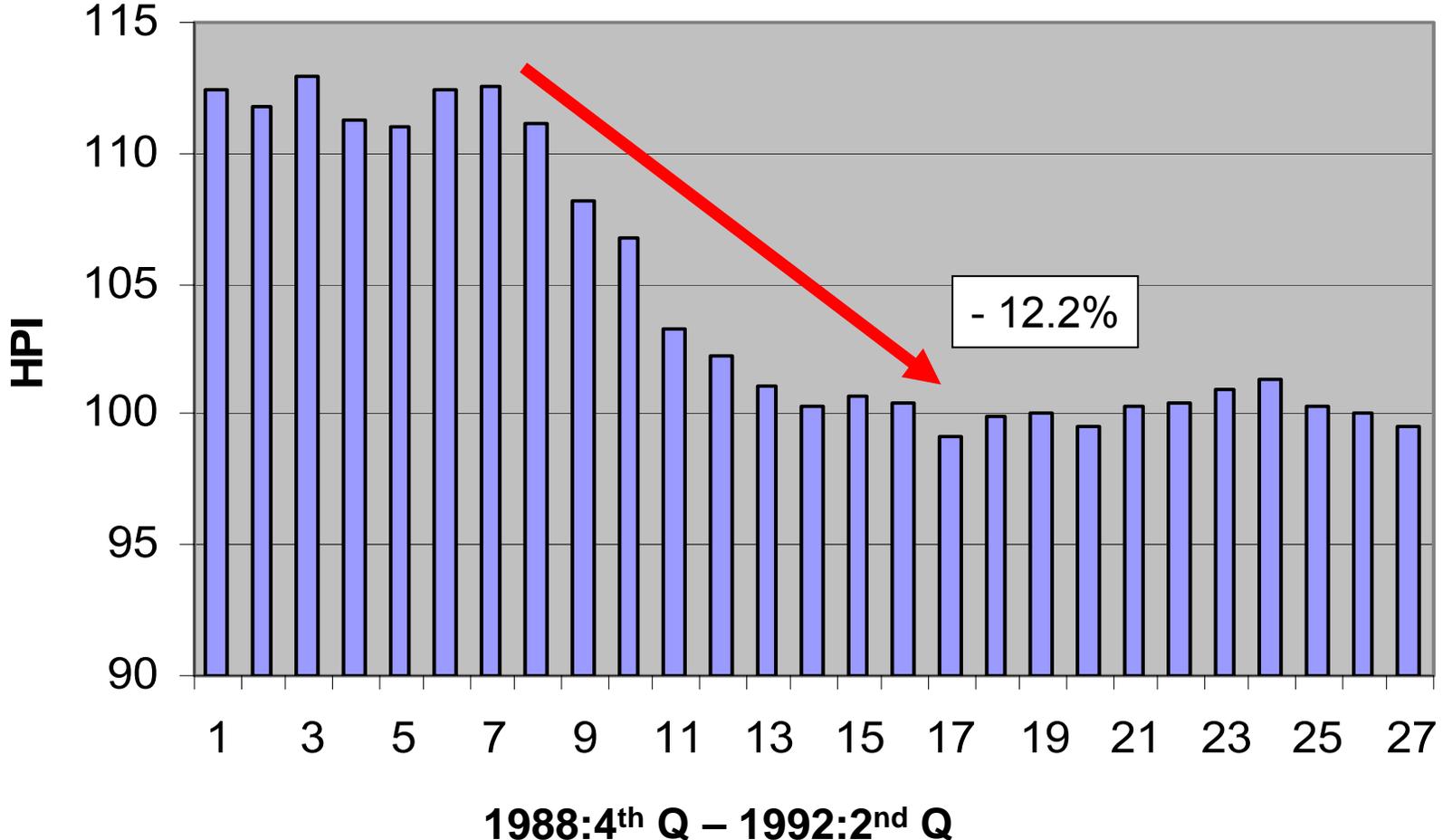


# Housing Price Decline – Metro Areas

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	Peak Qtr.	HPI Index	Trough Qtr.	HPI Index	%CHG	Recovery
Gary, IN	1981:I	63.42	1984:III	56.68	<b>-10.6%</b>	7 years
<b>BOSTON, MA</b>	1988:IV	112.95	1992:II	99.2	<b>-12.2%</b>	9 years
Duluth, MN	1988:II	114.18	1991:III	99.27	<b>-13.1%</b>	11 years
<b>WORCESTER, MA</b>	1989:IV	117.26	1995:I	100	<b>-14.7%</b>	9 years
<b>SPRINGFIELD, MA</b>	1989:iv	117.43	1995:i	100	<b>-14.8%</b>	11 years
Honolulu, HI	1993:II	101.55	1999:III	84.69	<b>-16.6%</b>	9 years
Detroit, MI	1981:IV	61.29	1982:IV	49.69	<b>-18.9%</b>	5 years
Hartford, CN	1988:III	126.4	1995:I	100	<b>-20.9%</b>	13 years
Los Angeles, CA	1990:III	127.16	1996:III	99.7	<b>-21.6%</b>	12 years
Lafayette, LA	1982:iii	115.27	1988:IV	65.53	<b>-43.2%</b>	15 years

# Boston MSA Housing Price Index



# Conclusions

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- The **high price of housing** is indeed a significant factor in the decline in employment and population in Massachusetts
  - The **high cost of living** beyond housing – including health care, day care, and taxes – contributes to the decline in employment and population
  - An increase in housing supply could **“inoculate”** Massachusetts homeowners against the possibility of a long-term precipitous decline in housing values
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# General Policy Implications

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- **INCREASING the housing stock**, particularly starter homes for young families is critical to the future economic development and prosperity of the Commonwealth
  - **REDUCING the high cost of health care, day care, and reduce the tax burden** (particularly the residential property tax which contributes to housing costs) is important as well ... along with assuring that the quality of **local public services** encourages families to stay in the Commonwealth despite its relatively high cost
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