The Brookings Institution

Center on Urban and Metropolitan Policy

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The Benefits and Realities of High Density Development

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The Benefits and Realities of High-Density Development

I What are the benefits of high-density development?

II What are the current demographic and market realities of our growth patterns?

III What are the implications for public policies and research?

I

What are the benefits of high-density development?

Several premises frame the latest academic literature

- Economy today is driven by knowledge
- Worker preferences for residential locations matter
- The concentration and agglomeration of firms AND workers facilitate the flow of information and knowledge exchange
- **BOTTOM LINE:** How a region grows physically effects how it grows economically, and how it grows economically effects how it grows physically

Higher Densities Lead to Higher Productivity

Higher densities lead to greater productivity and innovation

- **Ciccone and Hall (1996)**: average labor productivity increases with more employment density

- **Carlino (2001):** patent activity, as a proxy for innovation, was higher in the 1990s in those metros with higher employment densities

- **Cervero (2000):** higher productivity found in “accessible” cities with efficient transportation systems than in more dispersed places (47 metro areas)

Vibrant Downtowns and High Quality of Life Attract Talented Workers

Educated cities win in the new economy

- **Rauch (1993)**: Each additional year of education of workers in a metro area leads to another 2.8 percent growth in productivity

- **Glaeser et al (2000):** The cities and metros with highly skilled workers in the 1990s also had high population and income growth

- **Glaeser et al (2003):** The metro areas that have high proportions of skilled, educated labor are better able to reinvent themselves and adapt to changing economic needs

Metros with strong downtowns lead on key indicators of competitiveness such as creativity and talent

	Creativity Rank (R. Florida)	1990s Downtown Pop. Change	2000 Pop. Share with B.A.
San Francisco	1	22%	45.0%
Boston	3	30%	35.6%
San Deigo	3	20%	35.0%
Seattle	5	44%	47.2%
Raleigh-Durham	6	27%	43.6%
Minneapolis-St. Paul	11	20%	35.2%
Atlanta	14	111%	34.6%
Denver	14	51%	34.5%
Kansas City	**35**	**-13.1%**	**22.4%**
St. Louis	**45**	**4.2%**	**19.1%**

Densities May Result from Industry Composition

Academic evidence show that certain industries are more compact or sprawl-inducing than others

- **Innovative businesses are urban:** Innovative businesses and activities are most likely to be urban and located in cities

- **Routine means rural**: Activities that are more routine in nature are more likely to be suburban or rural

- **Industries with educated workers are centralized:** Industries that hire college educated workers are often more centralized, located in inner-ring; industries with majority high school graduates are less urban

- **Manufacturing and some retail are land consuming:** Warehousing and distribution, and some service industries -- like big box retail -- are suburban and exurban and land consuming

Compact Development Saves Taxpayers' Money

A 1989 study in Florida showed that the costs for providing infrastructure per dwelling unit is lowest and most efficient for more compact developments

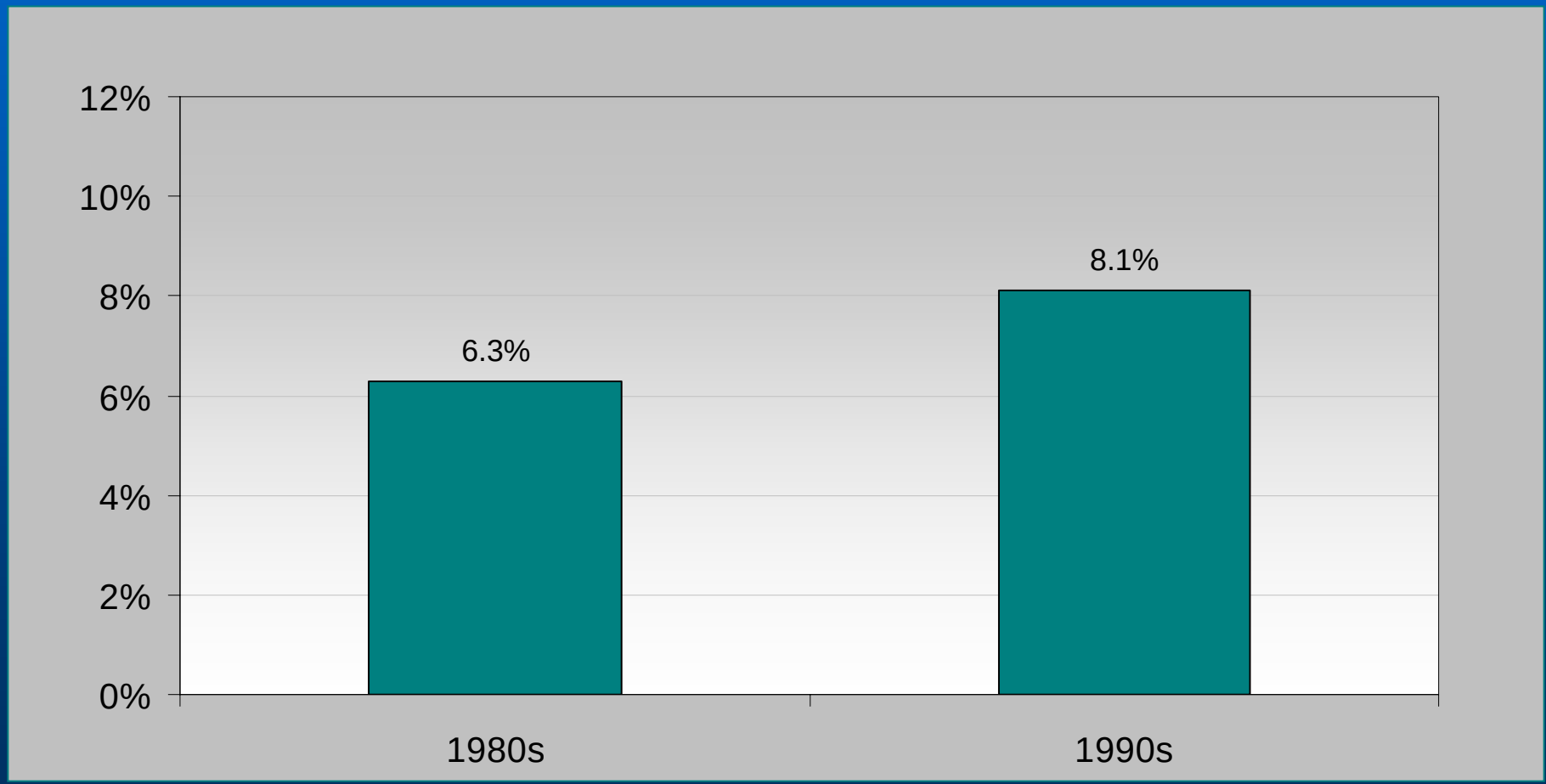
Efficiency Rank	Study Area	Urban Form	Cost
1	Downtown	Compact	**$9,252**
2	Southpoint	Contiguous	**$9,767**
3	Countryside	Contiguous	**$12,693**
4	Cantonment	Scattered	**$15,316**
5	Tampa Palms	Satellite	**$15,447**
6	University	Linear	**$16,260**
7	Kendall	Linear	**$16,514**
8	Wellington	Scattered	**$23,960**
Average			**$14,901**

II

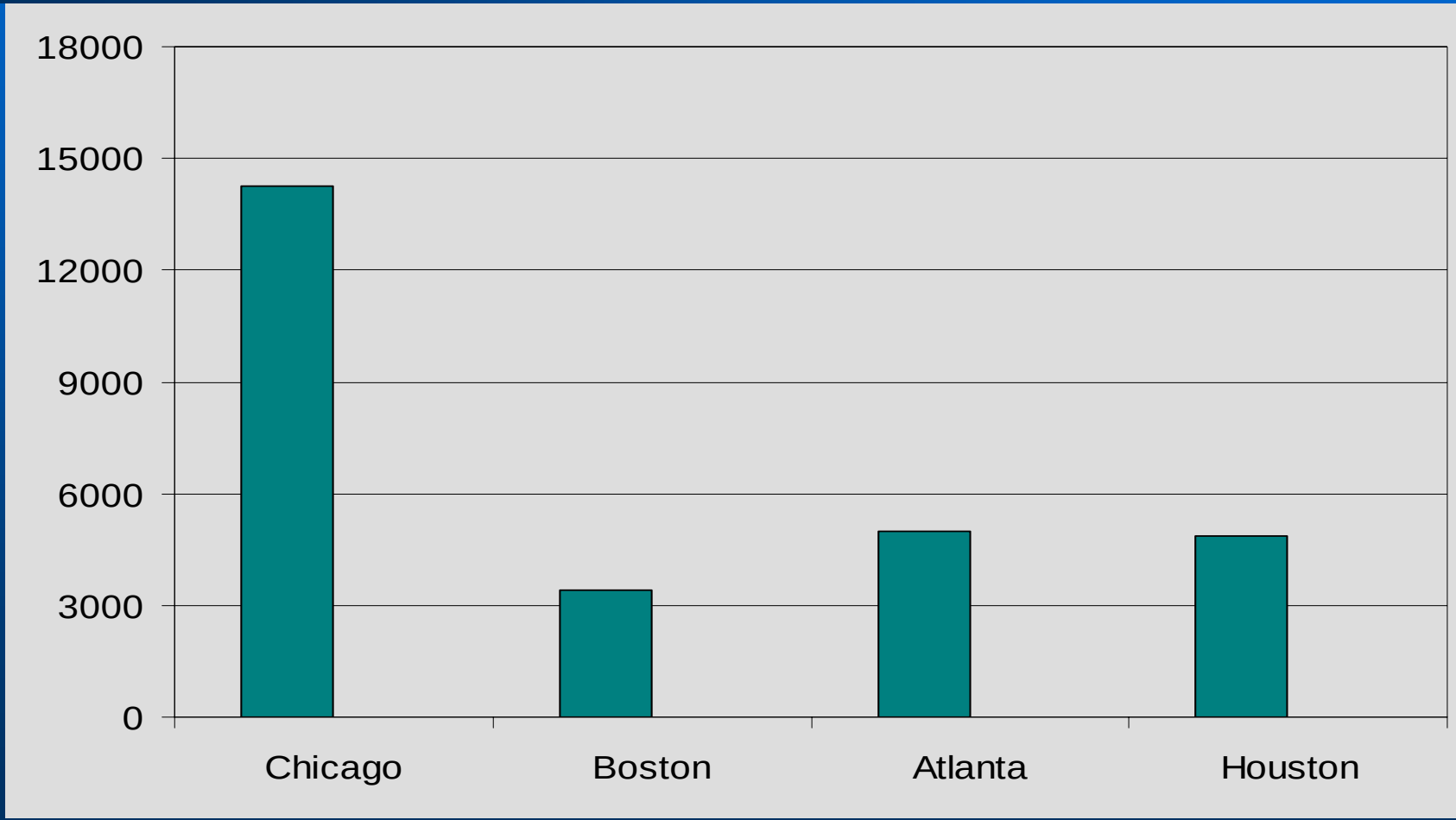
What are the current demographic and market realities?

Most cities and downtowns grew in the 1990s

As a group, the 100 largest cities grew faster in the 1990s than in the 1980s

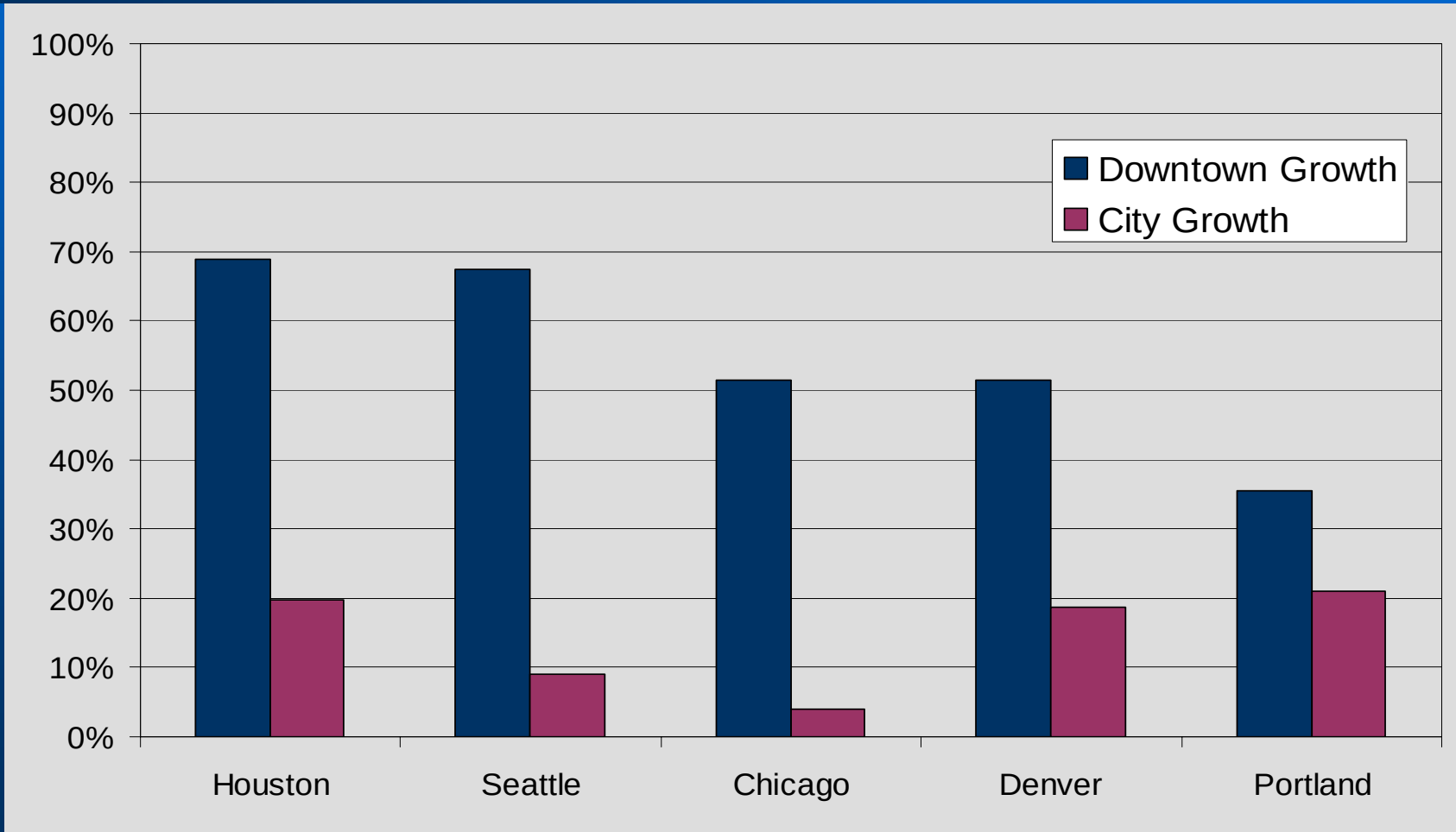


18 out of 24 cities saw increases in their downtown populations



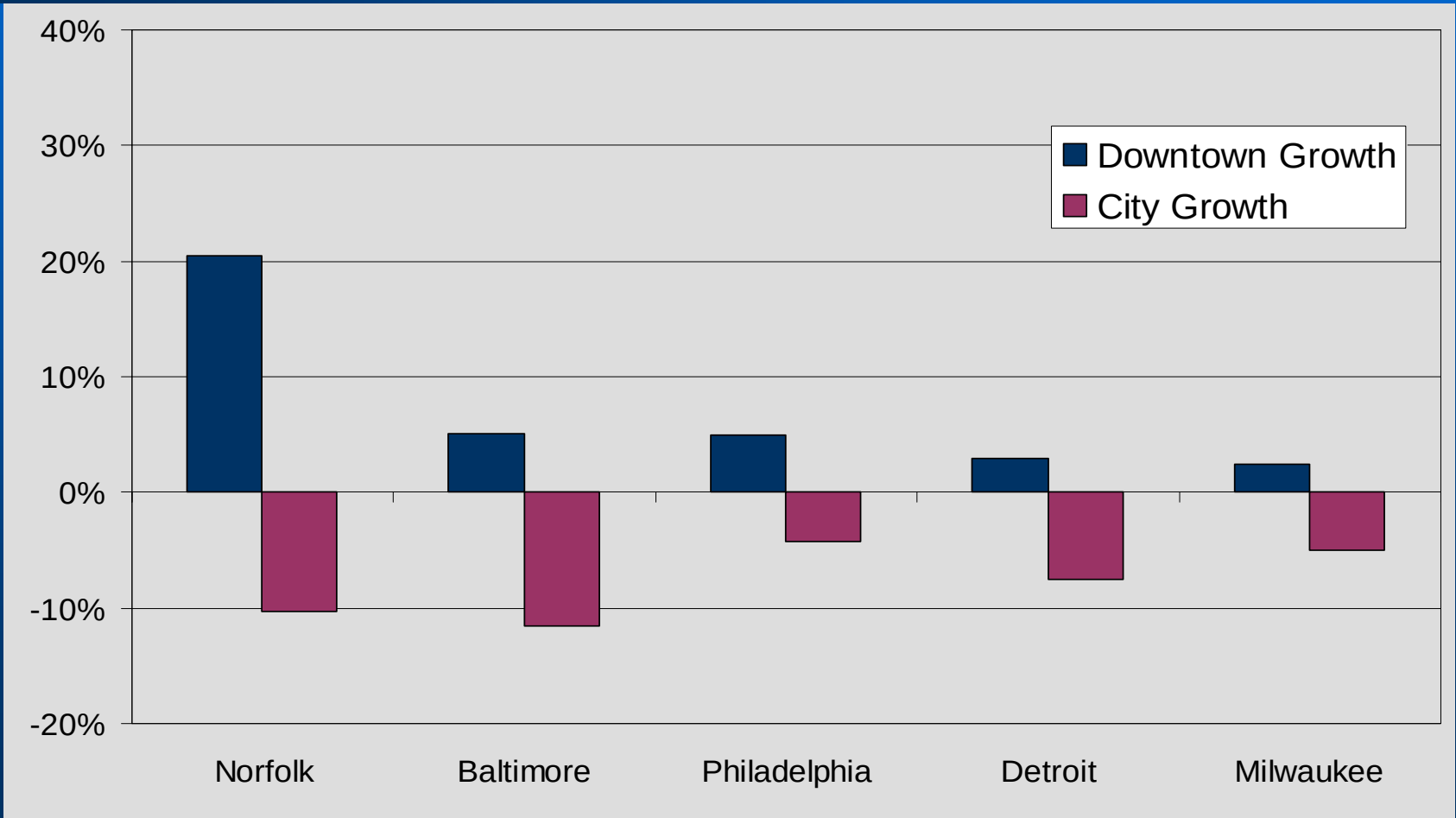
Source: U.S. Census Bureau

12 out of 24 downtowns had faster residential growth than their cities



Source: U.S. Census Bureau

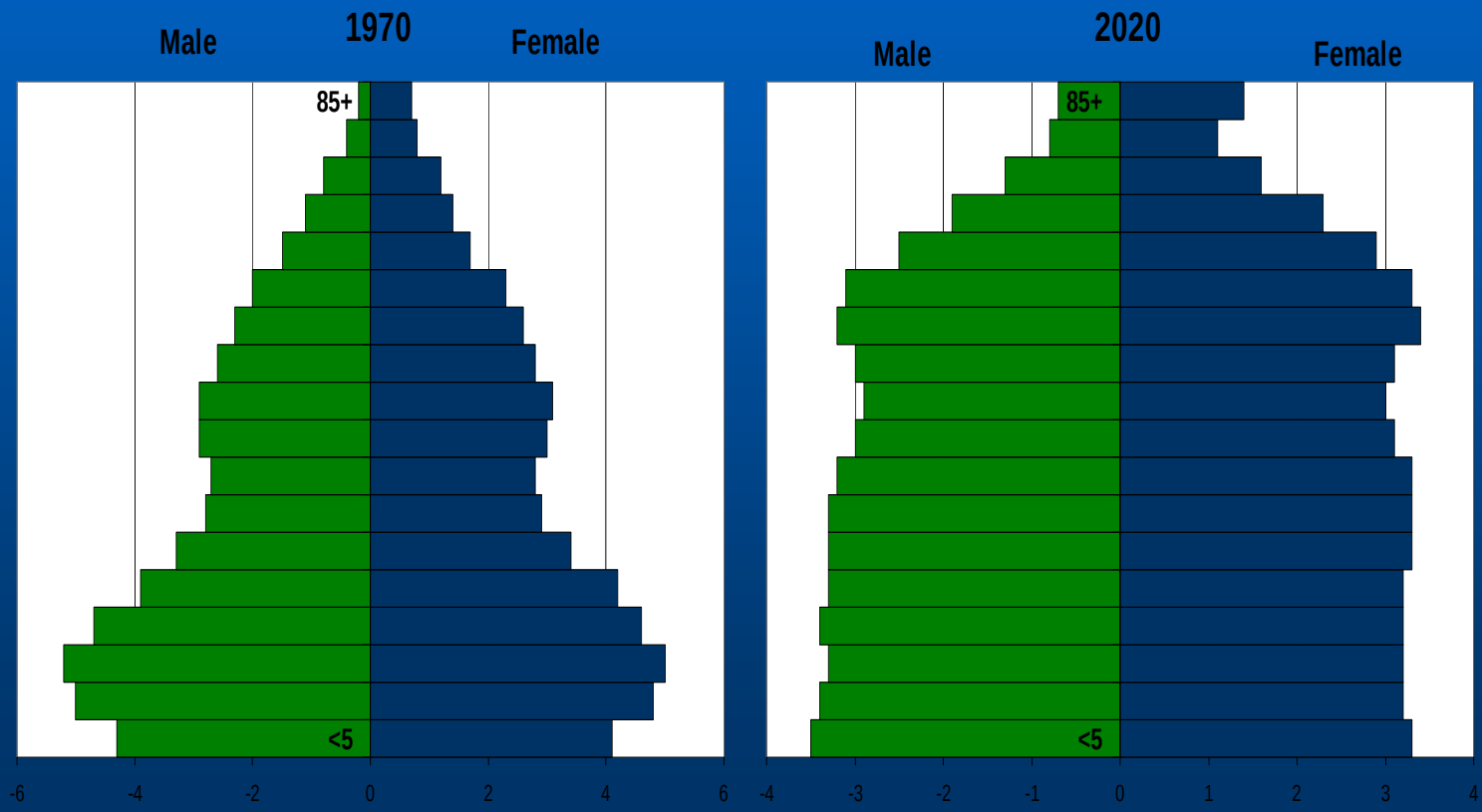
6 downtowns had population gains while their cities lost population



Source: U.S. Census Bureau

Changing demographics may benefit density

The general population is aging; by 2020, the share of people in all age groups will be nearly the same



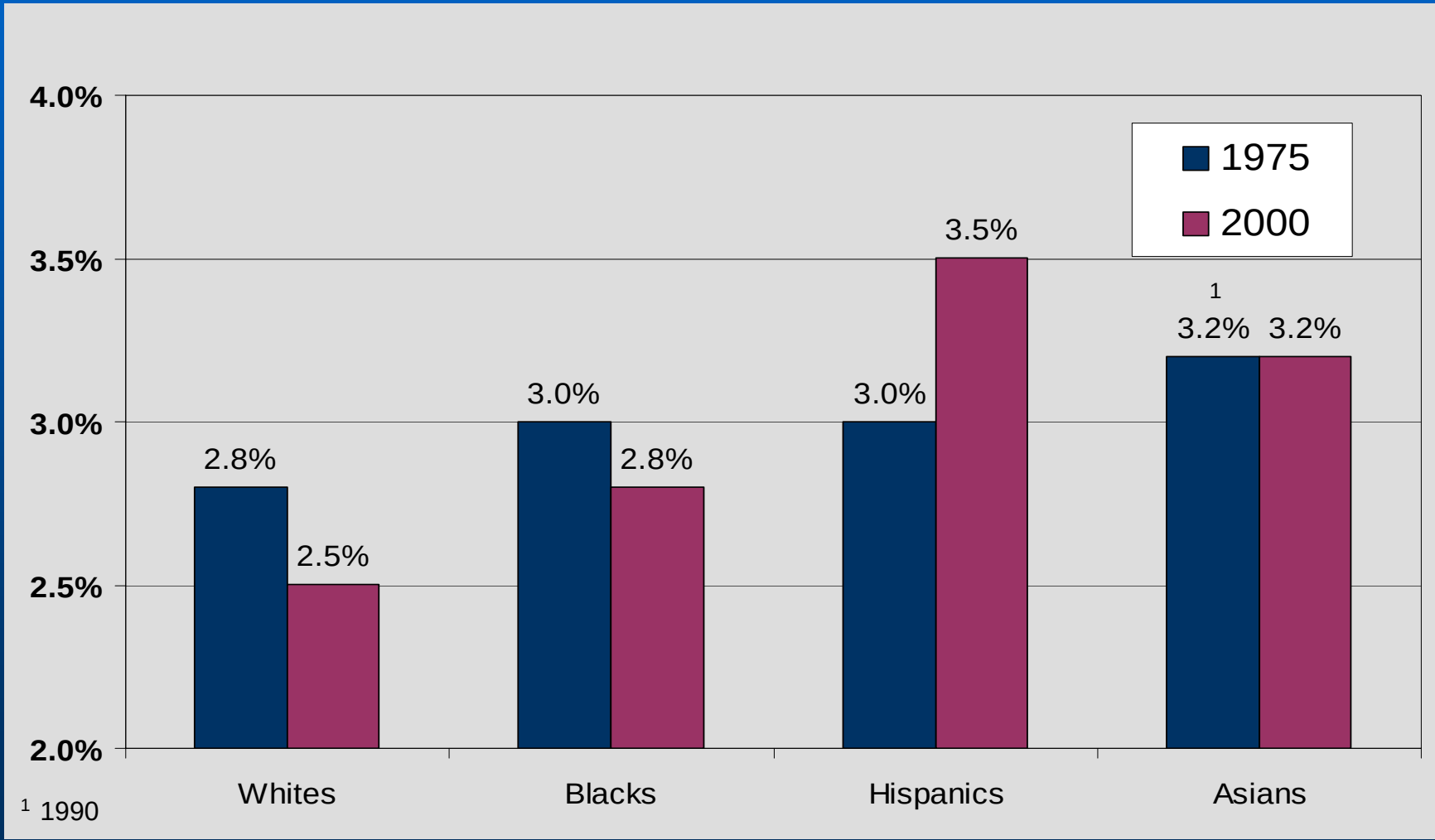
Source: Martha Riche. "The Implications of Changing U.S. Demographics for Housing Choice and Location in U.S. Cities" Brookings 2001

U.S. household size is shrinking

	1990	2000	2020
Families w/ children	36.6%	32.8%	28.2%
Families w/o children	33.7%	35.3%	39.7%
Married couples w/ child.	26.9%	23.5%	20.3%
Married couples w/o child.	28.4%	28.1%	32.1%
Singles	25.0%	25.8%	27.3%

Source: U.S. Census Bureau

But household size is not shrinking for Hispanics and Asians



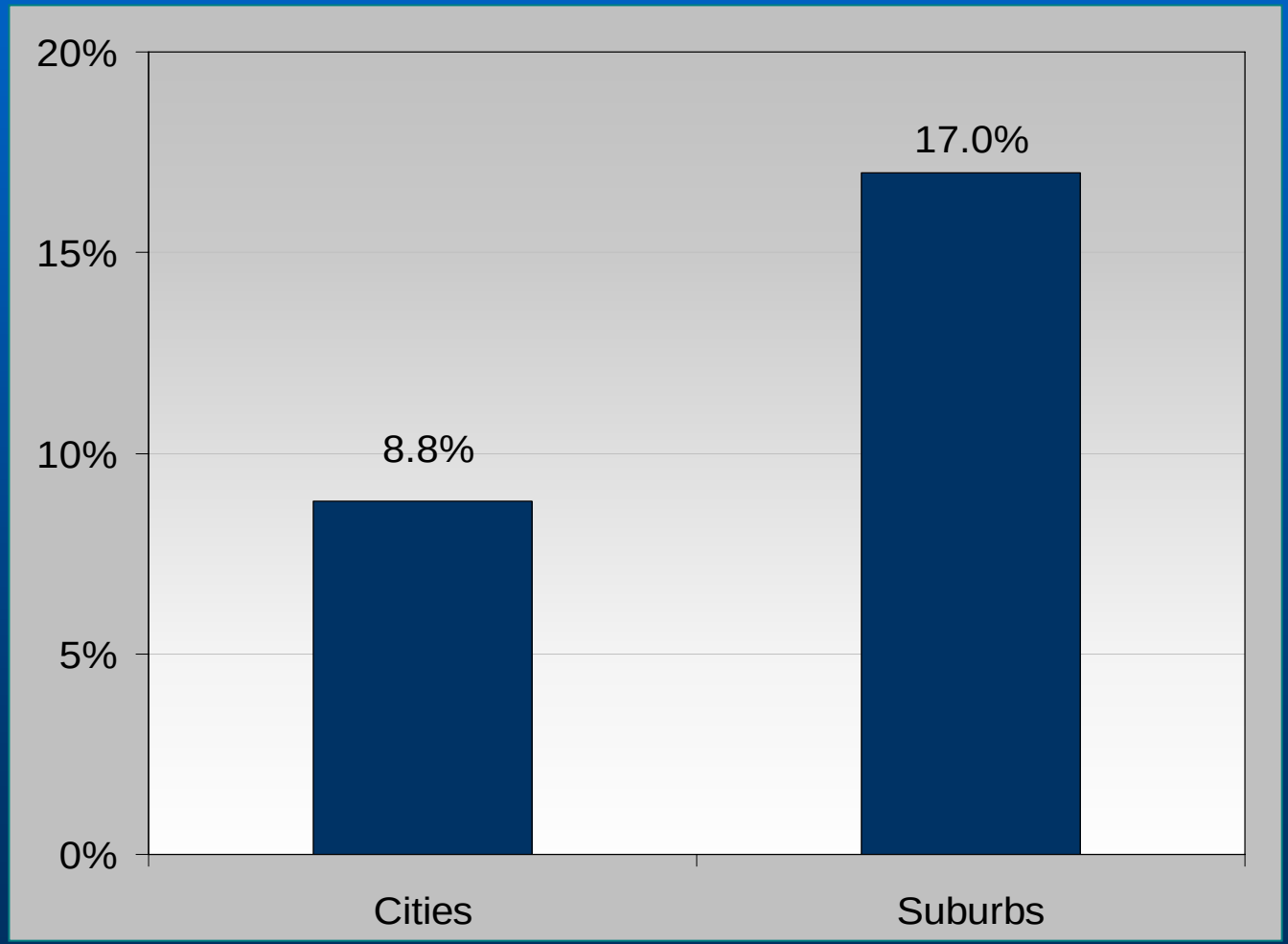
[1] 1990

Source: U.S. Census Bureau

But, decentralization still dominates

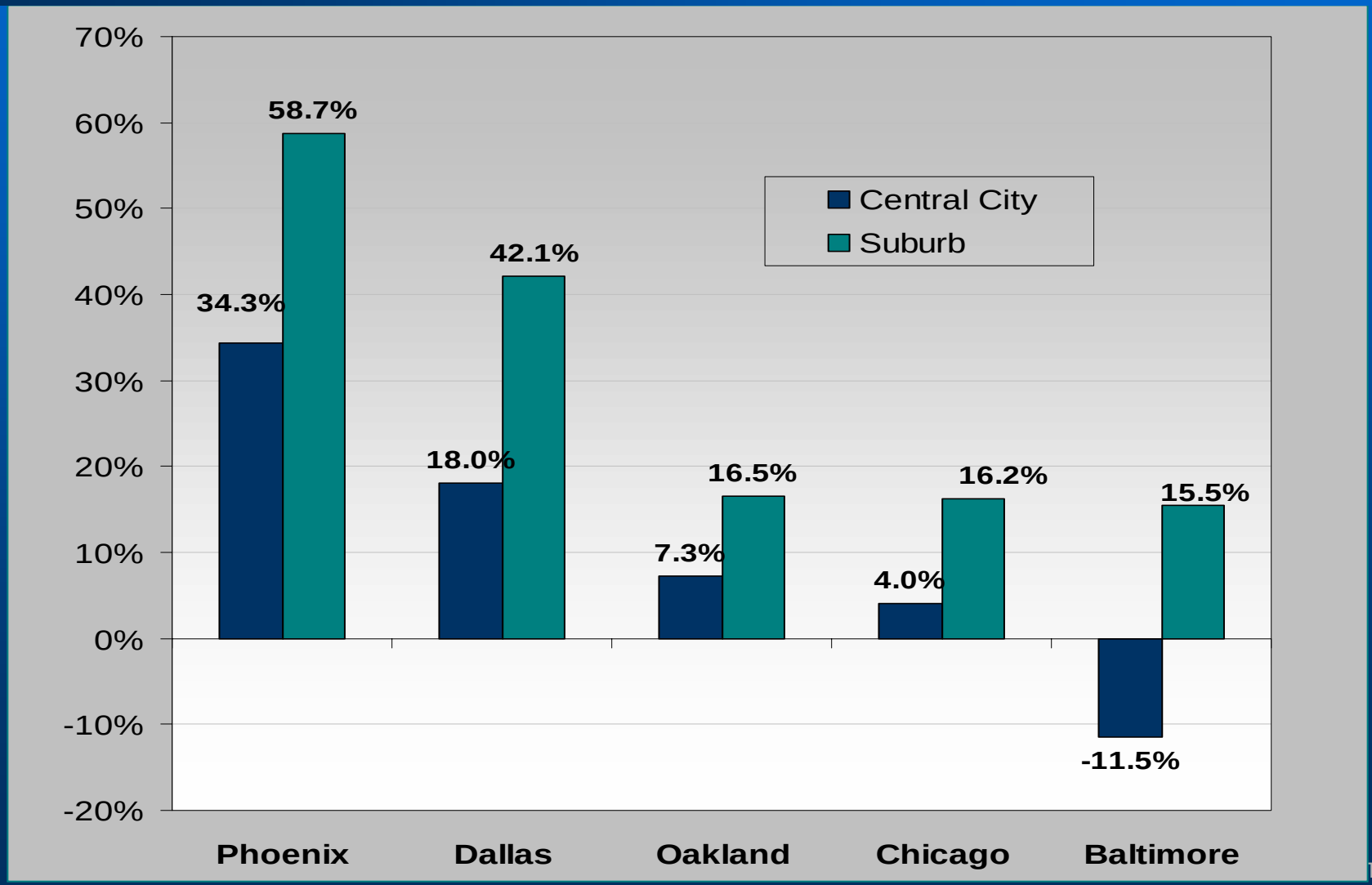
Despite city growth, suburbs grew faster

Percent population growth, 1990-2000



Source: U.S. Census Bureau; cities and suburbs in the 100 largest metro areas

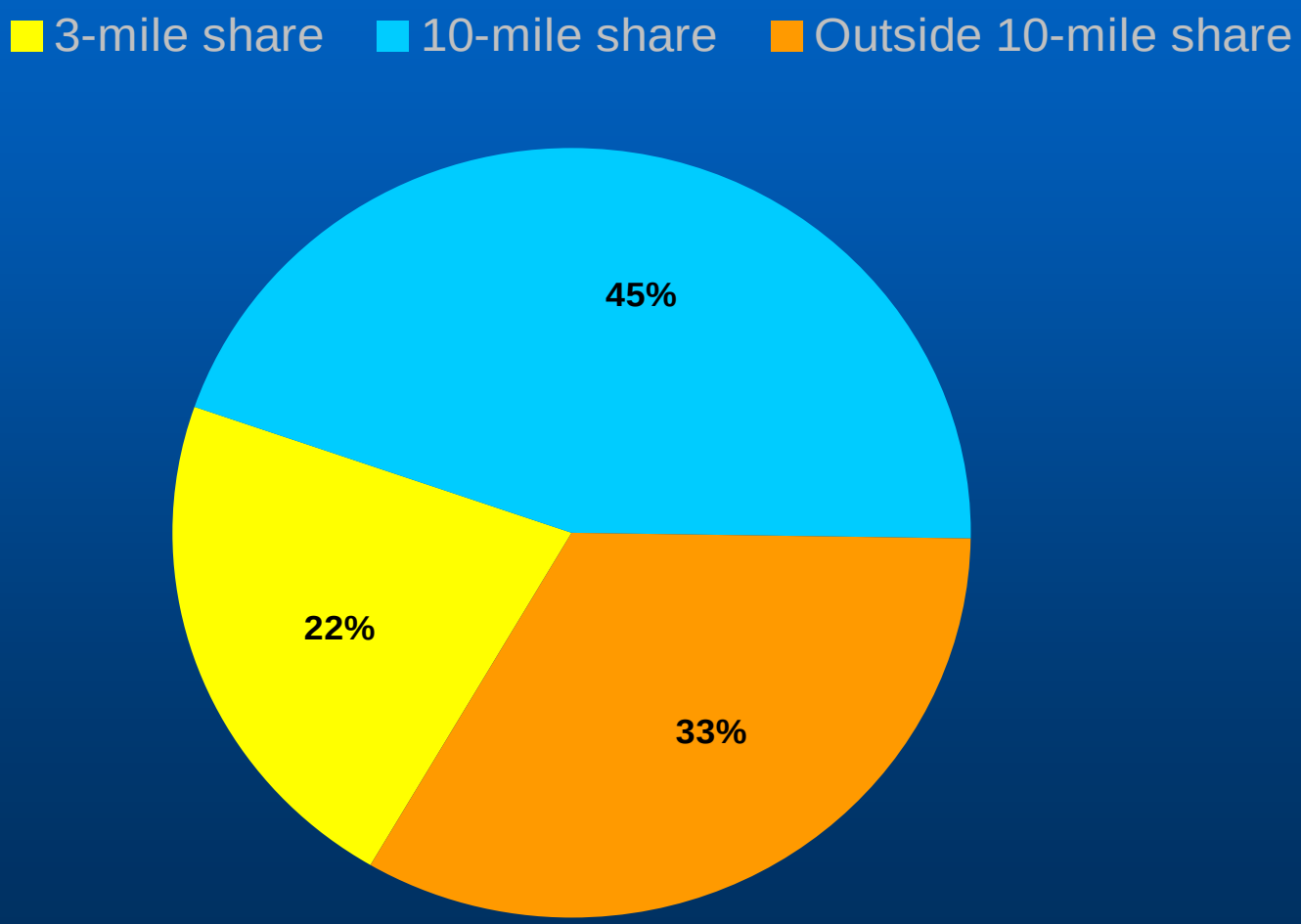
Even growing cities grew more slowly than their suburbs



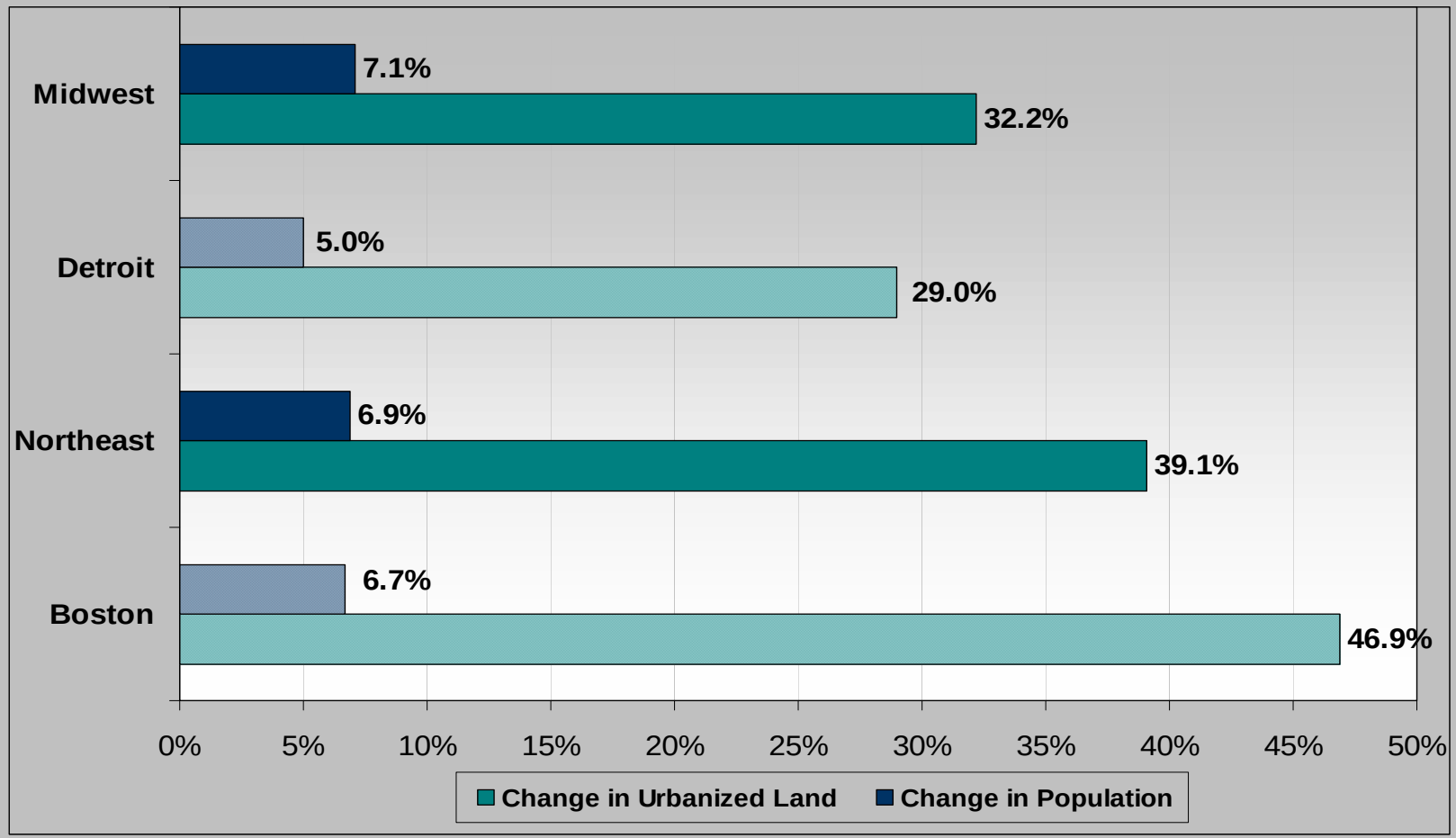
Source: U.S. Census Bureau

More than 30% of jobs in the top 100 metros are now located far from central downtowns.

Share of metropolitan employment, 100 largest metropolitan areas, 1996



Slow growing areas in the Northeast and Midwest consumed enormous amounts of land relative to population growth



Source: Fulton et al., "Who Sprawls Most? How Growth Patterns Differ Across the U.S."; Brookings Institution, July 2001

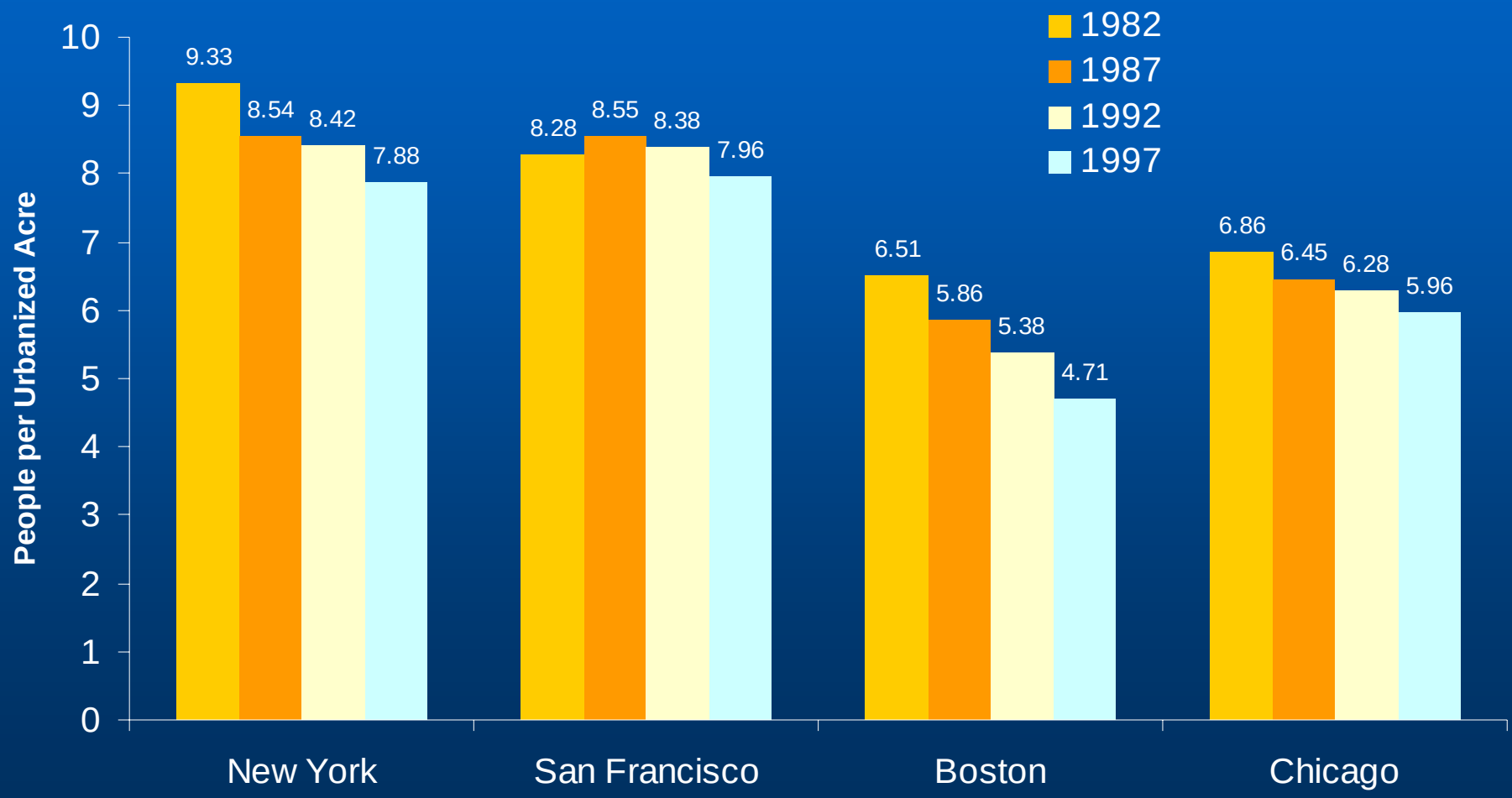
As a result, densities are declining

Density has dropped across all regions in the U.S. between 1982 and 1997

	Density		
	1982	1997	Percent Change
Northeast	5.87	4.51	-23.1%
South	3.68	2.82	-23.4%
Midwest	4.19	3.39	-19.0%
West	5.46	4.85	-11.2%
United States	4.46	3.55	-20.5%

Source: Fulton and others, "Who Sprawls Most? How Growth Patterns Differ Across the U.S."

Densities declined consistently over 15 years in hot markets



Source: Fulton and others, "Who Sprawls Most? How Growth Patterns Differ Across the U.S."

In most of the largest office markets, office space is located in low-density, edgeless locations

Metropolitan Area	% Office Space within Primary Downtown	% Office Space within Secondary	% Office Space within Edge Cities	% Office Space within Edgless
Core Dominated				
Chicago	53.9%	-	19.5%	26.6%
New York	56.7%	7.2%	6.2%	29.9%
Balanced				
Boston	37.4%	4.6%	18.8%	39.2%
Washington	28.6%	12.5%	27.1%	31.8%
San Francisco	33.9%	8.8%	13.9%	43.4%
Dispersed				
Dallas	20.5%	4.5%	40.3%	34.6%
Houston	23.0%	-	37.9%	39.1%
Atlanta	23.6%	9.9%	25.3%	41.2%
Edgeless				
Philadelphia	34.2%	3.2%	8.9%	53.6%
Miami	13.1%	4.5%	16.6%	65.8%
Average	**37.7%**	**6.0%**	**19.8%**	**36.5%**

Source: Black's Guide (New York Data comes from Cushman & Wakefield and the Real Estate Board of New York)

Cities are not YET capturing key demographics

Cities are not capturing the bulk of favored household types

	Central City	Suburbs
All Households	33%	67%
All Households w/o Children	29%	71%
** Married couples w/o children	26%	74%
** Married couples w/ children	26%	74%
All Singles	40%	60%
** Non-elderly singles	43%	56%

Source: U.S. Census Bureau, 2000
* For the 102 largest metro areas

And cities are not winning the bulk of key age groups

	Central City	Suburbs
Professional Singles (non family, age 25-44)	**44.4%**	**55.6%**
Empty Nester Couples (family, age 45-64)	**27.3%**	**72.7%**

Source: U.S. Census Bureau 2000
* For the 102 largest metro areas

III What are the implications of these trends?

IMPLICATIONS

- REINVESTMENT POLICIES: at the state and local level must promote reinvestment and infill development
- BETTER RESEARCH: on the benefits of a restoration economy
- BEYOND RETAIL-RESIDENTIAL MIX: to incorporate firm and corporate locations and design
- SERVES DIVERSE POPULATION: need attractive, high-density developments for all household types, income levels, and race and ethnicities

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