

Why Are Smart Places Getting Smarter?

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“Smart” regions with skilled workforces display higher rates of growth in population and income—and greater Boston is exhibit 1a for this finding. This is good news for Bostonians—and for residents of other “smart” regions such as Seattle, Raleigh/Durham, North Carolina, and the San Francisco Bay Area. But a closer look at the numbers suggests the emergence of a worrying trend. As smart places get smarter, they’re leaving everyone else in the dust.

The statistics are striking. Low-skilled metropolitan areas—in which less than 10 percent of adults had college degrees in 1980—grew on average by just 13 percent over the next two decades. Meanwhile, highly skilled regions—those where more than 25 percent of adults had college degrees in 1980—saw their population surge by 45 percent over the next twenty years.

Moreover, workers in “smart” cities—even unskilled workers surrounded by highly educated individuals—earn significantly more than their counterparts in less-educated metropolitan areas. Economist Enrico Moretti, for example, estimates that a one percentage point increase in the

college-educated population of a metropolitan area raises low-skilled workers’ wages by 0.6 to 1.2 percent.¹

Illustratively, a quarter century ago, Boston was a dying factory region with a declining population and rock-bottom real estate values. Over the next two decades, though, the city and its suburbs experienced an economic renaissance, marked by rising incomes, soaring housing prices, and an influx of new residents. Many of these newcomers came armed with bachelor’s degrees: the share of college graduates in the Boston metropolitan area jumped from 14 percent in 1980 to 34 percent in 2000. Only seven other metropolitan areas in the country registered greater growth in bachelor’s degree attainment over the same period.

The flip side of these results is cause for concern, however. The last quarter century has seen a divergence of human capital levels across metropolitan areas: cities with initially lower levels of bachelor’s degree attainment have had great difficulty attracting more skilled individuals. This problematic pattern suggests that economic inequality across cities

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Table 1. Top 10 MSAs by Growth in BA Attainment, 1980-2000

Rank	MSA	Percent College Graduates 1980	Percent College Graduates 2000	Growth 1980-2000
1	Middlesex-Somerset-Hunterdon, NJ (PMSA)	20.7%	37.4%	16.7%
2	Boulder-Longmont, CO (PMSA)	36.4%	52.4%	16.0%
3	Portland, ME (NECMA)	19.0%	34.2%	15.3%
4	Raleigh-Durham-Chapel Hill, NC (MSA)	23.7%	38.9%	15.2%
5	San Francisco, CA (PMSA)	28.7%	43.6%	14.9%
6	Jersey City, NJ (PMSA)	11.2%	25.3%	14.1%
7	San Jose, CA (PMSA)	26.4%	40.5%	14.1%
8	Boston-Worcester-Lawrence-Lowell-Brockton, MA-NH (NECMA)	20.3%	33.8%	13.5%
9	Bloomington-Normal, IL (MSA)	22.8%	36.2%	13.4%
10	Burlington, VT (NECMA)	22.1%	34.8%	12.7%

Source: Authors' calculations from U.S. Census data.

could rise as a result—a cause for alarm in Detroit, Newark, and other low-skilled cities. Increased inequality of skills across regions doesn't necessarily mean increased inequality across people, but at the very least, this trend is worthy of more attention.

The Brain Gap

The divergence in education levels between “smart” cities and less-skilled places has accelerated in recent years. In 1970, when 11.2 percent of the population in the average metropolitan area had bachelor's degrees, the difference in education levels across metropolitan areas was relatively small. The inter-quartile range (the gap in the share of college graduates between cities at the 75th percentile and the 25th percentile) was 4.5 percent. By 2000, in the average metropolitan area, 22.6 percent of the population had bachelor's degrees. Even more dramatically, the inter-quartile range increased to nearly 10 percent. In other words, almost all

metropolitan areas got “smarter,” but cities at the head of the class leapt forward at a faster rate than their less-skilled counterparts.

Of course, the measure we use here to identify “smart” cities—the percentage of the adult population that holds bachelor's degrees—is imperfect. Indeed, the top four high-tech entrepreneurs on the most recent Forbes 400 list—Bill Gates, Paul Allen, Michael Dell, and Larry Ellison—are all college dropouts. Still, while recognizing that the variable we use here isn't perfect, the evidence of an emerging “brain gap” among American cities appears to be strong. The big question is: why?

One possible answer is that skilled entrepreneurs are hiring highly skilled people, they're all congregating in highly educated urban hubs, and the tendency of skilled managers to employ skilled workers has clearly increased over time. In 1970, for example, a 1 percent increase in the share of an industry's managers with bachelor's degrees was associated with a 0.15 percent increase in the share of college graduates

Table 2. Bottom 10 MSAs by Growth in BA Attainment, 1980-2000

Rank	MSA	Percent College Graduates 1980	Percent College Graduates 2000	Growth 1980-2000
1	Casper, WY (MSA)	19.7%	20.0%	0.3%
2	Merced, CA (MSA)	10.5%	11.0%	0.6%
3	Yuma, NM (MSA)	10.9%	11.8%	1.0%
4	Odessa-Midland, TX (MSA)	17.3%	18.4%	1.1%
5	Yuba City, CA (MSA)	12.0%	13.2%	1.2%
6	Visalia-Tulare-Porterville, CA (MSA)	10.1%	11.5%	1.4%
7	Bakersfield, CA (MSA)	11.8%	13.5%	1.7%
8	Fresno, CA (MSA)	14.7%	16.8%	2.1%
9	McAllen-Edinburg-Mission, TX (MSA)	10.8%	12.9%	2.2%
10	Modesto, CA (MSA)	11.8%	14.1%	2.3%

Source: Authors' calculations from U.S. Census data.

among that industry's workforce. However, by 2000, a 1 percent increase in the share of managers with bachelor's degrees was associated with a 0.38 percentage point increase in the share of college graduates in that industry's workforce. Presumably, the same trend exists among skilled individuals who become entrepreneurs and hire their own workforce.

But why has this "brain gap" widened so much in recent years? After all, highly educated individuals have always been at the forefront of innovation. But while innovative entrepreneurs at the end of the nineteenth century—from Andrew Carnegie to Henry Ford—employed large numbers of unskilled workers, the leading entrepreneurs of the 1980s and 1990s—such as Gates, Allen, Dell, and Ellison—formed companies that mostly hire highly-educated individuals.

This tendency, in turn, explains why regions that had an initial advantage in human capital now have an even larger advantage in human capital. The initial

advantage, which occurred because of colleges or historical industrial patterns, brought high-tech entrepreneurs who then provided jobs for high human capital workers, which then attracted more skilled workers to the region. Moreover, since skill-intensive industries are adding employees at a particularly fast clip, this phenomenon is likely to continue for the foreseeable future.

Illustratively, both Steve Jobs, the founder of Apple and Ted Waitt, the founder of Gateway, started their high-tech companies in their respective home towns: Cupertino, California for Jobs and Sioux City, Iowa for Waitt. Today, Apple is still located in Cupertino, which is in the heart of Silicon Valley. In contrast, in the late 1990s, Waitt moved Gateway's corporate offices to San Diego, an area with many more high skilled workers than its original location.

Another way to understand the tendency of the skilled to flock to smart regions is to look at the wage effects of living in a skilled city. In 1980, high school dropouts appeared to reap the most "benefits" from

living in a “smart” city—if “benefits” are measured by the logarithm of the individual’s hourly wage. The benefits to living in a “smart” city have increased for all workers over the past two decades. But in a break from the past, college graduates—not high school dropouts—now appear to gain the most from living in “smart” cities. This supports the view that highly educated entrepreneurs are increasingly innovating in ways that employ similarly skilled people.

Closing the Gap

If skilled individuals raise wages for the workers around them—and if skilled individuals flock to smart cities—then we risk seeing intensified concentrations of wealth in some areas of the country and pockets of poverty in others. This suggests that local and regional policymakers have a stake in ensuring that their communities and regions become “smart” and stay “smart.” They can do the following:

Invest in Education

Communities with excellent K-12 schools will produce more students who go on to college—and at least some of these students will return after graduation. Moreover, since highly educated individuals are particularly concerned about their kids’ education, communities with high-performing K-12 schools will attract a greater share of highly skilled parents.

Invest in Safety

Boston’s homicide rate fell by more than half in the 1990s and other measures of violent crime went down as well. These trends no doubt have contributed to the influx of workers with college degrees: highly educated individuals—like everyone else—value safe streets. Cities that want to lure skilled entrepreneurs must make crime reduction a priority and then focus on keeping streets safe, particularly if it starts to increase, as it has done in Boston since the early part of this decade.

Housing

Smart young people cannot locate in a region unless there is moderately priced appropriate housing. Policies that either excessively restrict new construction or focus exclusively on one type of construction are likely to make it more difficult for regions to be “smart.”

Limit Taxes and Redistribution

Individual communities, however, also must keep tax rates low to encourage economic growth. As the New York City fiscal crisis in the 1970s showed, in the long run cities that try to establish an expensive local safety net will drive away entrepreneurs and increase poverty.

Endnotes

¹ E. Moretti. “Estimating the Social Returns to Higher Education: Evidence from Cross-Sectional and Longitudinal Data” 2004, *Journal of Econometrics* 121 (1-20: 175-212).



The Taubman Center and its affiliated institutes and programs are the Kennedy School of Government’s focal point for activities that address urban policy, state and local governance and intergovernmental relations.



The Rappaport Institute for Greater Boston aims to improve the region’s governance by fostering better connections between scholars, policy-makers, and civic leaders. The Rappaport Institute was founded and funded by the Jerome Lyle Rappaport Charitable Foundation which promotes emerging leaders in Greater Boston.

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