The Education-Jobs "Mix-Match":

How Much Opportunity Is There for the College-Educated Workforce in America's Metropolitan Areas?

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Over the last seven decades, the share of people with a college education has steadily increased. In 1940, only about 5 percent of adults ages 25 and older in the US had a bachelor's degree compared with about 31 percent (68 million) in 2016.[1] Another 29 percent (63 million) have at least some college education but not a four-year degree.[2] Thus, roughly 60 percent of the US population over the age of 25, or about 132 million people, have some postsecondary education.

Despite these trends, policy conversations about increasing opportunity for American workers largely focus on increasing the share of workers who have postsecondary education to reduce what is perceived as a persistent skills gap.

Indeed, people with postsecondary education tend to experience less unemployment and earn higher wages than those without it.[3] However, for adults to maximize their economic returns on education, they must obtain a wage premium for their knowledge and skills. Existing research shows workers may not always be able to do this: the New York Federal Reserve reports that the share of recent graduates who are unemployed or underemployed has risen over the last few decades, and the quality of the jobs held by the underemployed has declined.[4]

Moreover, people have different opportunities in different labor markets. Coastal metropolitan areas like New York City and Los Angeles are very different—in local industries, trends in educational attainment, and the cost of living—from smaller metropolitan areas in the middle of the country like Dubuque, Iowa, or Pocatello, Idaho.

These issues have implications not only for how we think about workforce development, but also for the important role of *economic development policy* in ensuring that the structure of local economies provides adequate opportunity.

In this brief, we contribute to a larger conversation about this complex issue with a simple descriptive analysis of the mix of residents' educational attainment and educational requirements for jobs in all 387 American metropolitan areas. We then discuss the policy questions and research gaps that emerge.

Methodology

We used data on educational attainment from the 2016 American Community Survey (ACS) one-year estimates, the most recent annual survey of the US population, to describe educational attainment nationally and in metropolitan areas. These data have limitations because they do not include younger persons (although the results would be very similar if we analyzed Americans ages 18 and older rather than ages 25 and older), but do include both people who are participating in the labor market and those who are not (e.g., retirees and homemakers). However, using ACS estimates has the advantage of common metropolitan area definitions that can be matched with jobs data (see paragraph below). We also extracted other variables from the 2016 ACS, including total population, census region, and the share of people working in different industries, as contextual information.

To quantify the mix of jobs available in local labor markets, we started with the Department of Labor's Bureau of Labor Statistics' (BLS) 2016 Occupational Employment Survey (OES) estimates for the nation as a whole and metropolitan areas.[5] The OES produces employment and wage estimates annually for over 800 occupations, through a survey of businesses that collects data for the payroll period through the 12th day of May or November. All full-time and part-time wage and salary workers in nonfarm industries are included, but the survey does not cover the self-employed, owners and partners in unincorporated firms, household workers, or unpaid family workers.

We joined the OES data on jobs by occupation by metropolitan area with national data from BLS' Employment Projections (EP) program, which includes the entry-level education typically required for 819 occupations, which BLS produces by combining several statistical surveys. Because they reflect the *average* job within an occupation, some jobs within each occupation could very well require more or less education. However, using EP designations allowed us to roughly calculate the share of jobs that usually require "some college" (defined as some college experience, no degree; postsecondary nondegree awards; and associate's degrees) and the share that require at least a four-year degree (bachelor's, master's, and doctoral degrees).

Data on residents' educational attainment and the jobs in their local labor markets were aggregated for 387 Core-Based Metropolitan Statistical Areas and New England City and Town Areas in the 50 states, as defined in Executive Office of the President (2015). For this analysis, we categorized all metropolitan areas by size using the US Census Bureau's typology based on total population: areas of 1

million residents or more, 250,000 to 999,999 residents, 100,000 to 249,999 residents, and fewer than 100,000 residents.[6]

For our analyses, we used basic frequencies to compare the share of people and jobs nationally and at the metropolitan area level for different levels of postsecondary education: some college but less than a four-year degree (referred to as "some college" throughout this brief), and a four-year degree or more. For a rough understanding of the gap between jobs and education, we calculated the "mix-match" by subtracting the share of jobs typically requiring each level of education from the share of people with that level of education.

We also ran regressions predicting the share of people with each level of education, the share of jobs requiring each level of education, and the difference in these shares with indicators for metropolitan area size, region, and mix of industries.

The National Education-Jobs "Mix-Match"

Nationally, nearly two-thirds (63 percent) of jobs require a high school degree or less at entry level. However, educational attainment among people ages 25 and older is roughly the inverse: sixty percent have *more* than a high school education (figure 1). This creates a potential imbalance between jobs and people for each level of postsecondary educational attainment. For example, the share of people with "some college" exceeds the share of jobs that typically require that level of education by 18 percentage points. The difference for four-year degrees is more modest, at only 5 percentage points.

Important trends underlie these numbers. Among adults ages 25 and older with "some college" education, less than a third have an associate's degree; the rest have a certification or have not completed any terminal diploma. The breakout between these two groups is unknown in our data, because the ACS does not ask specifically about certificates. However, a substantial share is likely noncompleters: only about 38 percent of community college students, 65 percent of four-year public university students, and 76 percent of four-year private university students complete their degrees within six years (Shapiro, Dundar, and Huie 2017).

BLS classifies 99 different occupations across various industries as typically requiring only "some college" education at entry. Nationally, only about 11 percent of jobs fall into this category. Among these jobs, slightly more than half (56 percent) require some sort of postsecondary nondegree certification, and the remainder is fairly evenly split between jobs that require an associate's degree and those that require just "some college" experience. The latter jobs are concentrated in just five occupations: computer user support specialists; teacher assistants; actors; bookkeeping, accounting, and auditing clerks; and computer, automated teller, and office machine repair technicians.

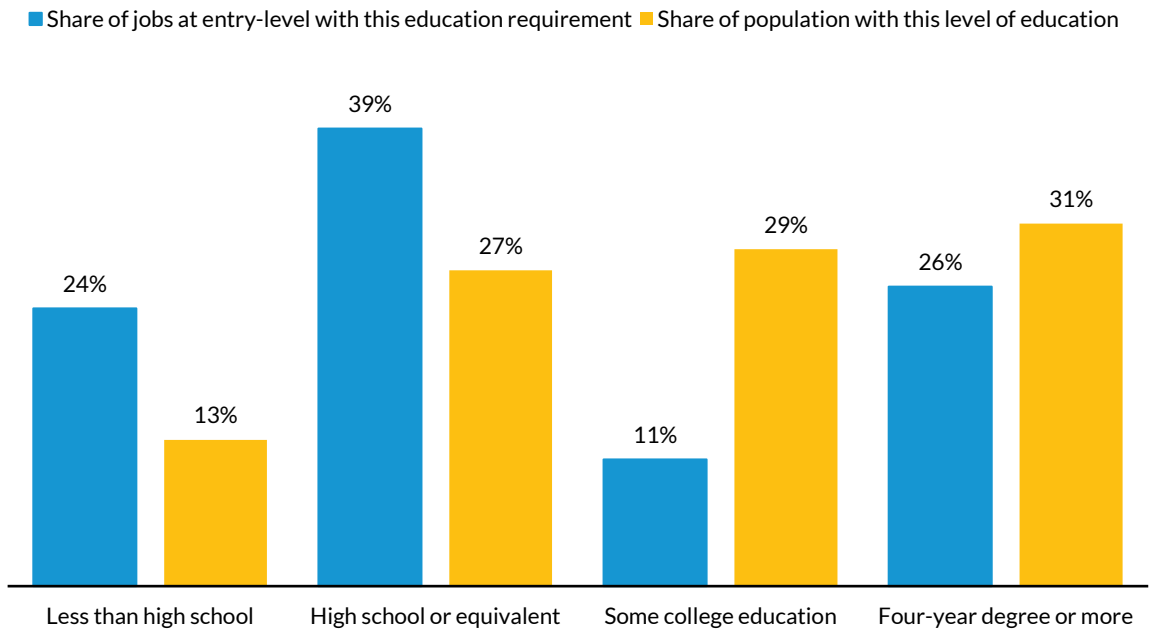
Among people with a four-year degree or more, 62 percent have a bachelor's degree or equivalent, and the remainder has some sort of graduate or professional degree. There are 275 different

occupations that require at least a four-year degree at entry, and 83 percent of the them typically require just a bachelor's degree.

FIGURE 1

Nationally, the Share of Jobs That Require Postsecondary Education Is Smaller Than the Share of College-Educated Adults

2016



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Sources: Authors' calculations using the 2016 ACS one-year estimates, 2016 Occupational Employment Survey, and 2016 Employment Projections.

Local Opportunities for People with "Some College"

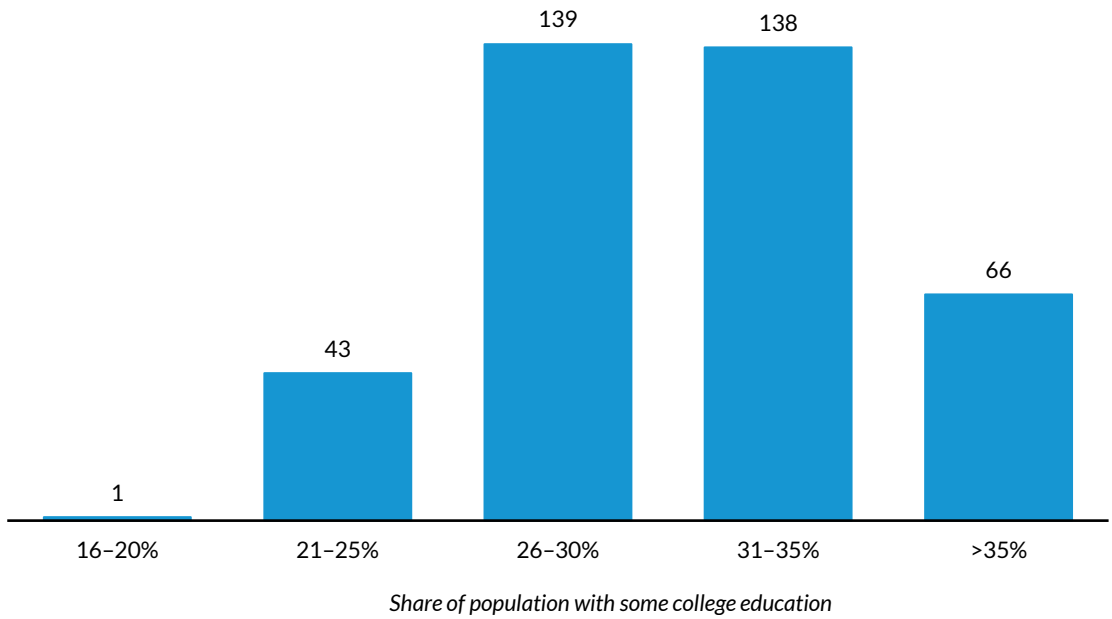
Analysis of trends in metropolitan areas reveals that the "mix-match" between the population with "some college" and jobs requiring that level of education may be more acute locally than nationally.

In more than half of the 387 American metropolitan areas, the share of the population with "some college" exceeds the national average of 29 percent; and in 66 metropolitan areas, the share is greater than 35 percent (figure 2).

FIGURE 2

Nearly Two-Thirds of Metropolitan Areas Have Shares of Adults with "Some College" above the National Average of 29 Percent

Number of metropolitan areas by shares of population with some college education, 2016



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Source: Authors' calculations from the 2016 ACS one-year estimates.

The lowest share of adults with "some college" is in college towns, like State College, PA (17 percent), and large metropolitan areas, like Washington-Arlington-Alexandria, DC-VA-MD-WV; San Jose-Sunnyvale-Santa Clara, CA; Boston-Cambridge-Nashua, MA; and New York-Newark-Jersey City, NY-NJ-PA (21–22 percent).

Metropolitan areas with the highest shares of adults with "some college" include small areas in the South and West, like Grants Pass, OR; Cheyenne, WY; Sherman-Denison, TX; Albany, OR; Killeen-Temple, TX; Jacksonville, NC; St. George, UT; and Redding, CA, which all have shares exceeding 40 percent.

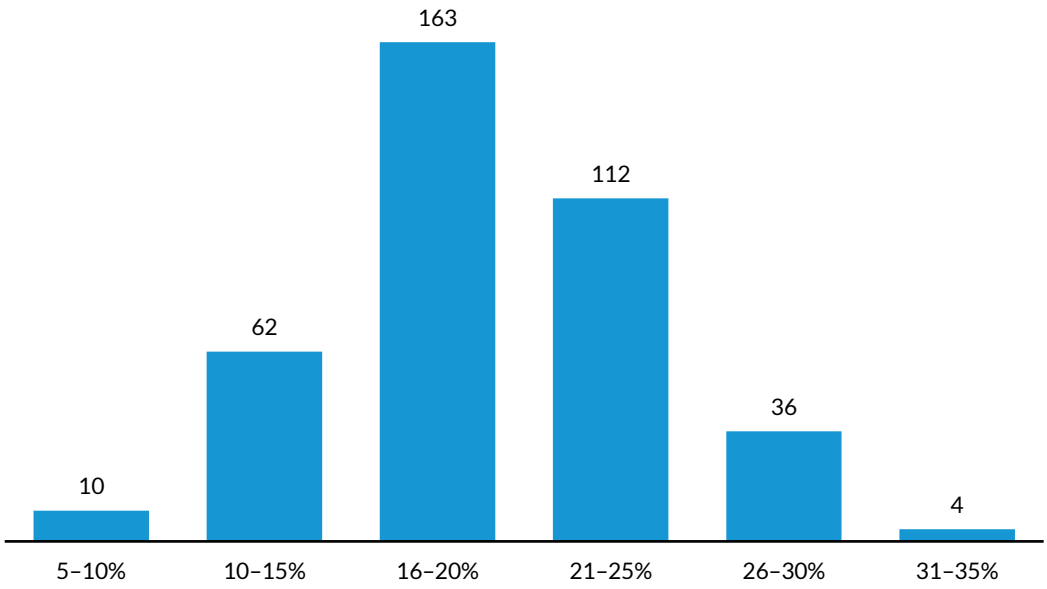
Examining trends across metropolitan areas more systematically with regression analysis, we find significant ($p<0.0001$) regional differences in the share of people with "some college," even after controlling for population size, the mix of industries, and the share of people who have four-year degrees or more. Metropolitan areas in the West have significantly higher concentrations of adults with "some college" than metropolitan areas in all other regions: 9 percentage points higher than the Northeast, 6 points higher than the South, and 3 percent higher than the Midwest.

In total, 272 (70 percent) metropolitan areas exceeded the national average of 11 percent of jobs requiring "some college" (data not shown). However, none of the 387 metropolitan areas had labor markets where the share of jobs requiring only "some college" exceeded the share of people with this level of education. The education-jobs "mix-match" ranged from 8 to 33 percentage points (figure 3). Moreover, in 202 of these metropolitan areas (52 percent), the difference is greater than the national difference (18 percentage points).

FIGURE 3

The Share of Adults with "Some College" Exceeds the Share of Jobs Typically Requiring It in All Metropolitan Areas

Number of metropolitan areas by difference between share of people with "some college" and share of jobs requiring it, 2016



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Sources: 2016 ACS one-year estimates, 2016 Occupational Employment Survey, and 2016 Employment Projections.

At one end of the spectrum, several metros (10) in the Northeast and South including State College, PA; Ithaca, NY; Lebanon, PA; New Haven, CT; Chambersburg-Waynesboro, PA; Bloomsburg-Berwick, PA; Bridgeport-Stamford-Norwalk, CT; Morgantown, WV; Laredo, TX; and Houma-Thibodaux, LA all have a relatively small "mix-match" between their shares of people with "some college" and jobs that require that level of education at entry level (5 to 10 percent). At the other extreme, four metropolitan areas—all in the West—have differences greater than 35 percentage points, including Grants Pass, OR; Redding, CA; St. George, UT; and Jacksonville, NC.

As with the share of adults with "some college," there is also significant regional variation. Regression analyses show that metropolitan areas in the West have a significantly greater ($p<.0001$) "mix-match" between their share of people with and jobs requiring "some college" than metropolitan areas in other regions, even after controlling for industry mix and metropolitan area size.

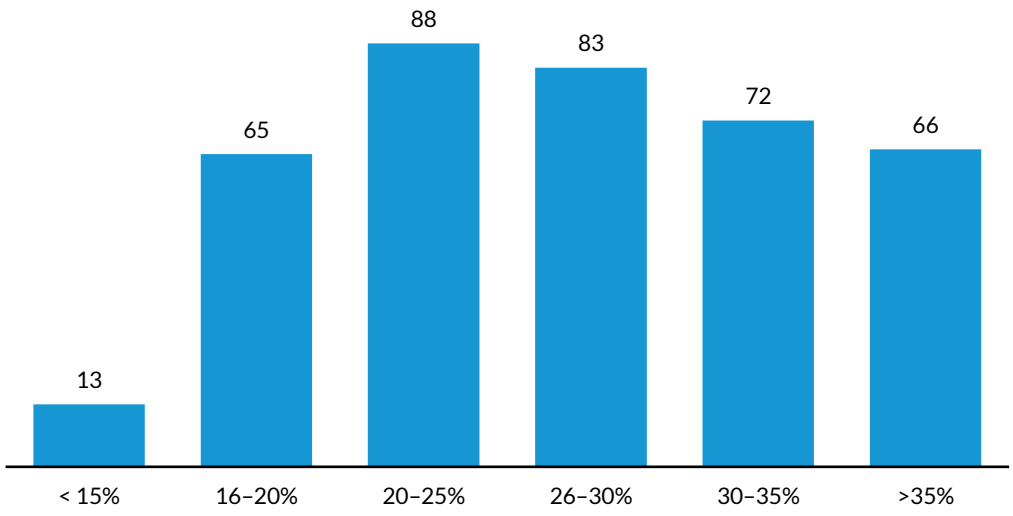
Local Opportunities for People with at Least a Four-Year Degree

In contrast to trends for only "some college" education, 264 of the 387 metropolitan areas (68 percent) have shares of people with at least a four-year degree *lower* than the national average (31 percent). Only about a third of metropolitan areas have a higher concentration of these individuals (figure 4).

FIGURE 4

Only a Third of Metropolitan Areas Have Shares of Adults with at Least a Four-Year Degree as High or Higher Than the National Average of 31 Percent

Number of metropolitan areas by shares of the population ages 25 and older with a four-year degree or more, 2016



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Source: 2016 ACS one-year estimates.

Areas with the highest concentration of people with at least a four-year degree (>35 percent) include smaller and modestly sized metropolitan areas that host large universities like Ithaca, NY (52 percent); Lawrence, KS (52 percent); Corvallis, OR (54 percent); Ann Arbor, MI (55 percent); Ames, IA

(55 percent); and Boulder, CO (61 percent); Silicon Valley metropolitan areas like San Francisco-Oakland-Hayward, CA (48 percent), and San Jose-Sunnyvale-Santa Clara, CA (50 percent); and the center of federal government, Washington-Arlington-Alexandria, DC-VA-MD-WV (50 percent). In contrast, nine of the 13 metropolitan areas with the lowest concentration of college graduates (<15 percent) are moderately sized (100,000–250,000 residents) with no university nearby, like Lake Havasu City-Kingman, AZ (11 percent); Dalton, GA (12 percent); or Vineland-Bridgeton, NJ (14 percent).

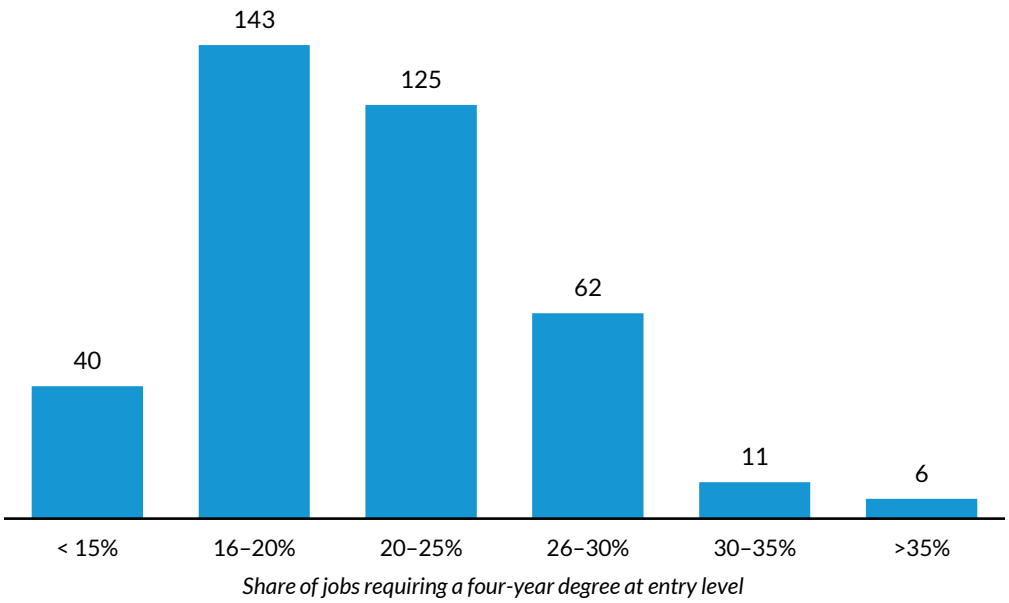
In the regression analysis, we find no significant trends by region or metropolitan area size after controlling for the mix of industries in each metropolitan area.

Turning to the job market, we see that relatively few metropolitan areas—only 79 of the 387 (20 percent)—have a share of jobs requiring at least a four-year degree that is the same or greater than the national average of 26 percent (figure 5). In most metropolitan areas, these jobs comprise a modest share of jobs.

FIGURE 5

Few Metropolitan Areas Have a Large Share of Jobs Requiring at Least a Four-Year Degree

Number of metropolitan areas by share of jobs requiring a four-year degree at entry level, 2016



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Sources: 2016 Occupational Employment Survey and 2016 Employment Projections.

The strongest job markets for four-year degree holders include college hubs like Boulder, CO (38 percent) and Durham-Chapel Hill, NC (41 percent); technology hubs like San Jose-Sunnyvale-Santa Clara, CA (40 percent); and the federal-government-dominated economies of Washington-Arlington-Alexandria, DC-VA-MD-WV (40 percent) and California-Lexington Park, MD (44 percent).

In contrast, the 40 metropolitan areas with the lowest concentration of these jobs (<15 percent) include retirement communities, like Villages, FL (8 percent), very small metropolitan areas, and some larger areas with large tourism sectors, like Myrtle Beach-Conway-North Myrtle Beach, SC-NC (13 percent).

Consistent with the trends identified in the share of people with four-year degrees, regression analysis of jobs requiring this level of education reveal that they tend to be most concentrated in larger metropolitan areas and all regions other than the South. These differences persist even after controlling for the mix of industries in each metropolitan area. Metropolitan areas with a million or more residents have job shares 4 percentage points higher than small metropolitan areas with 100,000 or fewer residents, and metropolitan areas with 250,000 to 900,000 residents have shares 3 percentage points higher. Meanwhile, the share of jobs requiring at least a bachelor's degree in southern metropolitan areas is 1 percentage point lower than metropolitan areas in all other regions.

We also find that 87 percent—337 of the 387—of all metropolitan areas have an education job "mix-match" where the share of people with at least a four-year degree exceeds the share of jobs requiring that level of education (figure 6). Among these metropolitan areas, the differences are generally not as large as those for people with only "some college," but still range from 1 to 32 percentage points. In 225 of the metropolitan areas (67 percent), the difference is greater than the national difference of 5 percentage points.

The 78 metropolitan areas with the largest jobs "mix-matches" (>10 percent) include college towns that have the largest populations of people ages 25 and older with at least a bachelor's degree. These locations also vary by size and region; examples include Mankato-North Mankato, MN (15 percent); Daphne-Fairhope-Foley, AL (18 percent); San Francisco-Oakland-Hayward, CA (15 percent); and Columbus, IN (18 percent).

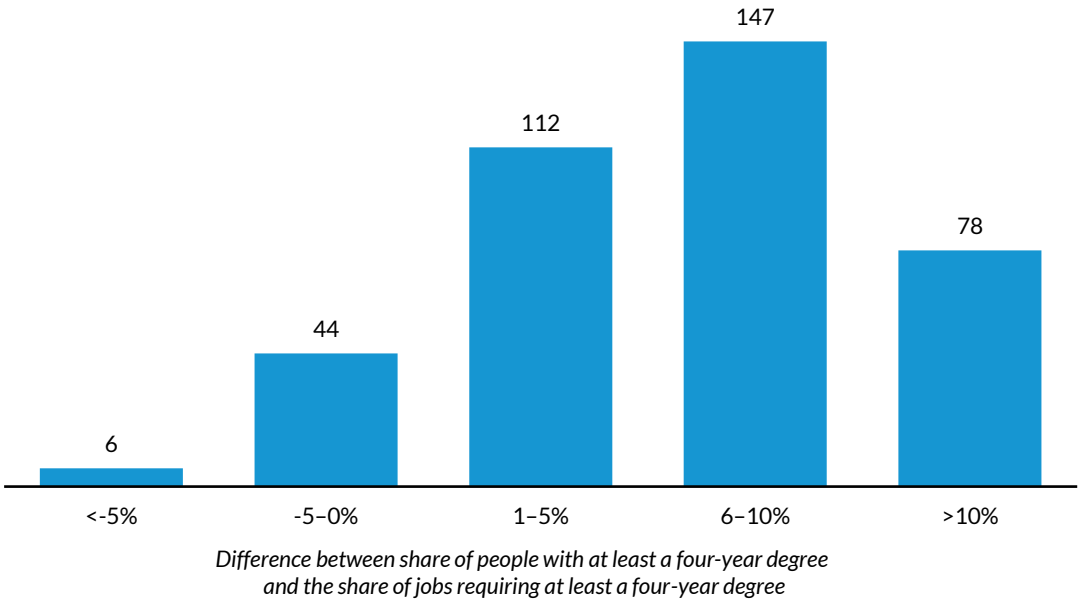
On the other hand, there are 50 metropolitan areas that show signs of a different kind of "mix-match" where the share of jobs typically requiring at least a four-year degree at entry level exceeds the share of people who have these credentials. These metropolitan areas exist in all regions, including small areas near large military installations like California-Lexington Park, MD; Sierra Vista-Douglas, AZ; and Hinesville, GA, and more moderately sized metropolitan areas in California's San Joaquin Valley like Hanford-Corcoran, CA and Merced, CA.

Exploring gaps by region and metropolitan area size, we find that there is a closer match between four-year degree education and jobs in the largest metropolitan areas, after controlling for the local mix of industries. On average, metropolitan areas with a million or more people have differences in education and job shares that are 4 percentage points smaller than metropolitan areas with fewer than 100,000 residents. And metropolitan areas with populations between 250,000 and 999,999 have gaps 3 percentage points smaller.

FIGURE 6

In Most Metropolitan Areas, the Share of Adults with at Least a Four-Year Degree Exceeds the Share of Jobs Requiring This Level of Education

Number of metropolitan areas by difference between the share of people with at least a four-year degree and the share of jobs requiring it, 2016



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Sources: 2016 ACS one-year estimates, 2016 Occupational Employment Survey, and 2016 Employment Projections.

Limitations

This simple description has some notable limitations. As mentioned in the methodology section, our data on educational attainment does not include people under age 25, and the population data are not restricted to labor force participants. This could potentially distort our estimates. For example, because people under age 25 and people with less education tend to have lower labor force participation rates,[7] one might expect the share of the labor force with postsecondary education to be higher than our estimates for the whole population ages 25 and older. But, the educational attainment of those ages 18 and older is remarkably similar to that of people ages 25 and older.

Analyzing postsecondary degrees in aggregate does not allow us to examine the substantive match between people's field of study and the specific types of degrees required in their labor market. Not all degrees are equally in demand; research shows that unemployment rates for those with a bachelor's degree between ages 25 and 29 are highest for those who majored in liberal arts and humanities, social work and human services, and fine arts (McFarland et al. 2018). Those who received degrees in nursing, general education, and mechanical engineering have the lowest rates of unemployment. For this reason,

the US Departments of Labor and Education and other federal agencies have begun to direct more funding toward developing career pathways that steer students toward more high-demand majors, particularly in STEM (science, technology, engineering, and math), that better connect them to the job market.[8]

Further, the analysis does not account for the dynamic nature of the labor market. The ways that businesses arrange their operations, define their job descriptions, and decide on educational and other requirements for workers vary both within and across metropolitan areas. There may also be occupations where postsecondary education is not expected at entry level, but encouraged or demanded with more years of experience. Moreover, wages vary substantially within occupations by geography and industry, and occupations requiring postsecondary education at entry level do not always offer higher wages than other occupations across career trajectories. Thus, even labor markets that seem to have a healthy balance between educational requirements of local jobs and residents' educational attainment may not achieve better employment outcomes.

Also, the geographic scope of labor markets may vary depending on the occupation or industry. For example, recent college graduates tend to be more geographically mobile than other workers, and businesses, particularly those looking to fill more specialized positions, may recruit beyond the boundaries of a single metropolitan area or labor market.

Discussion

This brief describes patterns in postsecondary educational attainment and entry-level educational requirements for local jobs in all 387 metropolitan areas. We found that, in most communities, there is an imbalance where the share of people with postsecondary qualifications generally surpasses the share of jobs that require that level of educational attainment. The descriptive analysis prompts important questions about our approaches to postsecondary education and training, employers' role in addressing labor force challenges, and implications for economic development policy.

Approaches to Postsecondary Training and Education

Some research suggests there is increasing labor market demand for postsecondary education. Carnevale, Smith, and Strohl (2013) note the high share of people with bachelor's degrees working in jobs that require only a high school diploma at entry level as evidence that the nature of these jobs is changing. There may be some truth to this: some occupations could require more education at higher levels of advancement, and some research indicates that jobs will change significantly in the coming decades because of technological innovations and regional or global restructuring (Bughin et al. 2018).

There may also be dynamics at play that have less to do with the changing nature of work and more to do with balance in the labor market. If people with postsecondary degrees cannot find jobs where they can use their education, it is reasonable to assume they would need to look for other jobs that require less education instead, potentially displacing people with less education who could have held

those jobs. As the share of people with postsecondary education increases, people may also need to continuously upgrade their skills or education, not necessarily to keep up with new duties required for a particular job, but to compete with other workers in the labor market.

New empirical, longitudinal research to examine these dynamics is important because they are unlikely to change soon. When we look at BLS' Employment Projections, jobs requiring higher education, particularly master's and doctoral or professional degrees, are predicted to grow more rapidly than other jobs over the next eight years (table 1). However, because these jobs comprise a small share of the job market, the overall share of these jobs stays largely the same. Despite slowing growth, jobs that require a high school diploma or less will continue to dominate American labor markets. Thus, we should not expect to see the job market significantly change in relation to the current educational profile or naturally offset future increases in postsecondary education.

TABLE 1

Despite Fast Growth, Jobs Requiring Postsecondary Education at Entry Level Will Remain a Relatively Small Part of the Labor Market

	2016 Jobs		Change in Jobs, 2016–26 (percent)	2026 Jobs[a]	
Typical entry-level education	Number	Percent distribution		Number	Percent distribution
Total, all occupations	156,063.8	100.0	7.4	197,259.3	100.0
Doctoral or professional degree	4,230.9	2.7	13.1	4,345.1	2.2
Master's degree	2,670.6	1.7	16.7	2,716.0	1.4
Bachelor's degree	33,372.4	21.4	10.1	40,514.1	20.5
Associate's degree	3,617.9	2.3	11.0	3,701.1	1.9
Postsecondary nondegree award	9,582.9	6.1	11.1	10,167.5	5.2
Some college, no degree	3,858.4	2.5	4.2	3,954.9	2.0
High school diploma or equivalent	61,504.1	39.4	5.1	85,736.7	43.5
No formal educational credential	37,226.7	23.9	6.4	46,123.9	23.4

Source: "Employment, wages, and projected change in employment by typical entry-level education," US Department of Labor, Bureau of Labor Statistics, https://www.bls.gov/emp/tables/education-summary.htm.
Note: [a] All 2026 calculations are the authors' estimates based on the above source.

This analysis highlights the importance of helping postsecondary students be strategic. Jobs requiring only "some college" account for a small fraction of all jobs in the labor market. To get a return on their investment, students must be careful to choose and complete certificates or associate's degrees that are in demand in their metropolitan area. Alternatively, when possible, students would do well to set goals to complete a four-year degree rather than two-year degree or certification. Individuals with higher degrees tend to get paid more than those without them, although the wage premium for higher education has flattened over time and may vary by geography or occupation (Valetta 2016; Baum 2014).

Although jobs that require four-year degrees or more make up a larger share of the job market, they also carry with them greater financial burdens with the rapidly increasing cost of college (The College Board 2017). Thus, students choosing to invest in bachelor's or graduate degrees should do so

mindfully. To support students in this process, high schools, colleges, and workforce development entities should make information widely available on the jobs locally available, the lowest-cost options for obtaining the degrees necessary for these jobs, and which credentials or degrees promise to be most marketable.

It may also be helpful to complement degree and credential programs with basic entrepreneurship and business training so that students are positioned to create their own opportunities or get greater value out of contracting positions, should there not be immediate opportunities for traditional employment that make good use of their credentials. Colleges and workforce entities should think about extending this kind of training to other adults with postsecondary education. Katz and Krueger (2016) suggest that alternative work arrangements, like freelancing and contracting, account for a large share of job growth. However, education and training alone are insufficient. Only one in five businesses survive after one year, and only about half survive beyond five years (US Small Business Administration Office of Advocacy 2018). Barr (2015) suggests that adequate access to capital (other than through credit card debt) and professional networks are also integral. We discuss this in greater detail in the following section on economic development policies and approaches.

Working with Employers

When employers are asked about the skills gap, they usually do not emphasize educational credentials. In a recent survey of human resources professionals, the Society for Human Resource Management (2016) found that only about 24 percent of employers felt they had difficulty hiring because applicants did not have the right credentials or certifications. The most important skills needed for full-time regular positions were workplace soft skills (e.g., problem solving, interpersonal, communication, teamwork, and leadership skills), which do not require a postsecondary degree.

However, employers may face an additional dilemma. The more common postsecondary education is, the more difficult it may be for employers to effectively filter through the candidate pool using degrees or credentials. Cappelli (2012) points out that the simultaneous downsizing and outsourcing of human resources functions and the widespread use of online job searches only exacerbate the problem. If screening for candidates with postsecondary education yields too many applicants, employers might raise the educational requirements or require more experience at entry level just to manage the process. In a recent analysis of their job listings, Burning Glass Technologies (2014) noted substantial "up-credentialing" over the last 15 years in occupations that used to require less education, even when the required skills have not changed or when this makes the position harder to fill.

Work-based learning may be critical to addressing skills gaps and slowing potential credential inflation. Although businesses are still the biggest purveyors of training, data about who gets training and how much indicate that mid- and higher-level workers are more likely to receive employer-supported training than lower-level workers (Lerman 2015). Implementing policies to incentivize and support work-based learning for more workers may be key to both meeting business needs and ensuring a good return on investment for workers and employers.

The Workforce Innovation and Opportunity Act is already helping ensure publicly funded job trainings align with employers' needs. But, researchers also need to work with and learn from employers directly to help them scale their own hiring and training practices to meet their needs and address national workforce challenges by:

- collaborating with businesses to better understand the criteria used to filter candidates and the rationale behind them;
- analyzing job listings to explore credential and experience inflation in different markets, and how much it prolongs the process or adds cost to the hiring process for employers;
- testing innovative new skills-matching hiring platforms to measure value to employers and social impact;[9] and
- examining how best to encourage businesses to invest in trainings that address the skills gaps that are important to them and provide a good return on investment for workers and employers alike.

Economic Development Policies and Approaches

Bennett and Vedder (2015) suggest that, in the United States, we may have reached a point of diminishing returns to formal postsecondary education. When countries have very low shares of their population going to college, increases in college attendance translate to both increasing income growth and decreasing inequality. But when college education is widespread, countries experience slowing growth and increasing inequality. These kinds of challenges cannot be solved by workforce development policies and programs alone; economic development strategies are also necessary.

People with underutilized postsecondary education may be an overlooked resource for community economic development. In planning economic development strategies, local communities often take stock of local industries, unique natural resources, and strategic location to identify their comparative advantages. By identifying the population's degrees, credentials, and skills, communities can strategize which industries or businesses to attract or retain, and how economic development policies could encourage entrepreneurship and innovation hubs. Investing in local people with underutilized college education may be an attractive alternative to attracting new outside firms that may not have a commitment to the community, particularly in smaller, shrinking labor markets. And helping more educated residents find work appropriate to their education can open up more opportunity for residents with less education.

Economic policies should also support workers' geographic mobility. Americans used to relocate much more frequently when they reached a dead end in their local labor market. These kinds of moves are now at a historic low but still promise to help workers get a better return on their education.[10] A recent study of young college graduates shows that those who are willing to migrate to other areas are less likely than "stayers" to be underemployed in their jobs during difficult economic times (Waldorf and Yun 2016). Moretti (2013) suggests that subsidies could be offered through the unemployment

program to people who would like to relocate to access better opportunities, though support to those who are underemployed should also be considered.

Conclusion

The next 10 to 20 years will bring many challenges for the U.S. economy and the American workforce. In many ways, with greater access to education, workers are better positioned than ever to contribute to their communities. We just need to ensure that our policies, businesses, and institutions at the national, state, and metropolitan levels provide the opportunities needed for people to succeed.

Notes

[1] "Highest Educational Attainment Levels Since 1940," United States Census Bureau, accessed September 13, 2018, https://www.census.gov/library/visualizations/2017/comm/cb17-51_educational_attainment.html. "Table 2. Educational Attainment of the Population 25 Years and Over, by Selected Characteristics: 2016," accessed September 13, 2018, https://www.census.gov/data/tables/2016/demo/education-attainment/cps-detailed-tables.html.

[2] "Table S1501, Educational Attainment, 2016 American Community Survey 1-Year Estimates," United States Census Bureau, accessed September 13, 2018, https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_16_1YR_S1501&prodType=table.

[3] "Unemployment rates and earnings by educational attainment, 2017," United States Department of Labor, Bureau of Labor Statistics, accessed September 13, 2018, https://www.bls.gov/emp/chart-unemployment-earnings-education.htm.

[4] "The Labor Market for Recent College Graduates," The Federal Reserve Bank of New York, accessed September 13, 2018, https://www.newyorkfed.org/research/college-labor-market/index.html.

[5] For more information on the Occupational Employment Survey metropolitan data, see the Bureau of Labor Statistics' "May 2017 Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates," available at https://www.bls.gov/oes/current/oessrcma.htm.

[6] For more information on Census Bureau metropolitan sizes, see "Classification of Metropolitan Areas," available at https://www2.census.gov/geo/pdfs/reference/GARM/Ch13GARM.pdf.

[7] "Table S2301, Employment Status, 2016 American Community Survey 1-Year Estimates," United States Census Bureau, accessed September 13, 2018, https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_16_1YR_S2301&prodType=table.

[8] "Advancing Career Pathways," US Department of Education, Office of Career, Technical, and Adult Education, accessed September 14, 2018, https://cte.ed.gov/initiatives/advancing-career-pathways/. And "Advancing Career Pathways Systems," US Department of Labor, https://cte.ed.gov/initiatives/advancing-career-pathways.

[9] There are several different social enterprises, including SkillSmart, based in Germantown, MD, and Opportunity@Work of Washington, DC, marketing these kinds of solutions to both businesses and organizations that serve people with employment barriers.

[10] "Table A-1. Annual Geographic Mobility Rates, by Type of Movement: 1948-2017," US Census Bureau CPS Historical Migration/Geographic Mobility Tables, accessed September 14, 2018, https://www2.census.gov/programs-surveys/demo/tables/geographic-mobility/time-series/historic/tab-a-1.xls.

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