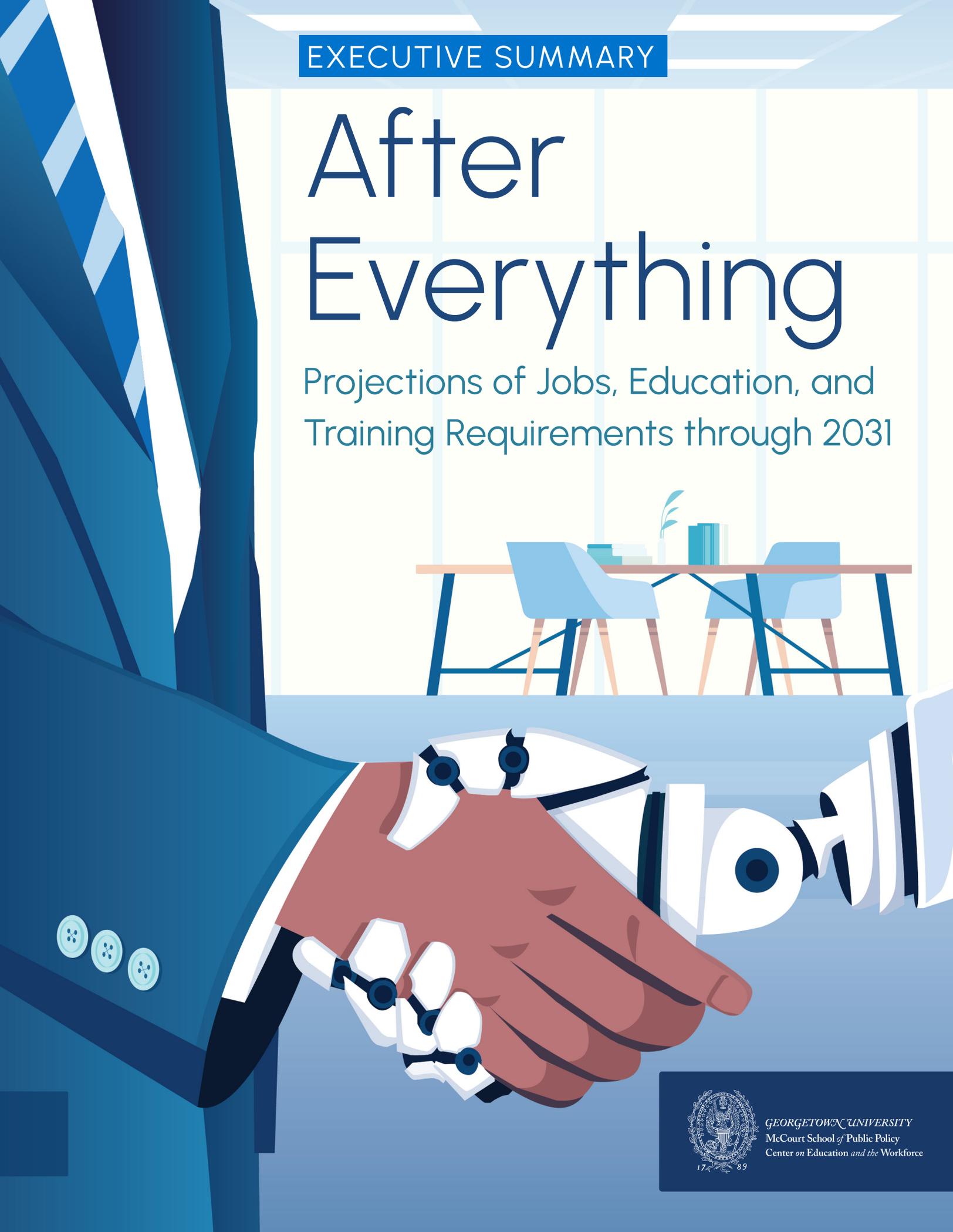


After Everything

Projections of Jobs, Education, and
Training Requirements through 2031





About the Projections Report

The Georgetown University Center on Education and the Workforce's (CEW) job projections through 2031 include an executive summary, a national report, a state-by-state analysis, a technical appendix, and a webpage of data visualizations.

National Report

This report includes a national overview of job projections and their educational requirements across industries, occupational clusters, and detailed occupational groups.

State Report

This report provides a state-by-state analysis of education demand and compares job outlooks for individual states to national estimates.

Technical Appendix

The technical report is a detailed explanation of CEW's methodological approach.

Visit cew.georgetown.edu/Projections2031 to access these reports and interact with the data.

EXECUTIVE SUMMARY

After Everything

Projections of Jobs, Education, and
Training Requirements through 2031



GEORGETOWN UNIVERSITY
McCourt School of Public Policy
Center on Education and the Workforce

Recessions and the Changing Workforce

The staggering highs and lows of the recent US economy and their effect on the labor force has been deeply unsettling. The US has come through the COVID-19 recession, the deepest economic downturn since the Great Depression, followed by the quickest recovery ever. In the last two years, the nation has seen the highest inflation in 40 years, accompanied by the lowest unemployment rate in 50 years. This comes against the backdrop of an economy that has been transforming for almost four decades from an industrial to a service economy, with all the pain and upheaval that accompanies such a shift. Our economy faces new uncertainties, from the need for more advanced education and training to questions about the number of jobs that technology will eliminate.

But one trend in the workforce has remained unaltered throughout this historic change: the increasing need for workers to have greater levels of education in order to succeed in the modern economy. That trend will continue. In 2021, about 68 percent of all jobs required at least some postsecondary education. By 2031, we estimate that 72 percent of jobs will require postsecondary education or training. In fact, 42 percent of all jobs will require at least a bachelor's degree.

The US economy is bifurcated between a large but sluggish blue-collar and skilled-trades economy and a smaller but faster-growing managerial and professional economy. This is leading to a widening economic divide between those who have postsecondary education and those who do not. Postsecondary education or training has become the threshold requirement for access to the managerial and professional economy and the middle-class status and earnings that flow from those jobs during both good and bad economic times. Postsecondary education is no longer just the preferred pathway to middle-class jobs — it is, increasingly, the only pathway. People without postsecondary education and training often end up working in the blue-collar and skilled-trades economy, but even many of those jobs are requiring workers with at least some education or training beyond high school.

For years, there have been predictions that technology will make some jobs obsolete, but, for the most part, that has not happened. In 1983, the US economy supported 100 million jobs, and by 2021, the number of jobs had grown to 155 million, despite the precipitous drop in 2020 during the COVID-19 recession.¹ The best evidence that technology will continue to create more jobs than it destroys is the fact that the number of jobs has continued to grow throughout the technological revolution.

Some futurists predict automation will cause significant job losses — up to half of all jobs — within 10 to 30 years.² However, our research shows that automation primarily will eliminate specific tasks within jobs rather than wipe out entire jobs. We see no evidence that most jobs will die out. Instead, we believe that the nature of jobs will change while the number of jobs continues to grow — at least until the end of our projection period in 2031. Claims of rampant job losses beyond that date are highly speculative.

The projections of education demand outlined in this report rest on a combination of historical data and growth forecasts. Given the size of the stimulus package and the positive momentum in the economy before the COVID-19 pandemic, it was not surprising that the pandemic's economic impact was relatively temporary. It took more than two years, but the economy recovered the 22 million jobs that were lost in the COVID-19 recession. Thankfully, it did not mimic the jobless recovery that followed the Great Recession of 2007.³

The recessions during the past two decades eliminated some jobs but created others. Our previous employment projections — for the periods 2008–2018 and 2010–2020 — were close to actual employment figures, varying between 4 percent and 5 percent from the actual outcomes of job growth. We are confident that when people now starting high school enter the labor market, they will find a labor force similar to the one we are projecting for 2031.

Overall, automation has had a significant impact on jobs in some sectors, but many good jobs still exist. For example, the number of jobs for machinists in the manufacturing sector continues to grow, even though the number of machinist jobs as a percentage of all jobs in the entire economy declines. Another example is retail sales jobs. Competition from the massive web-based retailer Amazon has forced big-box retailers to close some of their stores, and to beef up their online presence as a means of survival. Nevertheless, the number of sales jobs continues to grow, although technology is prompting changes in the tasks associated with those jobs.

1 US Bureau of Labor Statistics, various years.

2 Thomas Frey, “2 Billion Jobs to Disappear by 2030,” *Futurist Speaker*, February 3, 2012.

3 The gross domestic product (GDP) started growing 18 months after the Great Recession began, but job growth didn't resume until 21 months later. National Bureau of Economic Research, “US Business Cycle Expansions and Contractions,” September 20, 2010.

Technology primarily replaces tasks in jobs, not entire occupations.

There is a common misconception that computers and robots are approaching the ability to do almost everything, but in fact, their abilities are still confined to specific tasks that they are programmed to perform. While some job loss due to technology is inevitable, history shows that entire occupations will not vanish suddenly, especially within a decade.

Furthermore, claims from some theorists that bad jobs are replacing good jobs are almost entirely untrue. We find growth in good jobs will coincide with growing demand for more educated workers for those jobs.⁴

It is very difficult to show whether automation affects jobs in a positive or negative way because some jobs continue to grow while others are negatively affected. Jobs that combine repetitive physical and low-level cognitive tasks — such as those performed by farmworkers, property claims examiners, and production workers — are most likely to be automated. The jobs least likely to be automated combine several high-level cognitive tasks, such as senior executive jobs in large businesses. Blue-collar jobs that require a combination of fine motor skills and independence, such as jobs in construction, also are less likely to be automated.

The threat of automation is very real, but its overall impact on jobs remains uncertain. Current estimates of the number of jobs at high risk of automation range from 9 percent to 47 percent of total jobs.⁵ These estimates represent total job losses that are not offset by any new occupations or jobs that could arise from the shift from a manufacturing economy to an information economy. Newer research suggests that the highest estimates for job loss due to automation overstate the overall impact because the authors often equated any possible technological replacement of tasks within jobs to the loss of that entire job.⁶

We estimate that, on average, 28 percent of all tasks within current jobs will be automated by 2031. But that does not mean that 28 percent of current jobs will be eliminated. Many crosscurrents will determine how automation affects the workforce. Automation alone is more likely to displace some workers than to replace all of them. Some tasks that a worker does will be automated, so jobs may shift to take on new tasks. For example, a new machine could replace some workers and leave a smaller number of workers working alongside it. College-educated workers are less likely to be replaced by automation because employers are more willing to offer retraining opportunities to them than to high school-educated workers.⁷

4 Carnevale et al., *The Future of Good Jobs*, forthcoming.

5 Frey and Osborne, “*The Future of Employment*,” 2013; Arntz et al., “*The Risk of Automation for Jobs in OECD Countries*,” 2016.

6 Arntz et al., “*The Risk of Automation for Jobs in OECD Countries*,” 2016.

7 Eck, “*Job-Related Education and Training*,” 1993.

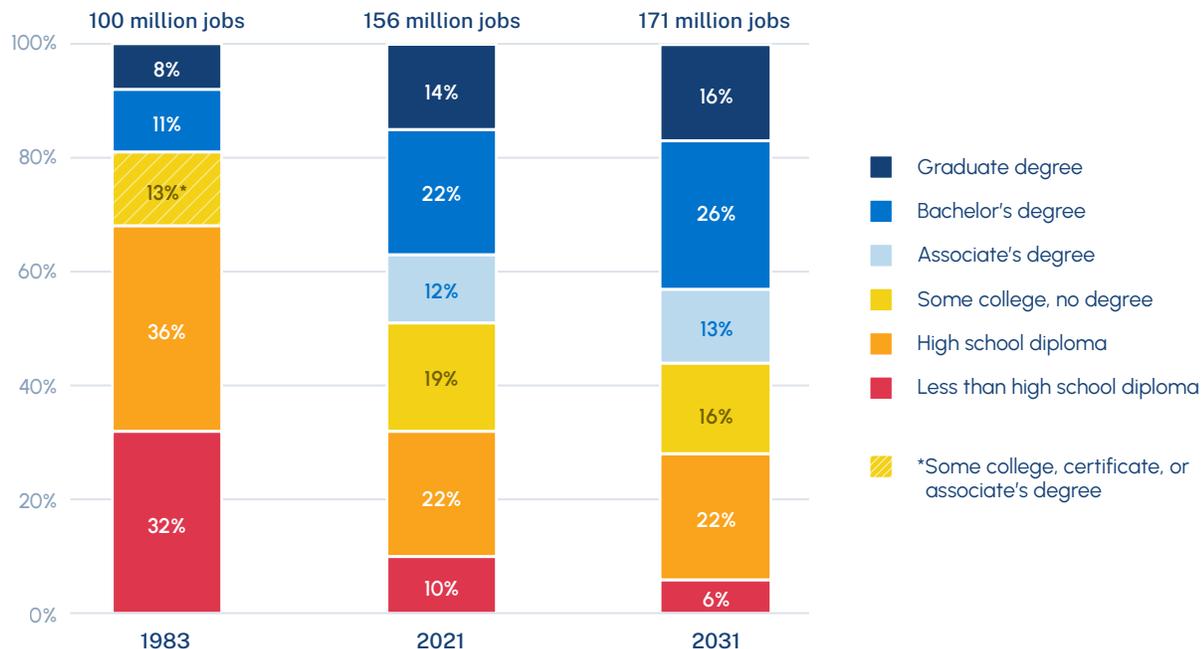
About 72 percent of jobs will require postsecondary education and training in 2031.

The workforce is rapidly upskilling. By 2031, 72 percent of all jobs will require workers to have at least some postsecondary credential or training beyond high school.

- ◇ 28 percent of jobs will require workers with a high school diploma or less;
- ◇ 29 percent of jobs will require some college or an associate's degree; and
- ◇ 42 percent of jobs will require a bachelor's degree or higher.

The demand for postsecondary education and training has increased over the last three decades (Figure 1). In 1983, when only 32 percent of prime-age workers had any postsecondary education, 32 million of the 100 million jobs in the workforce required at least

FIGURE 1. Forty-two percent of jobs in 2031 will require at least a bachelor's degree, while only 28 percent will go to workers with a high school diploma or less.



Source: Georgetown University Center on Education and the Workforce forecast using data from the US Census Bureau and Bureau of Labor Statistics, Current Population Survey (CPS); US Census Bureau, American Community Survey (ACS); US Bureau of Labor Statistics; IHS Markit; Lightcast; and US Census Bureau and Bureau of Labor Statistics, Current Population Survey (CPS), 1983.

*Note: Before 1992, the education variable in the Current Population Survey was identified as years of schooling. We are therefore unable to differentiate between "some college or certificate" and "associate's degree" in those years.

Columns may not sum to 100 percent due to rounding.

some college education. By 2021, the number of overall jobs had increased to 155 million, and 101 million of these jobs (68 percent) required postsecondary education and training.

- ◇ The share of middle-skills workers (those with an associate's degree, certificate, test-based certification, or some college but no credential) has more than doubled from 13 percent of the workforce in 1983 to 31 percent of the workforce in 2021.
- ◇ The share of workers with a bachelor's degree has doubled, from 11 percent in 1983 to 22 percent in 2021.
- ◇ The share of workers with a graduate degree has increased at a slightly slower pace, from 8 percent in 1983 to 14 percent in 2021.

Since the early 1980s, the American economy has transitioned from one with strong job prospects for workers with less than a high school diploma to one that relies heavily on workers with postsecondary education or training. During this period, the share of jobs held by workers with less than a high school diploma plunged from roughly one-third to less than 10 percent. The growth in demand for postsecondary education and training depends on two major trends. First, the fastest-growing industries — such as computer and data-processing services — require workers with disproportionately higher education levels. Second, over time, the vast majority of occupations have been steadily requiring more education and/or training.

The US economy will have about 171 million jobs in 2031 (Table 1). In terms of the educational level required, these jobs will be divided into the following categories:

- ◇ 10.9 million jobs (6 percent of the total) will be for workers with less than a high school diploma.
- ◇ 38.2 million jobs (22 percent) will be for workers with no more than a high school diploma.
- ◇ 27.9 million jobs (16 percent) will be for workers who have some college education but no degree.
- ◇ 22.3 million jobs (13 percent) will be for workers with an associate's degree.
- ◇ 43.6 million jobs (26 percent) will be for workers with a bachelor's degree.
- ◇ 27.6 million jobs (16 percent) will be for workers with a graduate degree.

TABLE 1. Of the nearly 171 million jobs in 2031, fewer than 50 million, or 28 percent, will go to workers with a high school diploma or less.

Occupational clusters in 2031, by educational level (in thousands of jobs)							
	Less than high school	High school graduates	Some college	Associate's degree	Bachelor's degree	Graduate degree	Total
Blue-collar	5,240	15,479	7,686	5,432	3,745	879	38,461
Sales and office support	1,192	8,128	7,732	5,360	10,713	2,949	36,074
Food and personal services	3,895	9,182	5,383	3,409	3,633	947	26,449
Managerial and professional office	251	1,607	2,117	1,824	9,493	6,703	21,996
Healthcare professional and technical	43	670	1,029	1,469	3,578	4,001	10,788
STEM and social sciences	18	246	524	771	4,950	4,212	10,720
Education	20	257	490	542	3,748	5,560	10,618
Healthcare support	214	2,339	2,481	3,030	1,232	310	9,605
Community services and arts	29	274	514	434	2,540	2,000	5,791
TOTAL	10,902	38,182	27,954	22,271	43,632	27,561	170,502
	6%	22%	16%	13%	26%	16%	100%

Source: Georgetown University Center on Education and the Workforce forecast using data from the US Census Bureau and Bureau of Labor Statistics, Current Population Survey (CPS); US Census Bureau, American Community Survey (ACS); US Bureau of Labor Statistics; IHS Markit LLC; and Lightcast.

Note: The data in this table represent the stock of jobs. Job stock includes jobs of people who are permanently employed and not seeking to leave their positions as well as new and replacement job opportunities.

Totals across occupations and percentages may not sum due to rounding.

Between 2021 and 2031, there will be 18.5 million job openings per year on average. Some 12.5 million of these annualized openings will require at least some college education (Table 2). By educational attainment, there will be:⁸

- ◇ 2.4 million annual job openings, or 13 percent of the total, for workers with a graduate degree.
- ◇ 4.3 million annual job openings, or 23 percent of the total, for workers with a bachelor’s degree;
- ◇ 2.5 million annual job openings, or 13 percent of the total, for workers with an associate’s degree;
- ◇ 3.3 million annual job openings, or 18 percent of the total, for workers with at least some college but no degree;
- ◇ 4.7 million annual job openings, or 25 percent of the total, for workers with a high school diploma; and
- ◇ 1.3 million annual job openings, or 7 percent of the total, for workers with less than a high school diploma.

TABLE 2. Between 2021 and 2031, the US economy will create 18.5 million annualized job openings, with 12.5 million of these positions requiring workers with postsecondary education and training.

Occupational clusters by educational level (in thousands of annualized job openings Nov 5)							
	Less than high school	High school graduates	Some college	Associate’s degree	Bachelor’s degree	Graduate degree	Total
Blue-collar	592	1,717	847	595	405	88	4,244
Sales and office support	130	884	834	571	1,164	318	3,901
Food and personal services	538	1,557	909	562	593	162	4,322
Managerial and professional office	22	140	184	160	842	562	1,910
Healthcare professional and technical	2	20	59	97	206	236	621

8 The following do not sum to 100 percent because of rounding.

Occupational clusters by educational level (in thousands of annualized job openings Nov 5)							
	Less than high school	High school graduates	Some college	Associate's degree	Bachelor's degree	Graduate degree	Total
Education	2	23	43	48	329	488	933
STEM and social sciences	1	18	41	56	378	327	821
Healthcare support	24	262	278	340	138	35	1,076
Community services and arts	3	30	56	48	278	232	647
TOTAL	1,315	4,651	3,252	2,476	4,334	2,448	18,475
	7%	25%	18%	13%	23%	13%	

Source: Georgetown University Center on Education and the Workforce forecast using data from the US Census Bureau and Bureau of Labor Statistics, Current Population Survey; US Census Bureau, American Community Survey; US Bureau of Labor Statistics; IHS Markit LLC; and Lightcast.

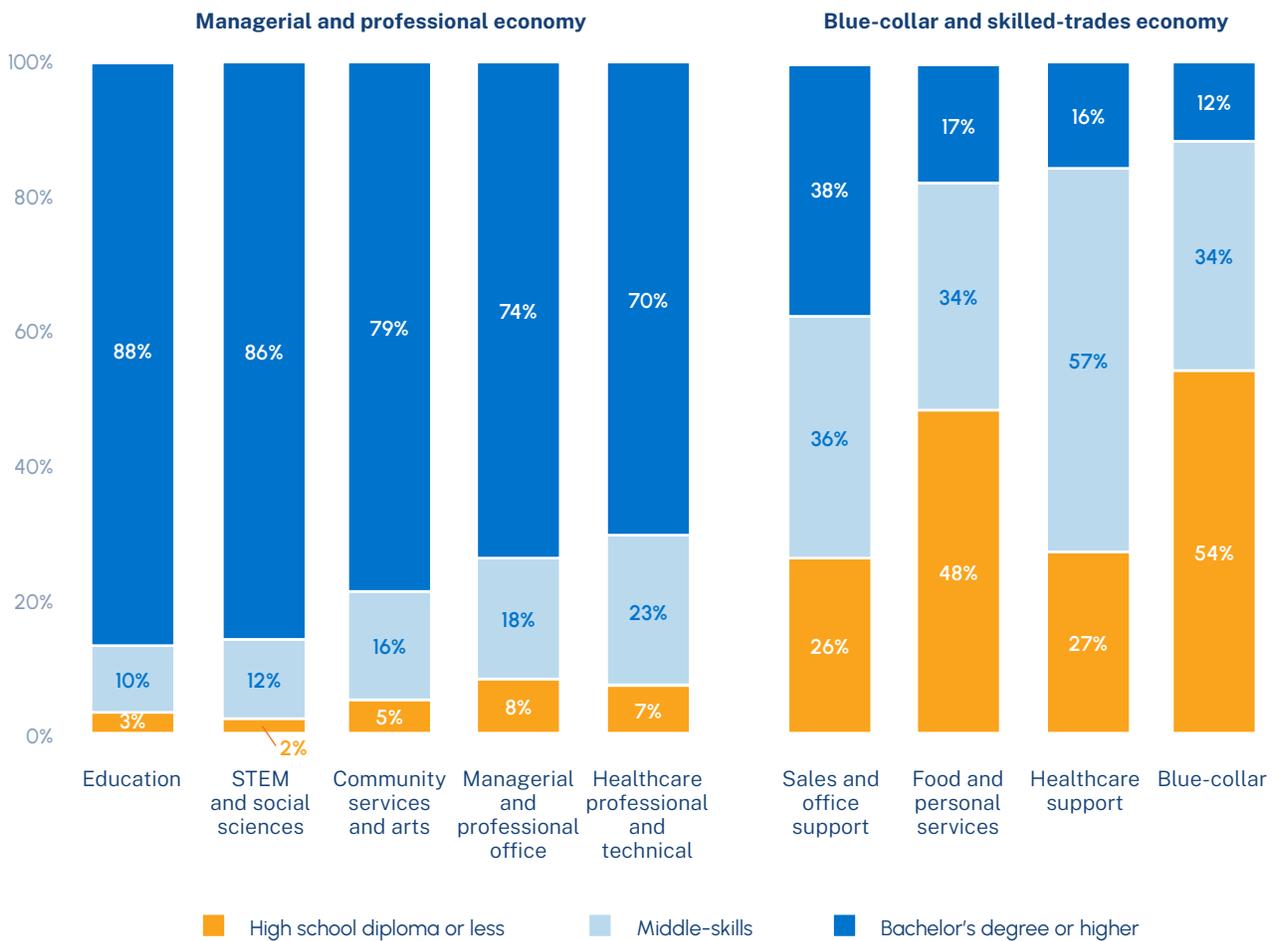
Note: Totals across occupations and percentages may not sum due to rounding.

This report introduces a new methodology for projecting jobs. In previous reports, the Georgetown University Center on Education and the Workforce broke down projections into two categories: new and replacement jobs. However, we became increasingly convinced that those projections overrepresented “churn” in jobs, the turnover of employees in existing jobs, rather than the creation of new jobs. The Bureau of Labor Statistics in the US Department of Labor changed its methods for forecasting jobs beginning in 2016 to de-emphasize job churn and more closely represent new jobs. Readers will note that the projections for job growth in this report (18.5 million annual job openings) are significantly different than previous reports. For example, in 2013, we forecast 55 million total job openings in the economy through 2020.⁹ While we recognize that there is an opportunity for confusion, the new methodology results in significantly improved projections of job replacements and therefore is a better measure of employment demand, in our judgment. (For more details on the new methodology, please see Appendix I in the full report.)

Job Projections through 2031 by Occupation

Increasingly, the labor force is being divided into two economies by occupation: the managerial and professional economy, in which most workers have postsecondary education, and the blue-collar and skilled-trades economy, in which just a little more than half of workers have college educations. That stark divide is reflected in the educational attainment required of workers in the occupations that make up these two groups (Figure 2).

FIGURE 2. Occupations in the managerial and professional sector of the economy will have the greatest proportion of postsecondary-educated workers in 2031.



Source: Georgetown University Center on Education and the Workforce forecast using data from the US Census Bureau and Bureau of Labor Statistics, Current Population Survey (CPS); US Census Bureau, American Community Survey (ACS); US Bureau of Labor Statistics; IHS Markit LLC; and Lightcast.
 Note: Columns may not sum to 100 percent due to rounding.

During the past several decades, about 70 percent of the increase in requirements for postsecondary education and training stemmed from upgrades in skills demanded in occupational categories that previously did not require higher education. The foreman or manufacturing supervisor occupation of the 1960s, for example, has since evolved into a new occupation that requires postsecondary education, such as the modern manufacturing engineer.

A significant but smaller share of the increase (about 30 percent) has resulted from the development of entirely new occupations or the expansion of occupations that already required high levels of postsecondary education and training. Many services provided by a doctor with a medical degree in the 1950s can now be performed by workers, such as nurse practitioners or physician assistants, who are trained to perform specific medical tasks that require college-level skills. Meanwhile, jobs once held by middle managers have transformed into myriad occupations which are classified as business services, all requiring significant postsecondary preparation.

The Managerial and Professional Economy

The managerial and professional economy consists of five occupational clusters: science, technology, engineering, and mathematics (STEM) and social sciences; education; healthcare professional and technical; community services and arts; and managerial and professional office. Between 2021 and 2031, across these occupational clusters, 95 percent of the job openings will require at least some postsecondary education. Taken together, these five occupational clusters will represent 35 percent of total employment in 2031 and about 47 percent of all jobs for workers with a postsecondary education.

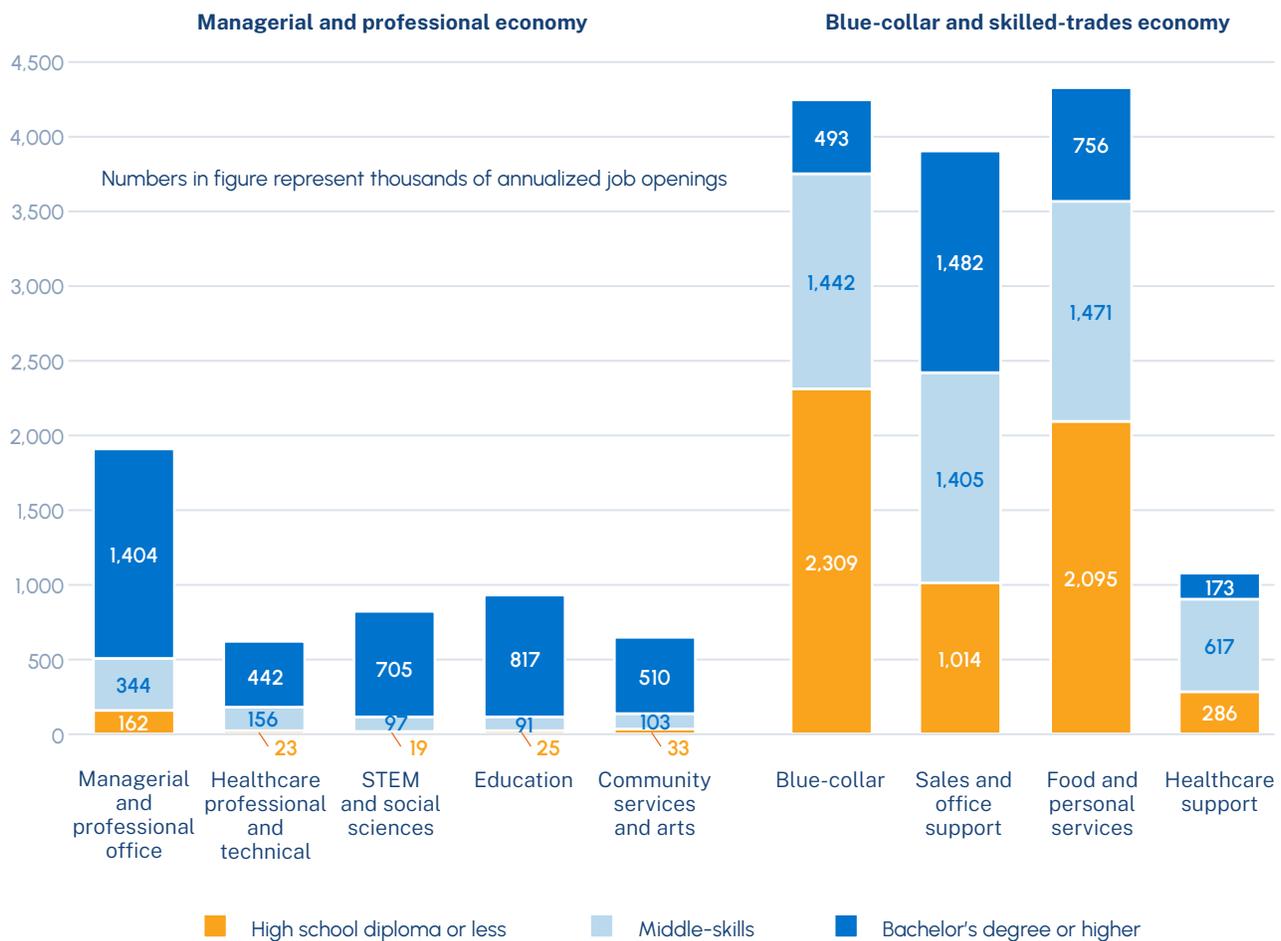
By 2031, jobs in the managerial and professional economy will be held overwhelmingly by highly educated workers. These jobs will employ only 3 percent of the nation's workers with less than a high school diploma, 7 percent of workers with only a high school diploma, and 17 percent of workers with some college education but no degree. However, 23 percent of the nation's workers with an associate's degree will find jobs in the managerial and professional economy, as will 56 percent of workers with a bachelor's degree and 82 percent of workers with a graduate degree.

These five major clusters had a combined 53.1 million jobs in 2021, a number that will climb to 59.9 million in 2031. Together, these occupations accounted for about 34 percent of all jobs in 2021 and will increase slightly to 35 percent of all jobs in 2031.

The Blue-Collar and Skilled-Trades Economy

The blue-collar and skilled-trades economy consists of the following four occupational clusters: sales and office support, healthcare support, food and personal services, and blue collar. Between 2021 and 2031, across these individual occupational clusters, 42 percent of the job openings will be available to workers with a high school diploma or less. Taken together, these four occupational clusters will represent 65 percent of total employment in 2031 and 53 percent of all jobs for workers with a postsecondary education.

FIGURE 3. Between 2021 and 2031, there will be job openings for workers with postsecondary educations in every occupational cluster, but almost all job opportunities for workers with a high school education or less will be in the blue-collar and skilled-trades economy.



Source: Georgetown University Center on Education and the Workforce forecast using data from the US Census Bureau and Bureau of Labor Statistics, Current Population Survey (CPS); US Census Bureau, American Community Survey (ACS); US Bureau of Labor Statistics; IHS Markit LLC; and Lightcast.

The number of jobs in this category is growing quickly because many of them provide services needed by the new knowledge economy, which relies more on workers' intellectual capabilities than on physical activities to produce goods and services.

By 2031, workers with lower levels of educational attainment will dominate the jobs in the blue-collar and skilled-trades economy even further. Jobs in this sector will employ 97 percent of the nation's workers with less than a high school diploma, 93 percent of workers with a high school diploma, 83 percent of workers who have some college education but no degree, and 77 percent of workers with an associate's degree. Workers who have at least a four-year degree are less represented: the blue-collar and skilled-trades economy will employ 44 percent of workers with a bachelor's degree and 18 percent of workers with a graduate degree.

One of the largest occupational clusters in this category — sales and office support — has a significant number of positions that require postsecondary education or training. The combination of overall size and the increased requirement of postsecondary credentials landed sales and office support first among occupational clusters in the share of workers with a postsecondary education (Figure 3).

Healthcare support, while a small occupational cluster now, will grow quickly. The jobs in this cluster include the lower-skilled occupations in the healthcare industry. The total number of jobs is about 81 percent the size of the larger and more highly-educated healthcare professional and technical occupational cluster. Healthcare support is the fastest-growing occupational cluster, but because it is still relatively small, it will rank fourth in total number of jobs added.

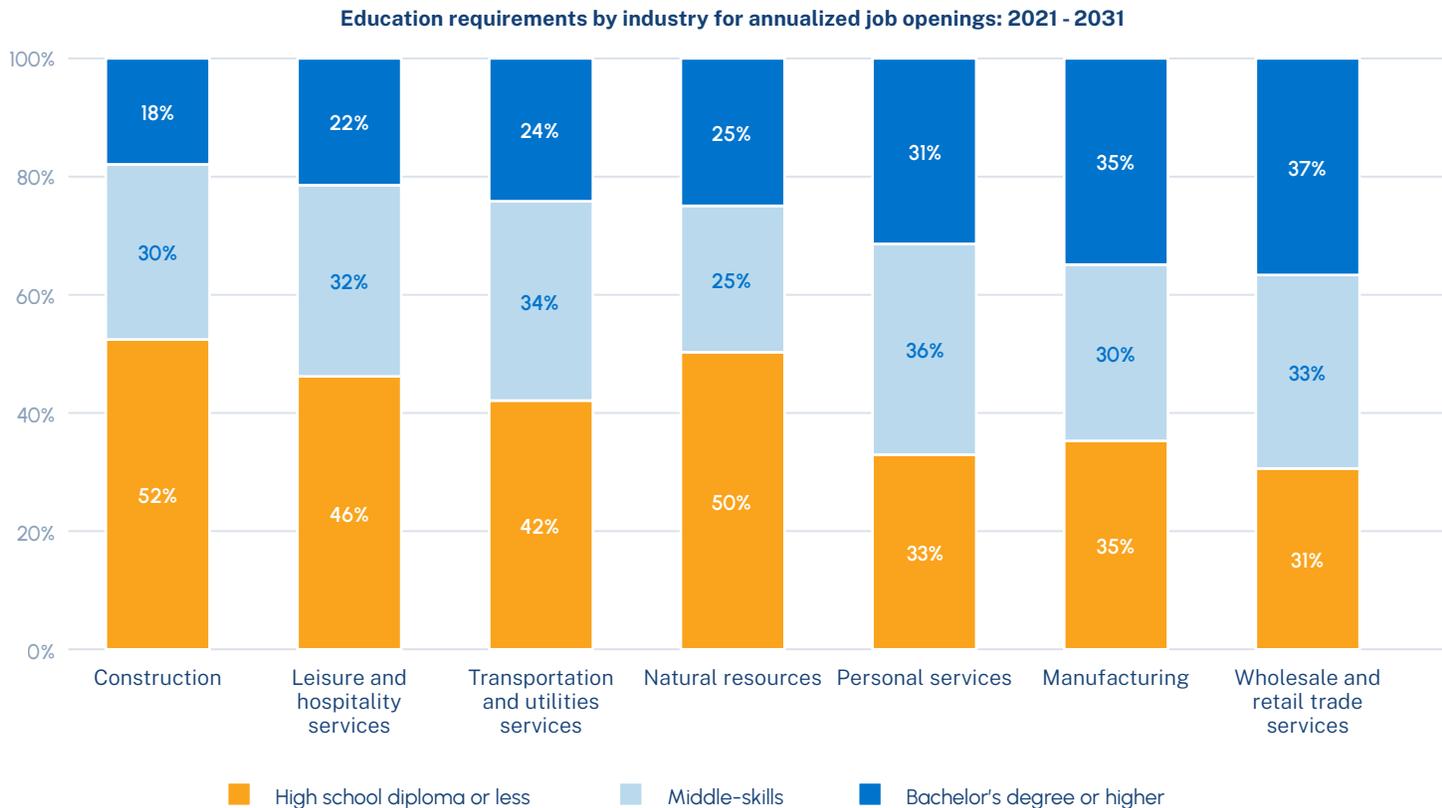
The significant number of bachelor's degree holders both in the managerial and professional economy and the blue-collar and skilled-trades economy indicates the versatility of a four-year college degree. Bachelor's degree holders are strong candidates for employment in both sectors, while all other education levels tilt heavily toward employment in either the blue-collar and skilled-trades economy (high school and below) or the managerial and professional economy (some college and above). This is important because the blue-collar and skilled-trades economy is still very large, accounting for 65 percent of all jobs, while the managerial and professional economy accounts for 35 percent of jobs.

Job Projections through 2031 by Industry

Between 2021 and 2031, of the 13 broad industry categories defined in this report, the three industries that will expand employment the fastest are healthcare services (20 percent), private education services (17 percent), and professional and business services (13 percent).

While some occupations are tied closely to a specific industry, most occupations are distributed widely across industries. For example, the healthcare industry includes occupations such as doctors or nurses, but it also includes accountants, lawyers, installation and repair workers, and transportation workers. No one set of occupations completely

FIGURE 4. In four out of 13 industries, more than 50 percent of annualized job openings will be for workers with a bachelor’s degree or higher between 2021 and 2031.



Source: Georgetown University Center on Education and the Workforce forecast using data from the US Census Bureau and Bureau of Labor Statistics, Current Population Survey (CPS); US Census Bureau, American Community Survey (ACS); US Bureau of Labor Statistics; IHS Markit LLC; and Lightcast.

*Middle skills are jobs that require education beyond high school, including associate’s degrees, postsecondary vocational certificates and test-based industry certifications, and some college but no degree.

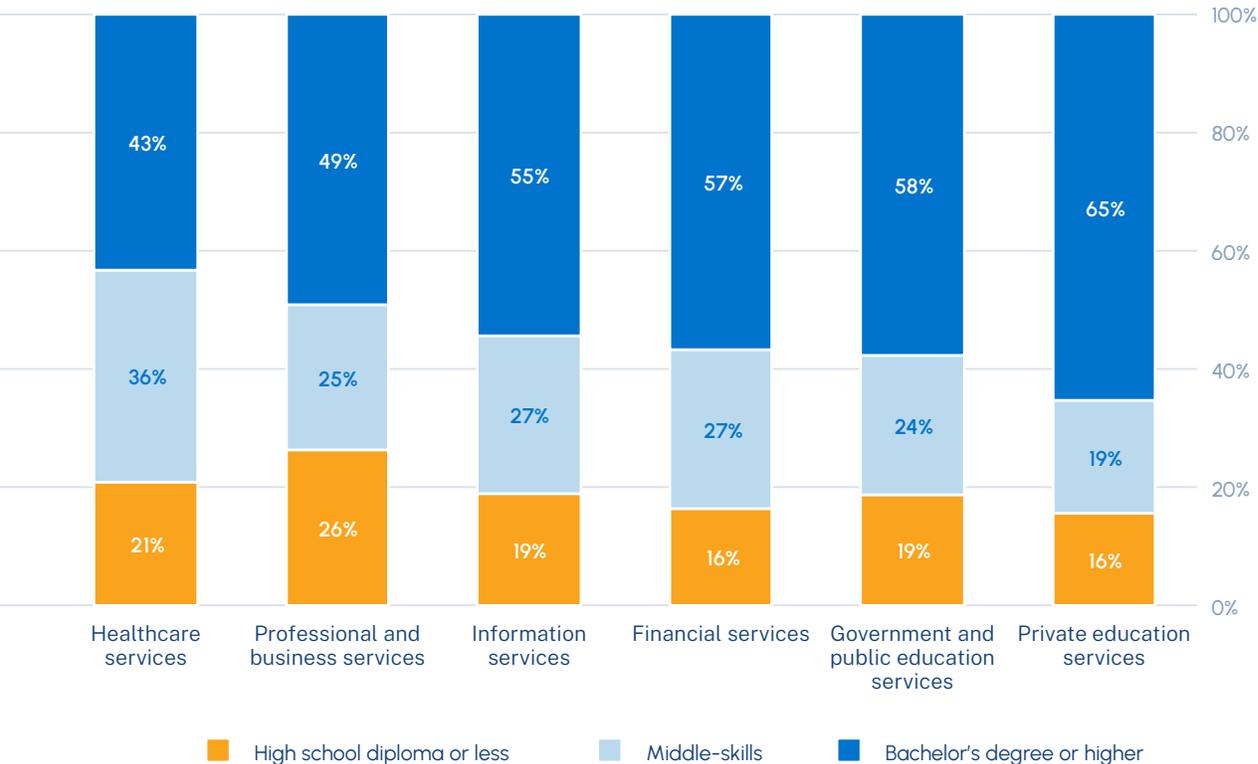
Note: Columns may not sum to 100 percent due to rounding.

dominates any single industry. As a result, even industries that rely heavily on workers with one level of educational attainment still have jobs for workers with a different skill set.

The highest educational concentrations for job openings from 2021 to 2031 in each educational category is projected as follows (Figure 4):

- ◇ **High school or less jobs:** Construction will have the greatest share of job openings that require no postsecondary training (52 percent).
- ◇ **Middle-skills:** Healthcare services and personal services will each have the greatest share of middle-skills job openings (36 percent).
- ◇ **Bachelor’s degree or higher:** Private education services will have the greatest share of job openings for workers with a bachelor’s degree or higher (65 percent).

Education requirements by industry for annualized job openings: 2021 - 2031



Source: Georgetown University Center on Education and the Workforce forecast using data from the US Census Bureau and Bureau of Labor Statistics, Current Population Survey (CPS); US Census Bureau, American Community Survey (ACS); US Bureau of Labor Statistics; IHS Markit LLC; and Lightcast.

*Middle skills are jobs that require education beyond high school, including associate’s degrees, postsecondary vocational certificates and test-based industry certifications, and some college but no degree.

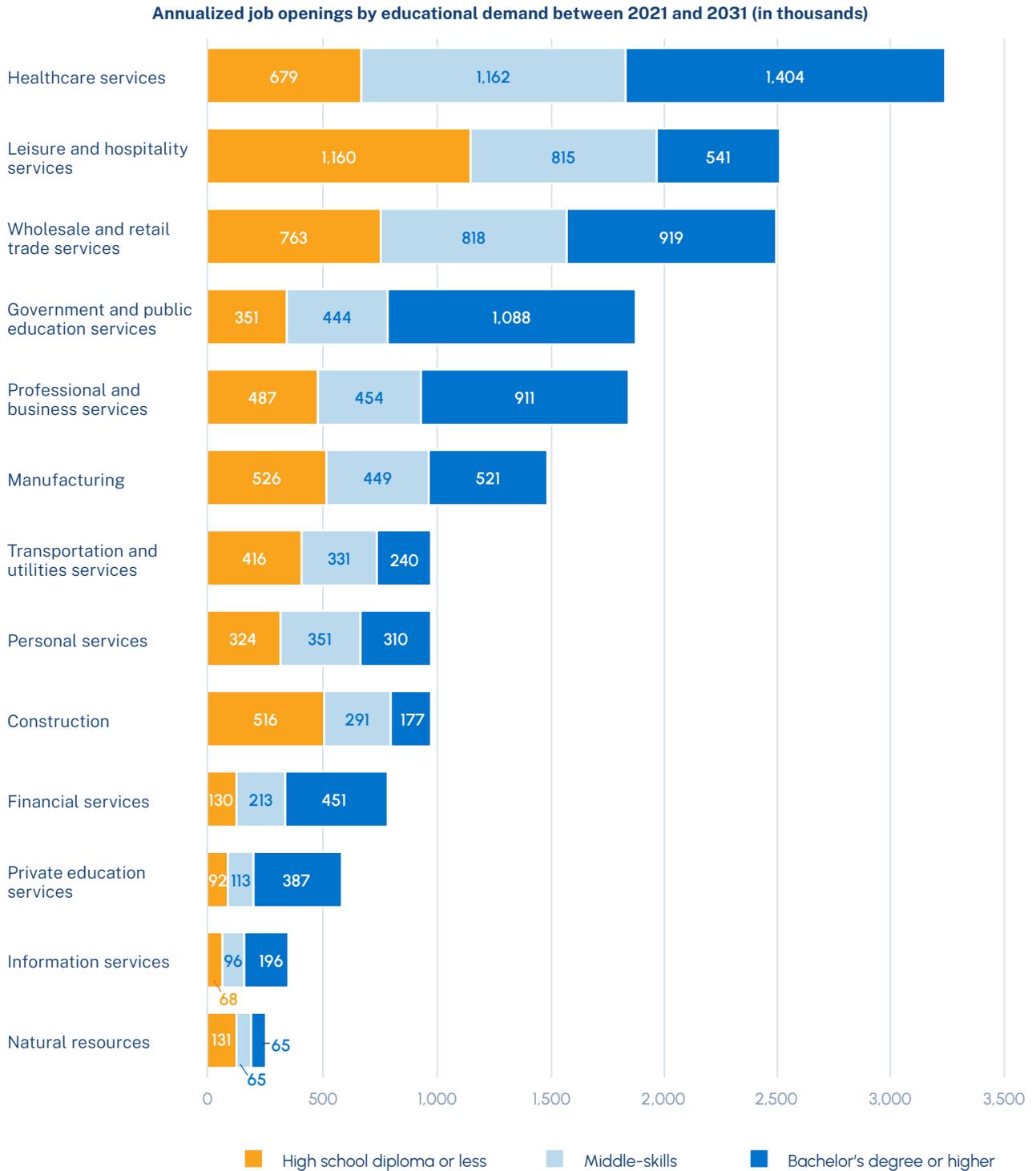
Note: Columns may not sum to 100 percent due to rounding.

The greatest number of job openings by educational attainment level from 2021 to 2031 are projected as follows:

- ◇ **High school or less:** Leisure and hospitality services will have the most annual job openings for workers with no postsecondary education (1.2 million).
- ◇ **Middle-skills:** Healthcare services will have the most annual job openings for middle-skills workers (1.2 million).
- ◇ **Bachelor's degree or higher:** Healthcare services will have the most annual job openings for workers with a bachelor's degree or higher (1.4 million).

The relationship between an industry's size and its workers' educational levels can be complex. For example, simply because of its size, the wholesale and retail trade services sector provides a lot of job openings at many education levels (Figure 5). It will have the second-most openings (763,000) for workers with a high school diploma or less, the second-most for middle-skills workers (818,000), and the third-most for workers with a bachelor's degree or higher (919,000). Another seeming contradiction is healthcare services, which has large concentrations of highly educated workers as well as the third-most job openings (679,000) for workers with a high school diploma or less.

FIGURE 5. Even in industries that mostly require workers to have a bachelor’s degree or higher, there are still job openings for high school-educated workers.



Source: Georgetown University Center on Education and the Workforce forecast using data from the US Census Bureau and Bureau of Labor Statistics, Current Population Survey (CPS); US Census Bureau, American Community Survey (ACS); US Bureau of Labor Statistics; IHS Markit LLC; and Lightcast.

Conclusion

As the US labor force continues to grow, it is requiring ever-higher levels of educational attainment. In 2021, there were 155 million jobs in the US, of which 68 percent required at least some postsecondary education. By 2031, there will be almost 171 million jobs in the US economy, and, employers collectively will require college degrees or other postsecondary preparation from 72 percent of their new and replacement hires.

For the last 50 years, industries have been using increasingly sophisticated technology to expand their output with fewer workers. There has been an astounding growth in productivity in this new phase of the technological revolution, fueled by artificial intelligence and robotics. The adoption of technology necessitates continuous upskilling of workers. That is because unless the workforce upskills, there will be a growing mismatch between workers' qualifications and the jobs created over the next decade.

In some cases, the technology that is increasing worker productivity is replacing some workers altogether. However, it is difficult to predict the number of jobs that will be lost due to automation. Estimates of the share of jobs that will be lost to automation range from 9 percent to 47 percent, not counting new occupations and jobs created by the shift from a manufacturing economy to an information economy. Our calculations indicate that on average, 28 percent of all tasks in current jobs — not 28 percent of jobs — will be at risk of automation by 2031.

The likelihood of technology replacing jobs is higher in sectors that have already incorporated technology into their production processes — including the manufacturing, wholesale and retail trade services, construction, and financial services industries. Job losses are inevitable, so the existing safety net for displaced workers must be strengthened.

Technology adoption improves overall productivity and creates net overall growth. Even though some sectors will experience disproportionate job losses, jobs will be created elsewhere in the economy.

The fastest-growing occupation and industry sectors are those that have workers with the most postsecondary education and training. The economy will continue to create jobs for workers with a high school diploma or less. But these jobs, in many cases, do not offer high enough earnings for the workers who hold them to adequately maintain a home and raise a family. The labor force will be increasingly divided between those who have postsecondary education and those who don't. But it is becoming ever clearer that postsecondary education or training is the only path for most workers to a middle-class lifestyle.



After Everything: Projections of Jobs, Education, and Training Requirements through 2031 can be accessed online at: cew.georgetown.edu/Projections2031.



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