



# Dismissed by Degrees

How degree inflation is undermining U.S. competitiveness and hurting America's middle class



## **Acknowledgements**

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**Disclosures**

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# EXECUTIVE SUMMARY

Degree inflation—the rising demand for a four-year college degree for jobs that previously did not require one—is a substantive and widespread phenomenon that is making the U.S. labor market more inefficient. Postings for many jobs traditionally viewed as middle-skills jobs (those that require employees with more than a high school diploma but less than a college degree) in the United States now stipulate a college degree as a minimum education requirement, while only a third of the adult population possesses this credential.

This phenomenon hampers companies from finding the talent they need to grow and prosper and hinders Americans from accessing jobs that provide the basis for a decent standard of living. In an analysis of more than 26 million job postings, we found that the degree gap (the discrepancy between the demand for a college degree in job postings and the employees who are currently in that job who have a college degree) is significant. For example, in 2015, 67% of production supervisor job postings asked for a college degree, while only 16% of employed production supervisors had one. Our analysis indicates that more than 6 million jobs are currently at risk of degree inflation.

A survey of 600 business and human resource leaders shows that degree inflation is driven by two key factors: the fast-changing nature of many middle-skills jobs and employers' misperceptions of the economics of investing in quality talent at the non-graduate level. As more middle-skills jobs require mastery of one or more technologies, employers find it difficult to hire non-graduate talent with the requisite skills. While candidates often lack hard skills, such as proficiency in Microsoft Excel, they are equally likely to suffer from soft-skills deficits, such as poor written and verbal communications.

Over time, employers defaulted to using college degrees as a proxy for a candidate's range and depth of skills. That caused degree inflation to spread to more and more middle-skills jobs. That has had negative repercussions on aspiring workers, as well as experienced workers seeking a new position but who lack a degree. More important, our survey indicates that most employers incur substantial, often hidden, costs by inflating degree requirements, while enjoying few of the benefits they were seeking.

The results of our survey were consistent across many industries—employers pay more, often significantly more, for college graduates to do jobs also filled by non-degree holders without getting any material improvement in productivity. While a majority of employers pay between 11% and 30% more for college graduates, many employers also report that non-graduates with experience perform nearly or equally well on critical dimensions like time to reach full productivity, time to promotion, level of productivity, or amount of oversight required.

Moreover, employers incur significant indirect costs. Seeking college graduates makes many middle-skills jobs harder to fill, and once hired, college graduates demonstrate higher turnover rates and lower engagement levels. A systemic view of the total economics of hiring college graduates shows that companies should be extraordinarily cautious before raising credential requirements for middle-skill positions and should not gravitate toward college graduates based only on a vague notion that it might improve the quality of their workforce.

Degree inflation hurts the average American's ability to enter and stay in the workforce. Many middle-skills jobs synonymous with middle-class lifestyles and upward mobility—such as supervisors, support specialists, sales representatives, inspectors and testers, clerks, and secretaries and administrative assistants—are now considered hard-to-fill jobs because employers prefer candidates who are college graduates. Even workers who have relevant experience are excluded from consideration by automated tools that weed



out candidates who do not have a college degree. In our survey, two-thirds of companies acknowledge that stipulating a four-year degree excludes qualified candidates from consideration.

Degree inflation particularly hurts populations with college graduation rates lower than the national average, such as Blacks and Hispanics, age 25 years and older. In addition, degree inflation raises the barriers to entry for Opportunity Youth, the nearly six million young adults who are currently not in school or in jobs. Companies that insist only on a college degree deny themselves the untapped potential of eager to work young adults as well as experienced, older workers as pools of affordable talent.

Key recommendations:

- Companies can create a competitive advantage by investing in talent management pipelines that match jobs to workers with the right competencies and experience. Instead of seeking college graduates who command a premium for doing a middle-skills job, such an approach allows companies to access middle-skills workers who are often just as productive, who demonstrate higher levels of engagement and who have a lower propensity to switch employers.
  - When faced with a critical middle-skills gap, CEOs can encourage solutions that explore tapping into local and non-traditional talent pools, rather than investing in labor-displacing capital equipment or in incurring the high indirect costs associated with outsourcing or offshoring business activities.
  - In critical hard-to-fill jobs, CEOs can reverse degree inflation by asking the organization to be more deliberate in its hiring practices for middle-skills jobs. That requires resolving a paradox: in many organizations, while employers recognize that candidates need to be vetted on the basis of their competence, companies rely on proxies like educational attainment to define the applicant pool.
- Instead of relying on a college degree to access hard and soft skills, companies can widen their search to include non-graduates with relevant work experience or consider partnering with local community-based organizations to tap populations like Opportunity Youth. Such partnerships can put young adults on the pathway to a lifetime career or provide new opportunities for experienced, older workers displaced by factors beyond their control.
  - By revisiting specifications for critical middle-skills jobs and identifying the key competencies required to do the job, companies can match them to specific associate's degrees, certificates, or internal training programs that create career pathways for non-degree holders.
  - A strong case for investing in such an effort can be made when companies measure the all-in economics of degree inflation. Companies who do that math realize that often it is cost-effective to hire non-graduates and then provide classroom, web-based, or online training that is customized to the company's needs.
  - Companies, educators and policymakers need to work together to bring about a systemic shift in the way middle-skills workers are being prepared to enter the workforce. That requires partnering with high schools, vocational colleges, community colleges and workforce training programs to influence the curriculum and design programs that impart the hard and soft skills required in increasingly complex middle-skills jobs.

# WHAT IS DEGREE INFLATION?

In the 20th century, the United States prospered as a modern industrial economy, in large part due to the productivity of its workforce. Companies flourished as skilled and trained American workers produced goods and services efficiently. The high productivity of workers allowed middle-class Americans to enjoy growing wages and rising standards of living throughout the course of several decades. The U.S. economy's competitive advantage of a skilled labor force was a vital contribution to the success of American businesses in the post-World War II period.

Today, U.S. companies can no longer take for granted their ability to access skilled and productive workers, and workers cannot depend on being able to find or retain jobs. This misalignment between the skills companies want and the skills U.S. workers currently have hurts both businesses and working-class Americans.

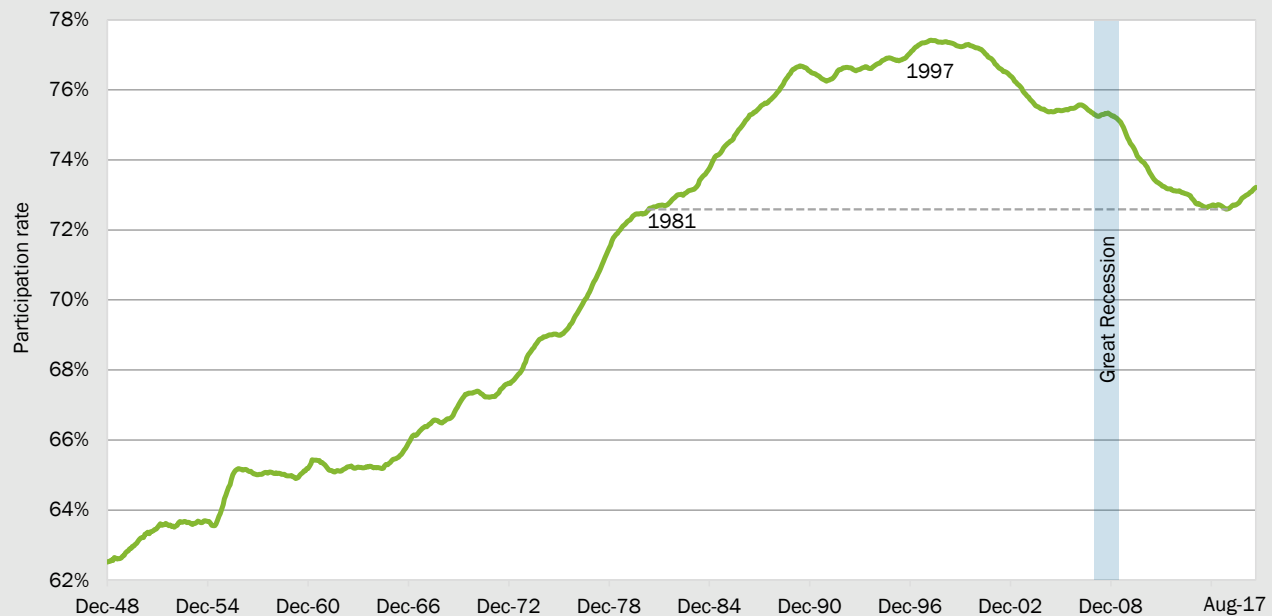
For example, since February 2010, small, midsize and large businesses have added jobs at a steady pace, averaging almost 200,000 jobs a month,<sup>1</sup> but they struggle to find workplace-ready workers to fill positions that are critical to grow and prosper. In 2012, in a global survey of Harvard Business School (HBS) alumni, business leaders listed

“better access to skilled labor” as one of the top three reasons to locate a business activity in the United States. Ironically, they also ranked “better access to skilled labor” as one of the top three reasons not to locate a business in the United States.<sup>2</sup> In *Bridge the Gap: Rebuilding America's Middle Skills*, HBS U.S. Competitiveness Project and Accenture surveys in 2013 and 2014 identified that this paucity of talent especially affected middle-skills jobs—those that require more than a high school diploma but less than a four-year college degree. Companies reported that many middle-skills jobs that were critical to their ability to compete were hard to fill.<sup>3</sup> Manpower Group's 2016–2017 talent shortage survey confirmed that many of the hardest-to-fill jobs in the U.S. are those held by middle-skills workers such as: trade workers, including electricians, plumbers and carpenters; drivers of trucks, heavy machinery, delivery vehicles and construction vehicles; and sales representatives for all industries, especially retail.<sup>4</sup>

Today's labor market provides further proof that the jobs market is working inefficiently. Despite record-high open job postings—more than 6.1 million at the end of July 2017<sup>5</sup>—millions of Americans cannot find gainful

FIGURE 1: THE U.S. LABOR FORCE PARTICIPATION RATE HAS STEADILY DECLINED SINCE 1997

Population aged 16–64 involved in the workforce (rolling 12-month average), 1948–2017.



Source: Bureau of Labor Statistics.

Note: Shaded area indicates the recession of December 2007 to June 2009 as defined by the National Bureau of Economic Research. Civilian labor force over civilian non-institutional population (not seasonally adjusted) ages 16-64. 1997 marks the peak of the single-month labor force participation rate, not the 12-month rolling average.

employment. Currently, the United States is home to 6.8 million unemployed Americans and another 6.7 million underemployed Americans who are seeking full-time work.<sup>6</sup> Labor force participation in the United States declined steeply after peaking in 1997 (see Figure 1). By 2016, nearly one in five Americans in the prime working age of 25–54 years old was not participating in the U.S. workforce.<sup>7</sup> Even though labor force participation has improved in recent months, as of July 2017, 2.2 million young adults, ages 16–24, are unemployed,<sup>8</sup> and another 3.6 million Americans, aged 25 or older, with some college experience, an associate’s degree, or a lower level of education, are unemployed.<sup>9</sup> Too many jobs are taking too long to fill, while too many aspiring workers remain on the sidelines.

What is at the core of this mismatch between the supply of and demand for middle-skills talent? When Burning Glass Technologies analyzed millions of U.S. job postings, it found an anomaly. In occupation after occupation, employers were posting jobs with a requirement for a four-year college degree, when previously those jobs had not required such a credential. Burning Glass reported: “Employers are seeking a bachelor’s degree for jobs that formerly required less education, even when the actual skills required haven’t changed or when this makes the position harder to fill.”<sup>10</sup>

This phenomenon intrigued us. U.S. employers are ratcheting up their credential requirements for middle-

skills jobs at a time when the length of time to fill positions is at historically high levels, and the unemployment rate for college-degree holders is at a historic low.<sup>11</sup> Employers appear to be closing off their access to the two-thirds of the U.S. workforce that does not have a four-year college degree.<sup>12</sup> The rising demand for college-degree holders is a symptom of serious, systemic problems affecting the middle-skills jobs market in America.

We, thus, set out to understand “degree inflation,” the practice of seeking a candidate with a four-year college degree for a position currently held by someone with a high school diploma or an associate’s degree (see sidebar on Page 5 and sidebar on Page 6). Just how prevalent is this phenomenon? What is truly behind the demand for a college degree? What role did the Great Recession play in degree inflation? Did opportunism drive the growth in employer requirements for middle-skills jobs, or was there an underlying shift in the nature of middle-skills jobs? What alternatives exist for training and equipping middle-skills workers for those jobs beyond hiring graduates of four-year college programs? Are employers aware of the costs and benefits of those alternatives? Which companies have developed talent-management pipelines for middle-skills workers, and what are their best practices?

## THE DEGREE INFLATION RESEARCH PARTNERSHIP

In 2014, Accenture, Burning Glass and Harvard Business School’s U.S. Competitiveness Project applied the competitiveness lens to the market for middle-skills jobs—those that require more education and training than a high school diploma but less than a four-year college degree.<sup>13</sup> Findings from the research published in *Bridge the Gap: Rebuilding America’s Middle Skills* showed that the mismatch in the labor market for middle-skills jobs was hurting millions of middle-class Americans, as well as hampering U.S. companies from growing and competing in the global market place.

Burning Glass’ report *Moving the Goalposts: How Demand for a Bachelor’s Degree is Reshaping the Workforce* sheds further light on how employers were increasingly demanding a four-year degree, even when the jobs in question historically had not required one.

Accenture, Grads of Life and Harvard Business School’s (HBS) *Managing the Future of Work* project thus came together to research the specific role of degree inflation in the apparent growth in the middle-skills gap. All three organizations share a commitment to ensuring maximum labor participation from across the demographic spectrum, particularly those populations who are often unable to share in the nation’s prosperity.

Grads of Life is a national talent pipeline development initiative for employers that catalyzes market demand

for Opportunity Youth—young adults ages 16–24 who are out of school and out of work—by transforming employer perceptions and hiring practices. Grads of Life provides employers with the tools and resources they need to develop their own Opportunity Youth talent pipelines.

For Accenture, the research aligns with the company’s long-standing commitment to skills and employment research; its talent development for clients around the world; and its “Skills to Succeed” corporate citizenship initiative. Through Skills to Succeed, Accenture aims to equip three million people globally by the end of fiscal year 2020 with the skills to get a job or build a business.

The research effort is guided by an overarching definition, developed by HBS faculty members under the U.S. Competitiveness Project, of what defines competitiveness: “The United States is a competitive location to the extent that companies operating in the U.S. are able to compete successfully in the global economy while supporting high and rising living standards for average Americans.”<sup>14</sup>

Accenture, Grads of Life and HBS’ *Managing the Future of Work* Project thank Burning Glass Technologies for sharing its labor-market data and for facilitating the analysis of the middle-skills labor market in terms of trends in specific jobs, experience, qualifications and skills sought by employers.

## WHY WE CHOSE THE TERM “DEGREE INFLATION”

In recent years, the term “middle-skills jobs” has settled on referring to jobs that require workers with more than a high school diploma but less than a four-year college degree.<sup>15</sup> There is noticeably less consensus on describing the phenomenon of employers requesting a bachelor’s degree for jobs that traditionally didn’t require one. Despite being a recurring topic in academia and the media in recent years, no consistent set of terms has been established. In an effort to help clarify our use of the term “degree inflation” and prevent any confusion for other researchers, we provide here a short glossary of the various terms that are in use:

**Upskilling** is used in academic literature to describe employers’ tendencies to increase skills requirements in response to labor market shifts. During the Great Recession, when job openings were scarce but the supply of unemployed college graduates was abundant, employers could hire college graduates at lower wages. Researchers found that job postings requiring a bachelor’s degree or higher rose by more than 10% from 2007 to 2010.<sup>16</sup> We find that “upskilling” is also used by employers and the media to describe employers’ investment in upgrading skills in workers through education, training, and development.<sup>17</sup>

**Credential inflation** refers to the decline in the value of academic credentials over time as more people obtain them.<sup>18</sup> Researchers posit that, as the concentration of educated labor increases, the minimum credential requirements for jobs concurrently and irreversibly rises.<sup>19</sup> There are different forms of credential inflation occurring in the dynamic U.S. labor market.

**Upcredentialing** is used by Burning Glass Technologies to describe employers’ tendencies to seek college graduates to fill jobs that traditionally didn’t require a bachelor’s degree.<sup>20</sup> Burning Glass measures the extent to which the practice has affected certain occupations by examining the “*credentials gap*”: the difference between the percentage of job postings that require a bachelor’s degree and the percentage of current workers who hold a degree within that occupation.

We could have used “upcredentialing” in this research, too. However, we found that the issue of upcredentialing extends beyond just bachelor’s degrees. Other credentials, such as years of experience<sup>21</sup> and occupational licensing,<sup>22</sup> can act as barriers to entry, limiting the pool of applicants to only those that can bear the cost of entry into the profession. Each of those aspects of upcredentialing deserves its own research and analysis on how it contributes to America’s middle-skills gap—and each will have its own unique solution.

**Degree inflation** was thus our specific area of focus within the wider domain of credential inflation. In this report, we chose to focus our research on rising requirements for the four-year degree. We homed in on this trend, as we believe it has the most restrictive effect on access to opportunity for middle-skilled Americans. As a consequence, tackling this issue will have a significant impact on closing the middle-skills gap in the United States. We refer to this phenomenon as the four-year college “*degree inflation*” and its measurement as the four-year college “*degree gap*.”



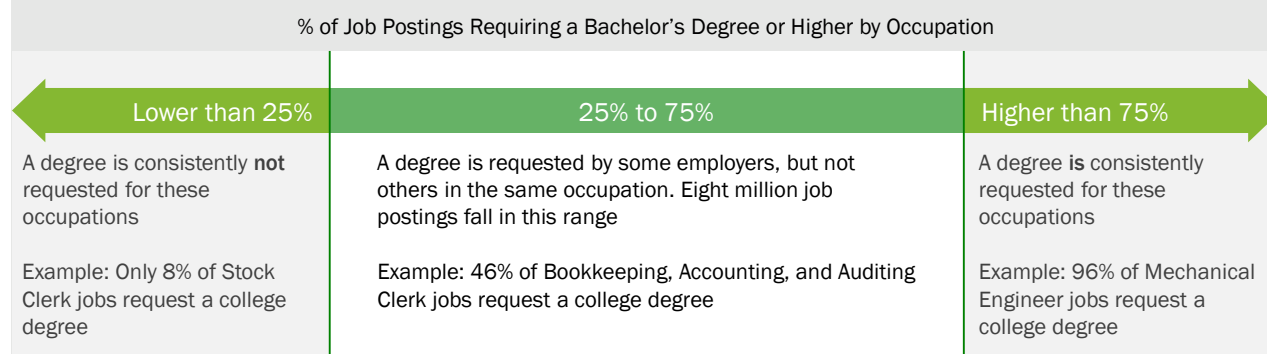
# THE PREVALENCE OF DEGREE INFLATION— AND ITS SIGNIFICANCE FOR EMPLOYERS

The “jobless recovery” after the Great Recession was popularly characterized by the meme of college graduates working as baristas. On the supply side, college-educated Americans in search of a livelihood were willing to move down the occupational ladder.<sup>23</sup> Supply then created its own demand: café and coffee shop employers gladly filled open positions with candidates whose qualifications exceeded those of previous applicants.<sup>24</sup>

It would be convenient to blame the genesis of degree inflation on simple opportunism in the face of excess supply, but that would be wrong. As we explored the phenomenon

across industries and across occupations, we found that a significant number of employers were raising the educational requirements for applicants for traditional middle-skills occupations. Through an analysis of 26 million job postings parsed by Burning Glass in 2015, we identified roughly eight million jobs where employers expressed a wide variance in the educational preferences in their job postings. In those jobs, some employers requested a bachelor’s degree as a minimum requirement for applicants, while other employers had no such requirement for jobs with nearly identical job descriptions<sup>25</sup> (see Figure 2).

FIGURE 2: EMPLOYERS EXPRESS WIDE VARIANCE IN THEIR EDUCATIONAL PREFERENCES IN JOB POSTINGS

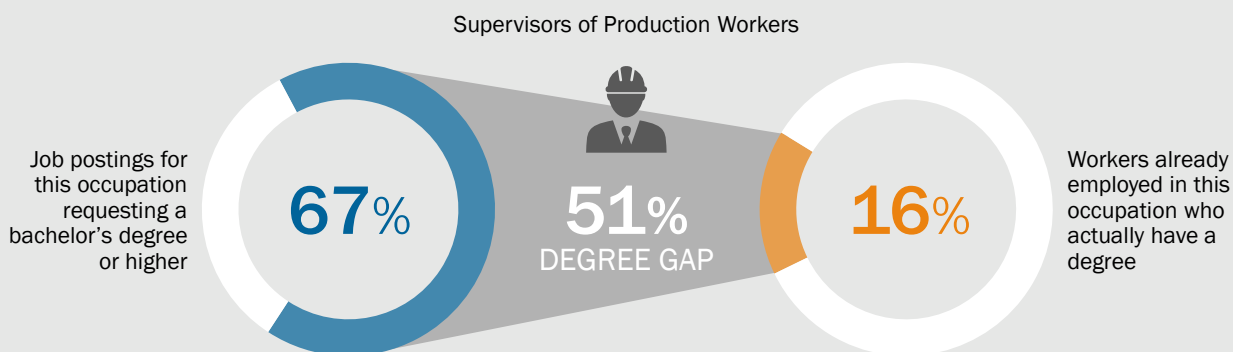


Source: Methodology from *Moving the Goalposts*. Figures from Burning Glass Labor Insight 2015 Summary Table.

Note: Based on Burning Glass’ credentials gap method. Starting with occupations for which a bachelor’s degree is preferred or required for 25% to 75% of postings, we then calculate the difference between % of postings requesting a college degree vs. % of employees who have one (for each Standard Occupational Classification – SOC). See Appendices 1, 2 and 3.

FIGURE 3: DEGREE GAP: THE DIFFERENCE BETWEEN THE PERCENT OF JOB POSTINGS REQUIRING A COLLEGE DEGREE AND THE PERCENT OF INCUMBENT WORKERS WITH A COLLEGE DEGREE

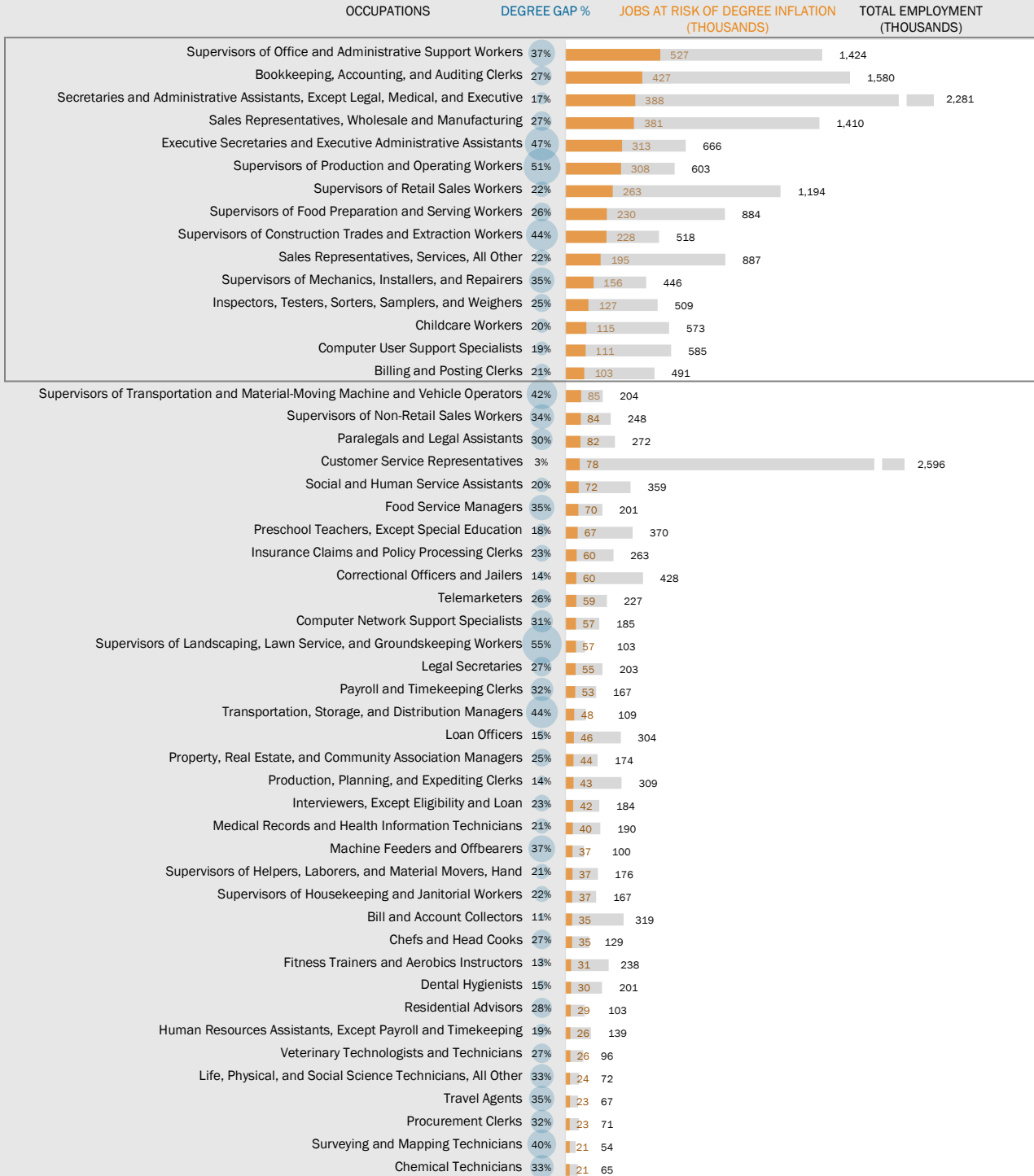
In the Supervisor of Production Workers occupation, 67% of employers request a college degree in postings, but only 16% of the current workforce has a college degree. This amounts to a 51% degree gap.



Source: Burning Glass Labor Insight 2015 Summary Table. See also Appendices 1, 2 and 3.

FIGURE 4: GROWING PREFERENCE FOR A COLLEGE DEGREE COULD IMPACT 6.2 MILLION MIDDLE-SKILLS JOBS

The number of jobs at risk of degree inflation is a function of the size of the degree gap and number of people employed in that occupation. Some occupations with high degree gaps are not major drivers of employment. This chart displays the top 50 out of 171 occupations, with jobs at risk of degree inflation.



Source: Burning Glass Technologies 2015 Summary Table. See Appendices 1, 2 and 3.

Note: Occupations with "All other" in the title represent occupations with a wide range of characteristics which do not fit into one of the detailed O\*NET-SOC occupations.

That served as the crux of our analysis. (For more details on our methodology for labor market analysis, see Appendices 1, 2 and 3.) By exploring that universe of eight million jobs, occupation by occupation, we next began to dissect the degree gap: the discrepancy between the educational credentials employers seek from current applicants and the educational attainments of incumbent workers. Using the barista example, it would mean café and coffee shop owners were advertising for graduates at a rate that exceeded the existing proportion of college-educated baristas. Fortunately, that illustration is apocryphal: Despite the media attention “baristas-with-a-bachelor’s” get, in reality according to Burning Glass data, only 4% of employers in 2010 asked for a four-year college degree for counter attendants and cafeteria, food concession, and café and coffee shop occupations. Unfortunately, for many critical middle-skills occupations, the degree gap is much wider. For example, 67% of production supervisor job postings asked for a college degree, while only 16% of employed production supervisors actually had a degree—a degree gap of 51% (see Figure 3 on Page 7).<sup>26</sup>

To understand the extent and impact of degree inflation, we compared the degree gap with the number of people employed in each of the occupations affected. Our analysis indicates that a large number of occupations are gradually succumbing to degree inflation, as employers seek graduates to fill roles previously held by middle-skills

workers. As many as 6.2 million workers could be affected by degree inflation—meaning their lack of a bachelor’s degree could preclude them from qualifying for the same job with another employer (see Figure 4).

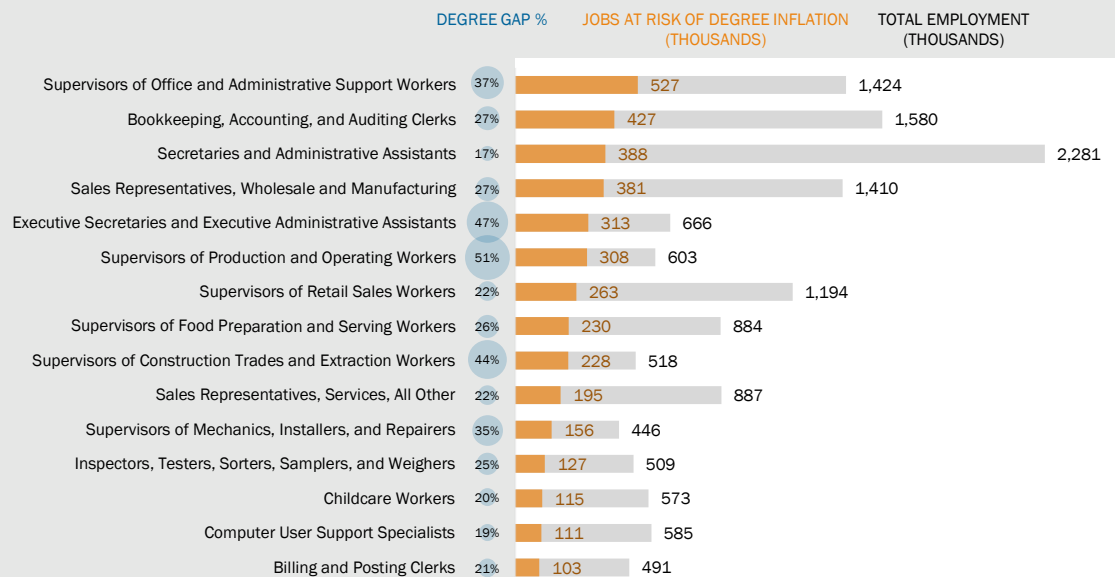
### Feeling the pinch

Many jobs that were traditionally middle-skills jobs now require a college degree. In some occupations (such as computer support specialists) and in some metropolitan areas with a relatively higher share of college graduates, more than 50% of jobs that traditionally required middle skills workers now seek graduates.<sup>27</sup> Our analysis shows that, out of those 6.2 million jobs for which employers are increasingly stipulating a preference for higher academic attainment from applicants than that achieved by incumbent workers, 62%—or 3.9 million—jobs fall within just 15 occupations (see Figure 5).<sup>28</sup> Those occupations constitute ground zero for understanding the impact of degree inflation on the middle-skills gap in the United States.

The impact of this trend extends far beyond that felt by aspiring workers. By engaging in degree inflation, employers restrict their access to a wider pool of talent in several ways. For a start, they disqualify all those who might have the skills—and not just the college degree—to do that job. But that’s not all; employers also preclude developing or accessing potential talent pipelines that could actually

FIGURE 5: JUST 15 OCCUPATIONS ACCOUNT FOR 62% OF MIDDLE-SKILLS JOBS AT RISK OF DEGREE INFLATION

Occupations such as Supervisors of Office and Administrative Workers drive a significant amount of employment. Taking into account the 37% degree gap in this occupation, about 527,000 jobs could be affected by employer preferences for college-educated talent.



Source: Burning Glass Technologies 2015 Summary Table. See Appendices 1, 2 and 3.

increase the population of qualified applicants. At one end of the spectrum, they ignore “Opportunity Youth” who might have the relevant skills but not a college degree. At the other end, employers miss the opportunity to hire older applicants who lack a college degree but bring years of relevant experience to the job. Moreover, by raising the academic bar to a college degree, employers are electing to seek talent in the most fiercely contested segment of the labor market, where wages are higher and wage pressure is growing. In 2016, against median weekly earnings of \$885 for all persons age 25 and older, college graduates earned substantially more (\$1,156 per week) than those with an associate’s degree (\$819) and those with some college but no degree (\$756).<sup>29</sup>

The drift in job postings toward a bachelor’s degree is marked in middle-skills positions that are critical for a business’ success, that pay well, and that offer decent prospects for career advancement. Consider the role of first-line supervisors, which accounts for six of the 15 occupations most affected by degree inflation (see Figure 5 on Page 9), including: supervisors of retail sales workers; supervisors of office workers; and supervisors on

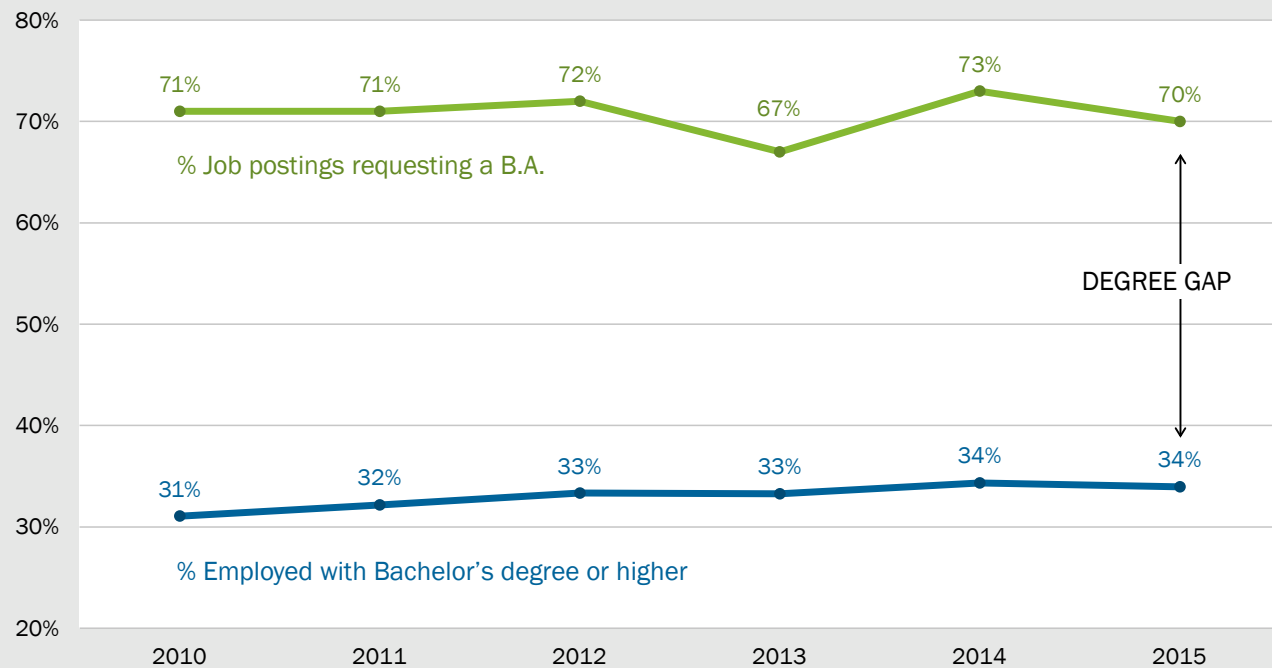
a production shop floor. The jobs offer a career pathway for middle-skills employees, and they pay a decent living wage of approximately \$33,000 to \$66,000 a year.<sup>30</sup>

In 2015, more than 1.4 million people were employed as first-line supervisors of office and administrative support workers. Of those, only about 34% had a bachelor’s degree. However, in 2015, 70% of job postings for this occupation asked for a bachelor’s degree.<sup>31</sup> That level of employer demand has held steady over the years, and it sets higher baseline expectations for education preferences for new applicants to this occupation. On this trajectory, as more and more employers fill these vacant roles with college-educated talent, the college-educated workforce in this occupation will rise from 34% to closer to 70%. Based on current levels of employment in this role, this portends about 527,000 jobs at risk of degree inflation—positions that are filled with middle-skills talent today that will be filled with college-educated talent tomorrow, even though the nature of the job remains the same.<sup>32</sup>

Or from the employer’s perspective, it would shrink the pool of experienced, potential applicants to the 34% of

FIGURE 6: IMBALANCE IN THE JOBS MARKET: SUPPLY AND DEMAND FOR COLLEGE DEGREE HOLDERS

Employers ask applicants to Supervisors of Office Workers positions to have a bachelor’s degree, even though most supervisors currently employed in the occupation don’t have one.



Source: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Employment Statistics; Burning Glass Technologies’ database of online job postings for 2010-2015; both sources accessed via Burning Glass Technologies, “Labor Insight Real-Time Labor Market Information Tool,” February 2, 2017. Also includes data from U.S. Census Bureau, American Community Survey, 2010-2015 1-year estimates; IPUMS-USA, University of Minnesota, www.ipums.org. See Appendix 2.

Notes: First-Line Supervisors of Office workers: 1.4 million employed in 2015. 171,000 total job postings in 2015. SOC: 43-1011.



incumbent workers who have a bachelor’s degree—and preclude access to more than 500,000 experienced first-line supervisors without a degree (see Figure 6).

This phenomenon would make intuitive sense if employers were adding new responsibilities to the role. However, a comparison of job postings for supervisors of office workers reveals that 9 of the 10 skills required are exactly the same in both types of job postings. Job postings that stipulate a college degree and those that do not seek the following: supervisory skills; customer service; Microsoft Excel; accounting; Microsoft Office; budgeting; staff management; scheduling; and office management.<sup>33</sup>

Meanwhile, the advertised salaries for the jobs show that college graduates command a wage premium. Employers that sought a graduate supervisor of office workers offered a mean real-time salary of \$65,200 per year. Employers that did not insist on a college degree paid supervisors of office workers a mean real-time salary of \$51,100 per year.

Other less-visible costs make the decision to inflate the job posting to a college degree still more expensive for employers. For example, in 12 out of the 15 occupations

where the degree gap is largest, it consistently takes more time to fill the position when the job posting includes the requirement for a college degree (see Figure 7). Those extra days—for example, 12 extra days in the case of first-line supervisors of mechanics, installers, and repairers—represent a significant indirect cost due to degree inflation, which is often invisible to many employers.

## Degree inflation by industry

The 15 occupations with the highest degree inflation span virtually every major industry.<sup>34</sup> (For the methodology for industry analysis, see Appendix 2.) For example:

- In manufacturing, more than 800,000 jobs are at risk due to degree inflation. Of those jobs, 43% fall within the “supervisors of production workers” occupation. “Inspectors, testers, sorters, samplers, and weighers” account for another 12% of the jobs.
- In retail, 83 occupations representing more than 650,000 jobs are at risk for degree inflation. About three in five of these jobs are within the “supervisors of retail sales workers” occupation.

FIGURE 7: MIDDLE-SKILLS JOBS TAKE LONGER TO FILL WHEN A FOUR-YEAR COLLEGE DEGREE IS REQUIRED

Requiring a bachelor’s degree can lead to extended hiring periods and higher human capital acquisition costs. For example, it takes 12 days longer to hire Supervisors of Mechanics, Installers and Repairers when a bachelor’s degree is required, relative to when it is not required.

Occupation title (SOC)	Time to fill (days)		
	No B.A. required	B.A. or higher required	Additional days to fill
First-Line Supervisors of Mechanics, Installers and Repairers	36	49	12
Computer User Support Specialists	32	39	7
First-Line Supervisors of Office and Administrative Support Workers	32	37	5
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	39	43	4
Sales Representatives, Services, All Other	39	43	4
Inspectors, Testers, Sorters, Samplers, and Weighers*	35	39	4
Bookkeeping, Accounting, and Auditing Clerks	29	32	3
First-Line Supervisors of Construction Trades and Extraction Workers	42	45	3
Billing and Posting Clerks	29	32	3
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	29	31	2
Executive Secretaries and Executive Administrative Assistants	29	31	2
First-Line Supervisors of Production and Operating Workers	39	41	2

Source: Burning Glass Time-to-Fill Data by Occupation and Industry

Note: Time-to-fill data from Burning Glass Technologies not available for First-Line Supervisors of Retail Sales Workers, First-Line Supervisors of Food Preparation and Serving Workers and Childcare Workers. Three of the 15 occupations with the highest jobs at risk for degree inflation are missing due to idiosyncrasies in job posting patterns. For example, Burning Glass found that postings for Supervisors of Retail Sales Workers tend to be posted continuously by employers. As employers don’t take down the job posting, the time to fill for these positions seems indefinite. This was observed in a number of service jobs where employers are continuously hiring.

\*SOC code assumed to match with Burning Glass Technologies’ database title “Quality inspector/Technician” based on O\*Net definition and reported job titles of sample.

- In the accommodation and food services industry, more than 630,000 jobs are at risk for degree inflation. Half of those jobs fall within the “food service managers” occupation, although 74 other occupations are also affected.
- In the health care and social assistance industry, 621,000 jobs are at risk. The occupation “childcare workers” accounts for 38% of those jobs, and 92 other occupations are similarly affected.
- In construction, 62 occupations representing 342,000 jobs are at risk for degree inflation. Of those, 58% are within the “supervisors of construction workers” occupation.

## HOW DID WE GET HERE?

To measure the contribution of degree inflation to the current gap between the supply and demand for middle-skills talent in the United States, we must go back several decades. Starting in the 1980s, several forces began reshaping work in America. Globalization facilitated the migration of work offshore, while almost simultaneously, automation and technological innovation began transforming scores of occupations in the country.<sup>35</sup>

Automation first began replacing routine jobs—those based on repeatable actions.<sup>36</sup> Robots, machinery, and software allowed for the automation of an increasingly number of routine tasks that were “manual” and “cognitive” in nature. Middle-skills jobs, ranging from office clerks to factory workers and warehouse workers, were particularly affected. Soon, automation began to penetrate non-routine and non-repetitive jobs, demanding higher skills from workers involved in more-complex processes and interfacing with more sophisticated equipment.<sup>37</sup> As routine work became less common, a higher percentage of jobs entailed significant social interaction. Employers increasingly expected middle-skills workers, like IT help desk technicians, salespeople, and nursing aides, to possess a range of soft skills, such as the ability to handle interpersonal interaction and work in team settings, flexibility, and problem-solving.<sup>38</sup> David Deming of the Harvard Graduate School of Education notes that: “Between 1980 and 2012, jobs requiring high levels of social interaction grew by nearly 12 percentage points as a share of the U.S. labor force. Math-intensive but less social jobs—including many science, technology, engineering, and math (STEM) occupations—shrank by 3.3 percentage points over the same period.”<sup>39</sup>

The growing prominence of social skills across occupations raised the value of four-year college degrees in the eyes of employers, as a minimum qualification for jobs that paid well and were a basis for upward mobility.<sup>40</sup> Employers began using the college degree as a proxy

for acquiring social skills in jobs that previously did not require a college degree.<sup>41</sup>

Those forces gathered momentum when the Great Recession hit. Three out of the four jobs lost were held by workers with a high school diploma or less. Between 2010 and 2016, only one job out of 100 new jobs created required a high school diploma or less (see Figure 8). Of the 11.6 million jobs created during this period, three out of four required a bachelor’s degree or higher.

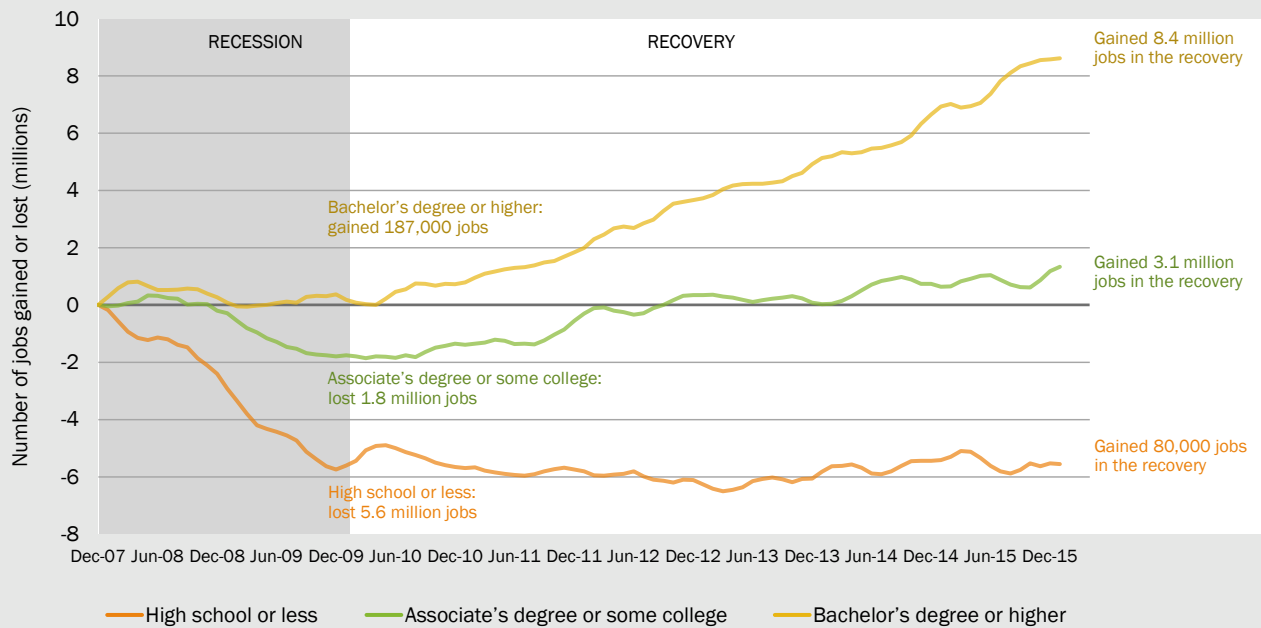
During the Great Recession and the lackluster recovery that followed, workers with higher credentials were willing to apply for positions for which they were overqualified.<sup>42</sup> Employers took the opportunity to raise the education level of the talent they hired.<sup>43</sup> Given the weakness in the labor market, such “over-education” did not put pressure on wages.<sup>44</sup> Employers did not pay a visible price for raising the skills base of their workforce.

One estimate, based on the analysis of 68 million online job postings, shows that as the labor market slackened between 2007 and 2010, the percentage of job postings requiring a bachelor’s degree or higher increased by more than 10 percentage points. Pertinently, when the labor market tightened, the share of job vacancies requiring a bachelor’s degree or more fell, suggesting that a degree was not actually needed to perform the relevant job.<sup>45</sup>

This aspect of degree inflation undermines the prospects of many workers, but it is particularly harmful for young adults in the 16–24 age group who are not in school and out of work. Degree inflation denies these young adults access to the critical first job and erodes the likelihood that they will gain the experience needed to enter and stay in the workforce.

FIGURE 8: LABOR MARKET RECOVERY: JOB CREATION BY LEVEL OF EDUCATIONAL ATTAINMENT

Jobs lost in the Great Recession were held by workers who had a high school diploma or less; jobs gained in the recovery favored those with a bachelor's degree or higher.



Source: Jobs gained and lost by education attainment level, 2007-2016. Georgetown University Center on Education and the Workforce, *America's Divided Recovery: College Haves and Have-Nots*, 2016, p. 2.

# UNDERSTANDING EMPLOYER DEMAND FOR COLLEGE DEGREES

In many occupations, our analysis shows that, whether a job is posted with or without the requirement of a college degree, there is a marked difference in wages paid, although there are few discernible differences in the skills required of applicants. Many employers pay college graduates more than middle-skills workers to do the same job. To understand that paradox, we conducted in-depth interviews with 20 business and human resource leaders from different industries across the country.

We found a range of responses. Several employers acknowledged that a four-year college degree indicated greater office readiness in a candidate. Says J. J. McCormick, Sales Manager at Veredus, a Hays Company: "For many companies, a bachelor's degree signals that the person has put themselves through four years of college, so they have certain life experiences, commitment levels, and organization levels." Other HR leaders expressed frustration that employers were using a four-year college degree as a shortcut or proxy to find the right talent, instead of searching for employees with the right skills. Says Pam Belcher, senior vice president, Human Resources and Talent Management at LifePoint Health: "All industries have gotten lazy around the issue of a college degree. It's just easy to slap on a B.A. requirement on a job posting."

To gather feedback on how a multitude of employers across the nation perceived the phenomenon of degree

inflation, we surveyed 600 business and human resource leaders. These employers held positions such as vice presidents and directors, in a diverse array of industries. The companies ranged in size from 50 to 10,000 employees. All respondents came from companies that had middle-skills jobs. (See Appendix 4 for survey methodology.)

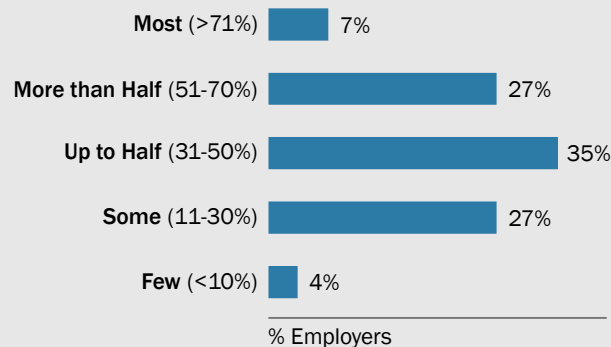
The survey confirmed that middle-skills jobs account for a sizable proportion of U.S. private sector employment, and most employers admitted they were struggling to fill middle-skills roles within their company (see Figure 9). That was especially true in midsize and large companies which are responsible for most of the middle-skills hiring in the country. Given the low unemployment rate of college graduates—just 2.7% in 2016<sup>46</sup>—why would companies choose to make those middle-skills positions even harder to fill by requiring a college degree?

The survey findings show that employers believe they are reacting "logically." In their thinking, *the rising demand for a college-degree requirement is a symptom of the rapid pace of change in the nature of jobs—and a quick-fix solution used by employers to acquire specific skills in the absence of a systemic shift in the way middle-skills workers are being prepared to enter the workforce.* Consider the findings:

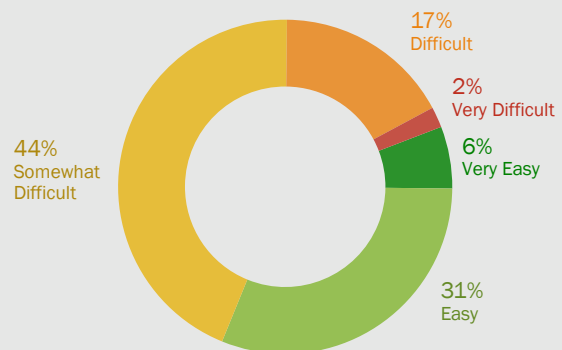
FIGURE 9: A MAJORITY OF EMPLOYERS HIRE MIDDLE-SKILLS WORKERS AND FIND THESE JOBS DIFFICULT TO FILL

A majority of employers classify at least 30% of jobs at their company as middle skills.

### Proportion of Workforce Considered Middle Skills



At the same time, 63% of employers report that middle-skills jobs are difficult to fill in their company.



Source: 2016-2017 Accenture, Grads of Life and HBS Project on Managing the Future of Work, Hiring and Talent Management Survey.



## SUMMARY OF SURVEY FINDINGS

- I. Quest for quality talent pushes employers to use a college degree as a proxy for hard and soft skills
- II. Degree inflation creeps up on companies and shrinks access to viable candidates
- III. Employers burden themselves with hidden costs due to degree inflation
- IV. Employers perceive that a college degree does not guarantee higher productivity in middle skills jobs
- V. In hard-to-fill jobs, employers prefer relevant work experience rather than a four-year degree

### Quest for quality talent pushes employers to use a college degree as a proxy for hard and soft skills

A popular belief in the wake of the Great Recession is that employers hired college graduates for middle-skills jobs because so many were available. While that is true to an extent, the survey reveals that other considerations better explain this trend. Many employers that are upgrading their credentials for middle-skills jobs are seeking candidates with a wider and deeper set of skills than were required historically.

A major underpinning for this conclusion is the insights the survey provided on “mixed-population jobs.” We asked respondents to consider middle-skills jobs within their companies that were being carried out by both types of employees: those with college degrees and those without degrees.

Forty percent of survey respondents acknowledged that *many* jobs in their organization were “mixed-population jobs.” Sixty percent of employers who responded believed that at least a “few” jobs were held by both degree and non-degree workers.<sup>47</sup> When asked to identify these “mixed-population jobs,” employers most commonly cited titles such as: administrative assistant; supervisor; executive assistant; technician; analyst; data-analyst; and sales manager.

When asked what led to middle-skills jobs migrating into mixed-population jobs, the top three reasons employers cited were that: the quality of available talent had changed, that is, employers found that there was *shortage of quality talent at the non-degree level* (57% of employers); *the job had changed and new skills were required to perform the job* (56%); *labor market conditions changed such as*

*the greater supply of college graduates after the Great Recession* (49%). (Note: respondents were allowed to select more than one option.)

When hiring for these roles, what were employers seeking when they asked for a four-year college degree in positions like administrative assistant, technician, and data-analyst? Our next series of questions were designed to pressure-test if hiring college graduates was, indeed, the most efficient and cost-effective way for employers to source the skills they were seeking. If a college degree is a surrogate for certain skills in these mixed-population jobs, the survey sought to identify which skills employers were seeking when they turned to college graduates.

For the purpose of our survey, we defined “hard skills” as vocational knowledge that is tangible and measurable, such as programming, analytics, and foreign languages. We defined “soft skills” as attributes (e.g., professional attire) and behaviors (e.g., clear communication) that indicate a higher capacity to do work that is non-routine or involves high levels of social interaction in the workplace. Examples include the ability to present ideas, negotiate, and manage client relationships.<sup>48</sup>

A key finding from the survey was that employers believe that a college degree is more likely to deliver applicants who are workforce ready, in terms of soft skills as well as hard skills. For those employers that said they began asking for college graduates due to a change in relevant skills, 60% said it was due to the increased complexity in the soft skills relevant to the job, while 70% said it was due to the increased complexity in the hard skills relevant to the job. Employers that said that they began seeking workers with college degrees due to “changes in the quality of talent” believed that candidates who did not have a degree no longer met either the soft skills requirements of the job (56%) or the hard skills requirements (58%).<sup>49</sup>

We then asked employers to list the specific hard and soft skills that were missing in applicants, especially those skills that prompted them to raise the education requirements for the job. We found that, for hard-to-fill jobs, employers are often looking for a very specific digital skill, such as proficiency in Microsoft Excel, SQL, Oracle, or Java, indicating that in some middle-skills jobs, the “hard skill” component of the job had increased. However, acquiring those skills does not require a four-year degree. Better alignment between educators and employers could ensure that workforce-training providers produce workers with market-ready hard skills.

In soft skills, the survey responses showed that employers are looking for very specific soft skills, such as the ability to communicate on the phone, to resolve issues that are critical, and to mentor (see Figure 10 on Page 16). One possible explanation is that the changing nature of middle-skills jobs imposes the need for a greater array of soft skills.

FIGURE 10: HARD AND SOFT SKILLS MISSING IN MIDDLE-SKILLS WORKERS THAT PROMPT EMPLOYERS TO SEEK COLLEGE GRADUATES

	Broad Category	Detailed Category	Frequency	Extract of Responses
Hard Skills	Digital	Software	78	Knowledge of specialized and proprietary software, understanding of new technologies
		Programming	38	Computing languages (e.g., HTML, SQL), knowledge of computer logic
		System/Network	13	Queries and database management experience, knowledge of servers and systems analysis
	Vocational	Foreign Language	25	Proficiency in a foreign language
		Management/Operations	17	Process methodologies, risk management
		Medical/Scientific	16	Medical, nursing, or PT certification, clinical skills
		Legal	14	Knowledge of industry compliance, familiarity with regulations
		Work Expertise	12	Experience in the field, knowledgeable, able to conduct trainings
	Analytical	Logistical	10	Coordination, facilitate timely reporting, manage inventory
		Sales/Marketing	8	Knows dynamics of marketing, can engage clients
		Data Analysis	50	Excel, analytics, modeling tools, able to identify trends
	Mechanical	Financial/Accounting	20	CPA, knowledgeable of accounting principles, budgeting
		Mathematical/Engineering	11	Calculus, basic math skills, knowledge of scientific methods
		Heavy Machinery	8	Knowledge of machinery, related certifications
	Equipment Operation	8	Equipment maintenance, knowledge of tools, able to make repairs	
Soft Skills	Communication	Presentation	60	Speak clearly and effectively, well articulated
		Reading/Writing	59	Social media, online writing, proper grammar
	Interpersonal	Teamwork	39	Emotional intelligence, able to work with a diverse group of people
		Client Management	36	Customer service, able to maintain customer relationships and handle communications
		Negotiation	19	Negotiation tactics, can influence others
	Leadership	Supervision	27	Manage others and lead a team
		Mentorship	7	Provide guidance, able to teach others
	Lateral Thinking	Project Management	6	Coordinate activities, execute strategies
		Innovation	16	Be creative, identify new markets, think outside the box
		Problem Solving	14	Can resolve issues efficiently
		Learning Ability	11	Trainable, quick learner
	Professionalism	Critical Thinking	9	Analytical thinking, ability to apply outside knowledge, quick thinker
		Etiquette	21	Professional, courteous, ethical
		Self-Management	12	Disciplined, organized, can handle stress and pressure
	Character	Appearance/Attire	9	Professional attire, professional communication
		Work Ethic	8	Show up on time, show commitment, work hard
		Reliability	8	Produce quality work, perform quickly and effectively
Independence		6	Ability to work remotely, ability to work without being micro-managed/supervised	

Source: 2016-2017 Accenture, Grads of Life and HBS Project on Managing the Future of Work, Hiring and Talent Management Survey.

Note: Frequency indicates number of respondents who cited specific hard or soft skills. Respondents were allowed to provide more than one answer. Categories with fewer than six responses were excluded.

For example, if in the past, call-center workers were hired based on “communications skills,” companies are now learning that the call-center staff needs to display strength in sub-skills, such as negotiation or empathy, that support realizing the benefits of good communications skills.

### Degree inflation creeps up on companies and shrinks access to viable candidates

Even though a majority of employers acknowledged that degree inflation is prevalent in “a few” or “many” middle-skills jobs at their company, most employers perceive the shift as a recent phenomenon. When asked when their company began asking for a college degree in “mixed-population jobs,” 76% of employers replied “less than three years ago” (see Figure 11).

As we have previously discussed, the phenomenon of degree inflation is not recent. It appears, however, that companies are becoming more aware of the impact of asking for college degrees on their ability to find talent. With the labor marketing tightening, employers are expressing growing concern that the demand for college degrees is narrowing the pipeline of available talent.

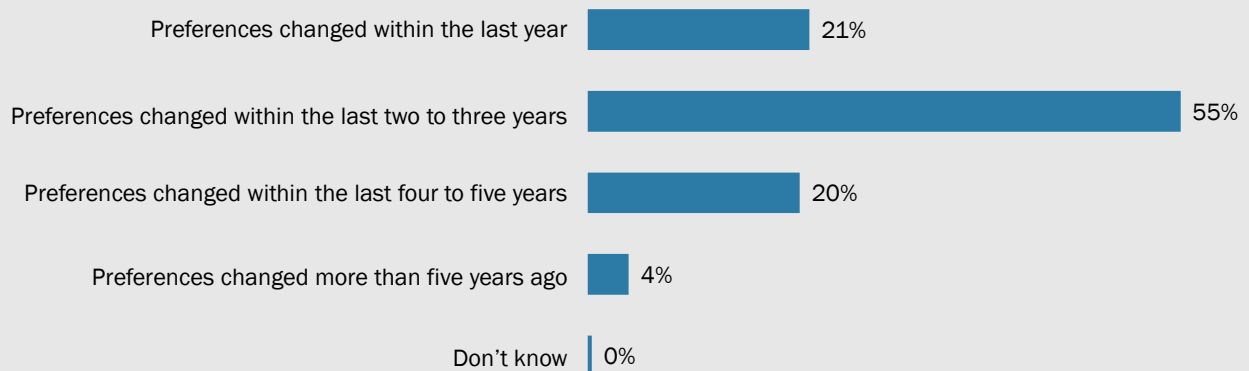
When asked if they “reject some individuals who have the skills and experience to be successful in a middle-skills job because they don’t meet the requirement of having a four-year degree,” 61% of survey respondents agreed or strongly agreed.<sup>50</sup> The process most large companies use to evaluate applicants’ submissions appears to contribute

to this outcome. For example, as many as 90%<sup>51</sup> of large companies use some form of automated applicant tracking system to screen resumes, at which point about half of all applications are filtered out of consideration.<sup>52</sup> Starting with simplified online job applications in the 1990s,<sup>53</sup> virtually every step in the hiring process today is touched by some form of automation, including web scraping, social media scanning services, and even intelligent agents that can automate up to 75% of the hiring process.<sup>54</sup> As impersonal electronic assessment of candidates overtakes personal assessment activities,<sup>55</sup> employers risk screening out applicants with relevant work experience or credentials other than college degrees.

In most industries in our survey, the percentage of respondents who *agreed or strongly agreed* that their companies screen out qualified job applicants as a function of a four-year degree requirement was far greater than the percentage of respondents who *disagreed or strongly disagreed* (see Figure 12 on Page 18).<sup>56</sup>

FIGURE 11: GROWING AWARENESS IN EMPLOYERS ABOUT DEGREE INFLATION

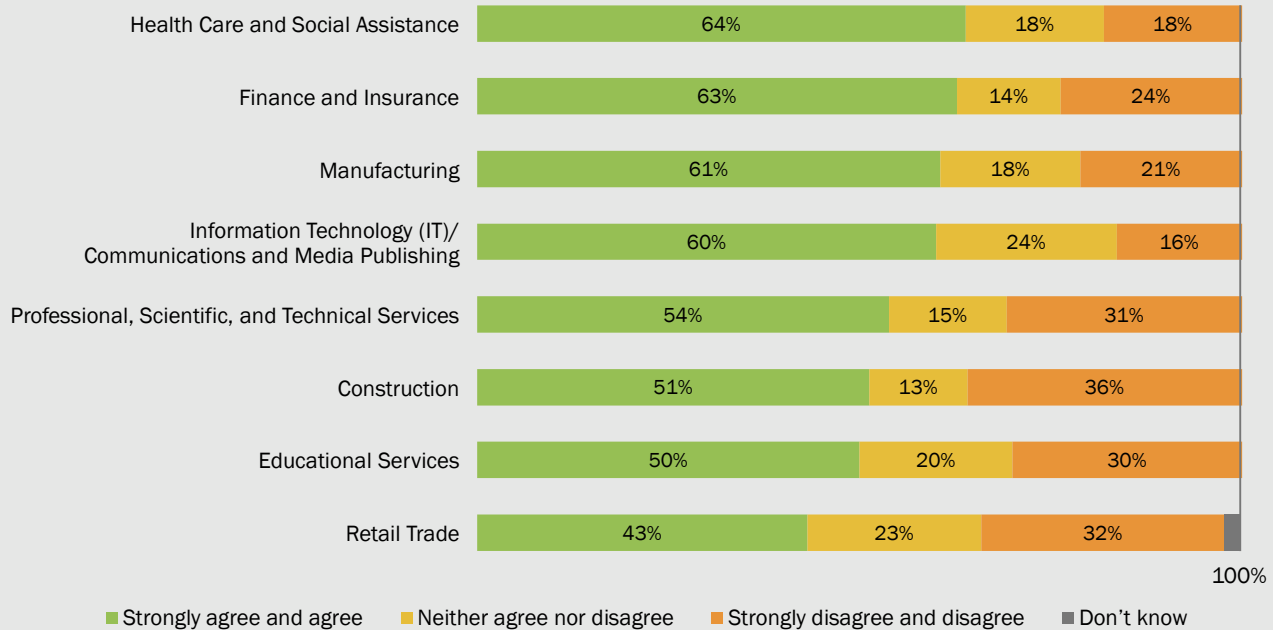
While degree inflation began before the Great Recession, employers have only recently become more aware of the phenomenon: 76% of employers who now prefer a college degree for a particular position believe they shifted their preferences within the last three years.



Source: 2016-2017 Accenture, Grads of Life and HBS Project on Managing the Future of Work, Hiring and Talent Management Survey.

FIGURE 12: EMPLOYERS ACROSS INDUSTRIES ACKNOWLEDGE THEY FILTER OUT QUALIFIED TALENT BY RAISING EDUCATIONAL REQUIREMENTS TO A COLLEGE DEGREE

Employers were asked to rate their agreement with the following statement: “We reject some individuals who have the skills and experience to be successful in a middle-skills job because they don’t meet the requirement of having a four-year degree.”



Source: 2016-2017 Accenture, Grads of Life and HBS Project on Managing the Future of Work, Hiring and Talent Management Survey.

Note: In Retail Trade, the percentages do not add up to 100% because 2% of respondents answered “Don’t know.” In Finance and Insurance the percentages do not add up to 100% because of rounding.

### Employers burden themselves with hidden costs due to degree inflation

The survey revealed that degree inflation is growing within companies, as more and more middle-skills positions become “mixed-population jobs.” We wanted to understand the “all-in” economics of that phenomenon (see Figure 13). Are the benefits commensurate with the costs of degree inflation? And are employers accounting for the hidden costs of degree inflation? The survey findings showed that, in most companies, degree inflation brought in its wake ripples of higher hidden costs. Consider:

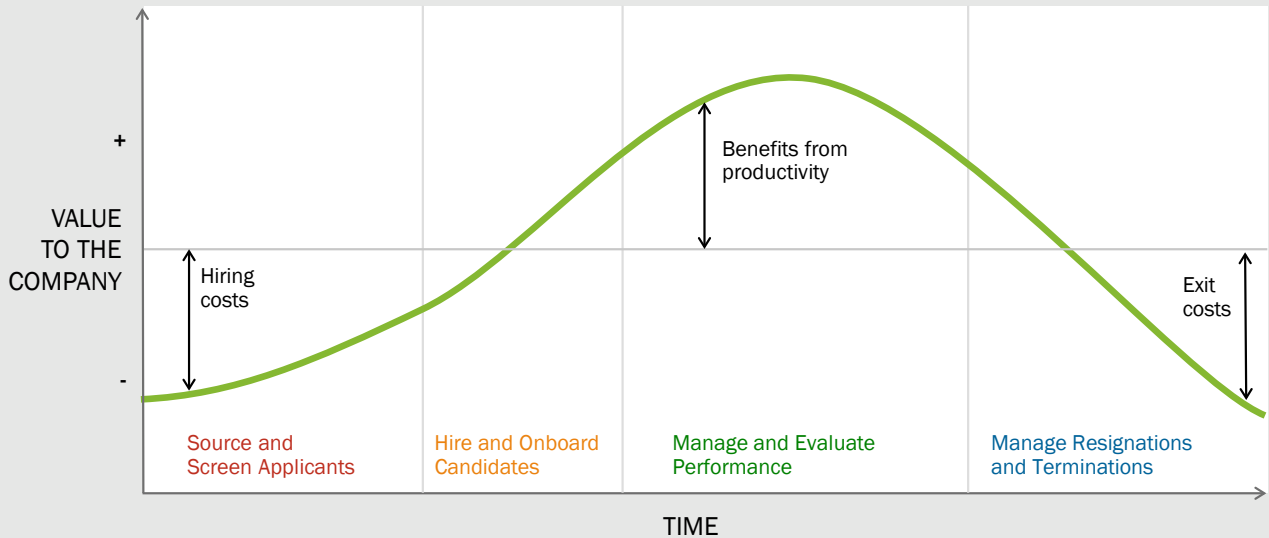
- Degree inflation makes middle-skills jobs harder to fill.** We asked employers to consider a middle-skills job in their company for which credential preferences changed. Employers confirmed that, for those jobs, asking for a college degree as a minimum qualification made it harder to find qualified candidates. A majority of respondents found that asking for a college degree made the position either *far more difficult to fill* (15%) or *difficult to fill* (52%).<sup>57</sup>

- Degree inflation results in wage inflation.** Employers consistently pay a premium—often significantly more—for degree holders to do the same job as non-degree employees. *Fifty-five percent of the surveyed leaders acknowledged that recent college graduates were compensated at a higher level than non-degree workers in the same job in their company.* Of these, a majority of employers (68%) reported that they pay a premium of 11% to 30% for college graduates, depending on the industry and how difficult it is to fill the job in question (see Figure 14 on Page 20).<sup>58</sup>
- Degree inflation leads to higher employee turnover.** The survey showed that college graduates have higher expectations in terms of salary and quality of work life, when compared with non-degree workers in the same role (see Figure 15 on Page 20). In terms of salary expectations, 59% of employers believed that recent college graduates expect higher salaries when compared with non-college graduates (11% of employers). They also perceived that college graduates have a far higher rate of voluntary turnover (39%) than non-graduates (21%) and a dramatically higher propensity to leave to work for a competitor (49%) than non-degree workers (12%).<sup>59</sup>



FIGURE 13: FINDING, HIRING, AND RETAINING TALENT IS EXTREMELY COSTLY TO EMPLOYERS EVEN BEFORE CONSIDERING THE HIDDEN COSTS OF DEGREE INFLATION

According to the Society for Human Resource Management, it costs upwards of **\$4,000** to hire an employee.\*



	<ul style="list-style-type: none"> <li>Recruiter time and fees</li> <li>Temporary contractor fees</li> <li>Overtime costs</li> <li>External posting fees</li> <li>Assessment tool costs</li> <li>Interview costs</li> </ul>	<ul style="list-style-type: none"> <li>Background verification</li> <li>Signing bonus</li> <li>Relocation</li> <li>Compensation</li> <li>Benefits and paid leave</li> <li>Orientation costs</li> </ul>	<ul style="list-style-type: none"> <li>Promotion and raises</li> <li>Development costs</li> <li>Equipment costs (e.g., laptops, uniforms)</li> </ul>	<ul style="list-style-type: none"> <li>Exit interview</li> <li>Severance</li> <li>Separation administration (e.g., COBRA coverage)</li> </ul>
Examples of indirect costs	<ul style="list-style-type: none"> <li>Opportunity cost of vacancies to sales/productivity</li> <li>Opportunity cost of supervisor time throughout hiring process</li> </ul>	<ul style="list-style-type: none"> <li>Low initial productivity during learning period</li> <li>Initial supervisor oversight</li> <li>Teambuilding and integration</li> </ul>	Performance impact due to <ul style="list-style-type: none"> <li>Low engagement</li> <li>Decreased productivity</li> <li>Higher absenteeism</li> <li>Lower team morale</li> <li>Reduced service quality</li> </ul>	<ul style="list-style-type: none"> <li>Loss of institutional knowledge</li> <li>Lost client contacts and relationships</li> </ul>

\*Society for Human Resource Management, 2016 Human Capital Benchmarking Report, November 2016.

Source: David G. Allen, "Retaining talent: A guide to analyzing and managing employee turnover," SHRM Foundation's Effective Practice Guideline Series, 2008. Josh Bersin, "Employee retention now a big issue: Why the tide has turned," Bersin by Deloitte, LinkedIn blog, August 2013. Accenture analysis.

• **Degree inflation results in lower employee engagement.**

A majority of employers (40%) believed that college graduates were more likely to feel unengaged or under-utilized compared with non-degree workers (23%).<sup>60</sup>

• **Degree holders and non-degree holders require similar levels of onboarding support.**

In attributes such as “likely to require more upfront training to reach full productivity” and “likely to require more supervisor oversight,”

employers viewed both types of employees as roughly equivalent. College graduates were actually thought to require slightly more supplementary training and oversight than non-degree workers (see Figure 15).

**FIGURE 14: MANY EMPLOYERS PAY A PREMIUM OF 11% TO 30% FOR RECENT COLLEGE GRADUATES COMPARED WITH NON-DEGREE COUNTERPARTS WITH RELEVANT PRIOR WORK EXPERIENCE**

Companies in the Construction, Educational Services, and Information Technology, Communications, and Media Publishing industries tend to pay higher premiums for recent grads than companies in other industries.



% Salary Premium for Recent College Graduates	Industries
21%–30% Higher	<ul style="list-style-type: none"> <li>• Construction</li> <li>• Educational Services</li> <li>• Information Technology, Communications, and Media Publishing</li> </ul>
11%–20% Higher	<ul style="list-style-type: none"> <li>• Health Care and Social Assistance</li> <li>• Manufacturing</li> <li>• Retail Trade</li> <li>• Finance and Insurance</li> <li>• Professional, Scientific, and Technical Services</li> </ul>

Source: 2016-2017 Accenture, Grads of Life and HBS Project on Managing the Future of Work, Hiring and Talent Management Survey.

Note: Chart displays salary premiums for the plurality of employers by industry. Employers were asked to provide the job title for one “mixed-population job” in their company, in which recent graduates of relevant four-year degree programs and non-degreed workers with relevant prior work experience performed the same responsibilities.

**FIGURE 15: EMPLOYERS BELIEVE RECENT GRADUATES ARE MORE LIKELY TO HAVE HIGHER SALARY EXPECTATIONS AND LOWER ENGAGEMENT**

Employers perceive non-degree workers to have a higher retention rate.




	 Recent college graduates	Both groups equally likely	 Non-degree workers with experience	Don't know
Higher levels of productivity	31%	49%	19%	0%
Higher rates of retention/longer tenure with company	29%	40%	31%	0%
Higher salary expectations	59%	30%	11%	1%
Higher absenteeism	30%	40%	24%	6%
Higher turnover	39%	39%	21%	2%
Likely to feel unengaged or under-utilized	40%	35%	23%	2%
Likely to leave for a competitor	49%	38%	12%	1%

Source: 2016-2017 Accenture, Grads of Life and HBS Project on Managing the Future of Work, Hiring and Talent Management Survey.

Note: Percentages do not add up to 100% due to rounding. Employers were asked to provide the job title for one “mixed-population job” in their company, in which recent graduates of relevant four-year degree programs and non-degreed workers with relevant prior work experience performed the same responsibilities.

FIGURE 16: EMPLOYERS IN SEVERAL INDUSTRIES PERCEIVE DEGREED AND NON-DEGREED TALENT AS EQUALLY PRODUCTIVE

In health care and educational services more than 60% of employers perceive both groups are equally likely to be productive.

	 Recent college graduates	 Both groups equally likely	 Non-degree workers with experience
Manufacturing	27%	48%	25%
Retail Trade	23%	55%	23%
Construction	36%	44%	21%
Educational Services	23%	60%	17%
Professional, Scientific, and Technical Services	44%	41%	15%
Finance and Insurance	39%	44%	17%
Health Care and Social Assistance	29%	61%	10%
Information Technology, Communications, and Media Publishing	35%	53%	13%

Source: 2016-2017 Accenture, Grads of Life and HBS Project on Managing the Future of Work, Hiring and Talent Management Survey.

Note: Percentages do not add up to 100% due to rounding. Employers were asked to provide the job title for one “mixed-population job” in their company, in which recent graduates of relevant four-year degree programs and non-degree workers with relevant prior work experience performed the same responsibilities.

### Employers perceive that a college degree does not guarantee higher productivity in middle skills jobs

In an ironic twist, the survey shows that employers perceive the performance of non-degree workers to be remarkably close to that of college graduates in the same job. When asked if employers saw a difference in productivity, 49% of employers reported that in mixed-population jobs, they found recent college graduates and non-degree workers with experience equally likely to be productive (see Figure 15 for seven attributes and Figure 18 on Page 23 for all 15 attributes surveyed). Further, in their perception, a college degree does not automatically guarantee better performance in other attributes such as time to promotion or amount of oversight required. The survey shows that despite paying a premium for college graduates, when asked to compare workers with a degree with workers without a degree in a specific mixed-population job, *employers found little difference in both types of workers when it came to those attributes.*

In many industries, a majority of employers assessed non-degree workers with experience as equally productive or more productive than recent college graduates (see Figure 16). The extent of the majority varied by industry—suggesting that in some industries, the opportunity to widen the talent

pool by hiring non-degree workers is higher than in others. For example, in retail, 78% of employers perceived non-degree workers to be equally or more productive compared with college graduates and the proportion of employers who perceived non-graduates to be more productive (23%) was exactly the same as the proportion of employers who perceived college graduates to be more productive (23%).<sup>61</sup>

### In hard-to-fill jobs, employers prefer relevant work experience rather than a four-year degree

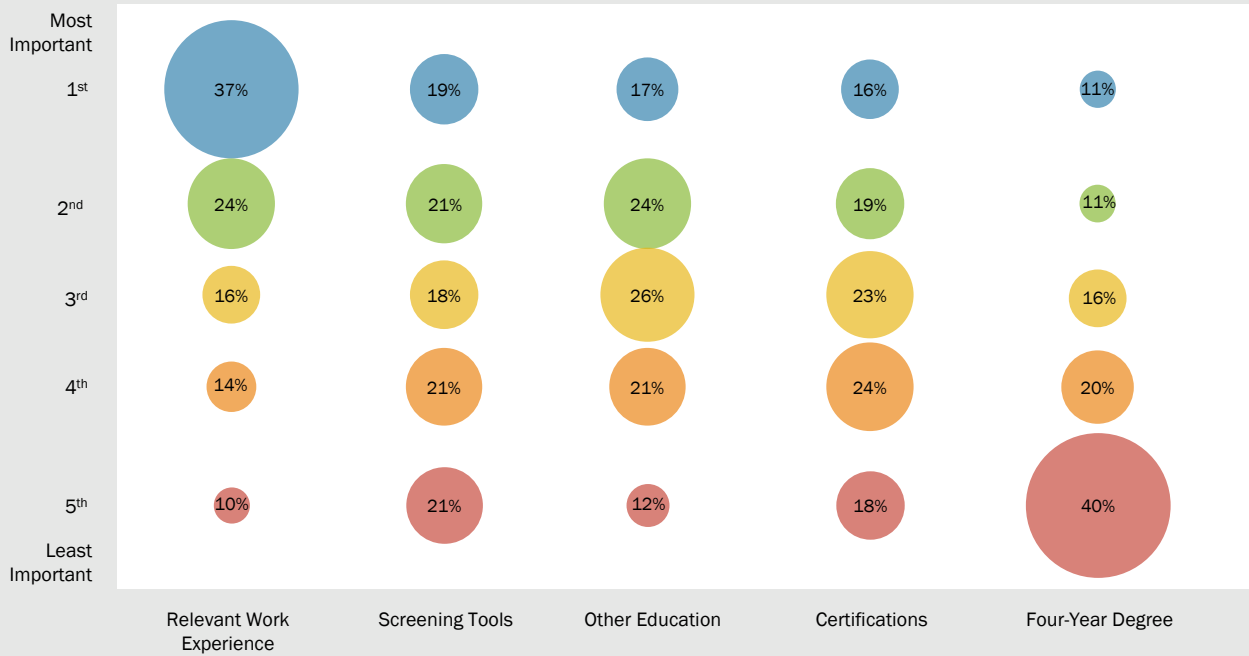
Hard-to-fill or difficult-to-fill jobs are those that require an extended period of time to fill or that can only be filled through a substantial investment in resources by the employer.<sup>62</sup> In open-ended responses, employers listed a variety of hard-to-fill middle-skills jobs, including administrative assistants, customer service employees, electricians, clerks, and sales representatives.

When asked what made a given position hard to fill, the top three reasons cited by employers were that most candidates *did not have sufficient experience* (50% of respondents who identified a hard-to-fill job), *trained applicants were hard to find* (47%) and that employers *could not find people with the right talent and work ethic/ambition* (46%).<sup>63</sup>

We asked employers which attributes they most valued in

FIGURE 17: EMPLOYERS VALUE WORK EXPERIENCE MOST WHEN CONSIDERING POTENTIAL CANDIDATES

When asked to rank the most important credentials/qualifications, 37% of employers chose “most important” for relevant work experience, and 40% of the respondents ranked a four-year degree as the “least important” choice.



Source: 2016-2017 Accenture, Grads of Life and HBS Project on Managing the Future of Work, Hiring and Talent Management Survey.

a candidate. They ranked relevant work experience as the *most* important qualification (37% of employers) for vetting candidates for middle-skills jobs. Work experience was also the second-most important qualification (24%) for those respondents who selected another attribute as the most important. Employers most frequently ranked a four-year degree as the *least* important qualification (40%), preferring other education, screening tools, and certifications (see Figure 17).<sup>64</sup>

Relevant experience trumps a four-year degree particularly in the case of larger companies that hire at scale. The survey showed that larger companies are more open to candidates who do not have a four-year degree than smaller companies. Companies with more than 10,000 employees *more frequently* (44%) ranked relevant work experience, rather than a college degree, as their most important criterion to vet candidates.<sup>65</sup>

The importance of experience is hardly a surprise. However, it reveals a flaw in the logic of companies defaulting to hiring college graduates. While that credential may provide employers with a greater sense of confidence that their new employee will prosper, it shuts out workers who may bring to the organization precisely the sort of competence that employers hope to obtain through the proxy of a college degree.

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In our survey, we asked respondents to compare degree and non-degree workers in mixed-population jobs in their organization on 15 attributes (see Figure 18). When respondents compared recent college graduates with non-degree workers with relevant experience, a majority of business leaders saw *no difference* between the two types of workers in 11 of the 15 attributes.

The value of relevant experience in middle-skills workers assumed greater significance in the wake of survey findings. Instead of a four-year college degree, the results pointed to new pathways for building a talent pipeline with the right mix of hard and soft skills, such as apprenticeships, internships, in-house training, and more up-to-date curricula in local community colleges, vocational colleges, and workforce-training institutes. Under all of those options, we noted employers could play a big role in being part of the solution.



**FIGURE 18: EMPLOYERS PERCEIVE NO DIFFERENCE BETWEEN COLLEGE GRADUATES AND NON-DEGREE WORKERS ON 11 OUT OF 15 ATTRIBUTES**

Respondents were asked to compare recent college graduates with non-degree workers with relevant experience, and indicate which group is more likely to demonstrate the following attributes when performing the same “mixed-population” job.

	 Recent college graduates	Both groups equally likely	 Non-degree workers with experience	Don't know
Likely to require more upfront training to reach full productivity	31%	<b>39%</b>	29%	1%
Faster time to reach full productivity	37%	<b>44%</b>	19%	0%
Higher levels of productivity	31%	<b>49%</b>	19%	0%
Higher salary expectations	<b>59%</b>	30%	11%	1%
Likely to require more supervisor oversight	31%	<b>40%</b>	27%	3%
Likely to participate in optional training for professional development	37%	<b>43%</b>	20%	0%
Higher absenteeism	30%	<b>40%</b>	24%	6%
Faster time to promotion	42%	<b>43%</b>	14%	1%
Likely be promoted internally	37%	<b>49%</b>	14%	0%
Higher rates of retention/longer tenure with company	29%	<b>40%</b>	31%	0%
Likely to request to relocate	<b>44%</b>	38%	13%	5%
Likely to accept employer's request to relocate for a new job	<b>39%</b>	<b>39%</b>	18%	4%
Likely to feel unengaged or under-utilized	<b>40%</b>	35%	23%	2%
Higher turnover	<b>39%</b>	<b>39%</b>	21%	2%
Likely to leave for a competitor	<b>49%</b>	38%	12%	1%

Source: 2016-2017 Accenture, Grads of Life and HBS Project on Managing the Future of Work, Hiring and Talent Management Survey.

Note: Percentages do not add up to 100% due to rounding. Employers were asked to provide the job title for one “mixed-population job” in their company, in which recent graduates of relevant four-year degree programs and non-degree workers with relevant prior work experience performed the same responsibilities.

# FIVE STEPS EMPLOYERS CAN TAKE TO PREVENT DEGREE INFLATION

The survey findings revealed a paradox: Employers recognize that candidates need to be vetted through a broader set of selection criteria than just educational qualifications, yet their company's hiring practices filter candidates based only on educational qualifications. In our conversations with companies, we found that some business leaders are not just aware of the anomaly, they have developed playbooks to fix it. They first identify the middle-skills jobs that are critical for their organization's competitiveness. In those jobs, they identify the root causes that led to degree inflation. They then implement customized solutions with an eye on increasing their access to talent. In doing all this, we found that employers ask the right questions in five key areas.

## I. Identify which middle-skills occupations are critical and prone to degree inflation in your organization—and your industry

### DIAGNOSING DEGREE INFLATION

*In which critical middle-skills jobs does your company now require a four-year college degree as a minimum requirement?*

*In those jobs, when and why did your company put in place the requirement for a college degree?*

*Was your company one of the first in the industry or did your company follow an industry trend to hire college graduates for critical middle-skills jobs?*

*Do your competitors post a college degree requirement for these middle-skills jobs?*

*What was the root cause for inflating the middle-skills job to the level of a college degree in your company?*

A company must know which jobs are critical within its organization, especially middle-skills jobs that are essential for the company's ability to compete.<sup>66</sup> By analyzing the influence of degree inflation on those critical middle-skills jobs, a company can then estimate how it stands, relative to other competitors, in its ability to attract the quality and quantity of the talent it needs. By being the first mover on combatting degree inflation, a company can create a competitive advantage by accessing middle-skills employees who command lower wages, demonstrate higher levels of engagement, and exhibit a lower propensity to quit.

In some industries, like manufacturing, retail, accommodation and food services, and health care, the phenomenon of degree inflation is far more prevalent than in other industries (see Figure 19 and Appendix 2). Below,

we provide some industry profiles to demonstrate the impact degree inflation can have on a company's ability to compete within an industry and the potential to create a competitive advantage by reversing degree inflation.

### The manufacturing industry

The manufacturing industry has seen enormous transformation over the past few decades. The forces of technology and globalization have driven the changes, which have altered the nature of the work in manufacturing jobs. Our analysis shows that, within manufacturing, 92 occupations representing 848,000 jobs are prone to degree inflation.<sup>67</sup> Of those jobs, 43% fall within just one occupation: supervisors of production workers.

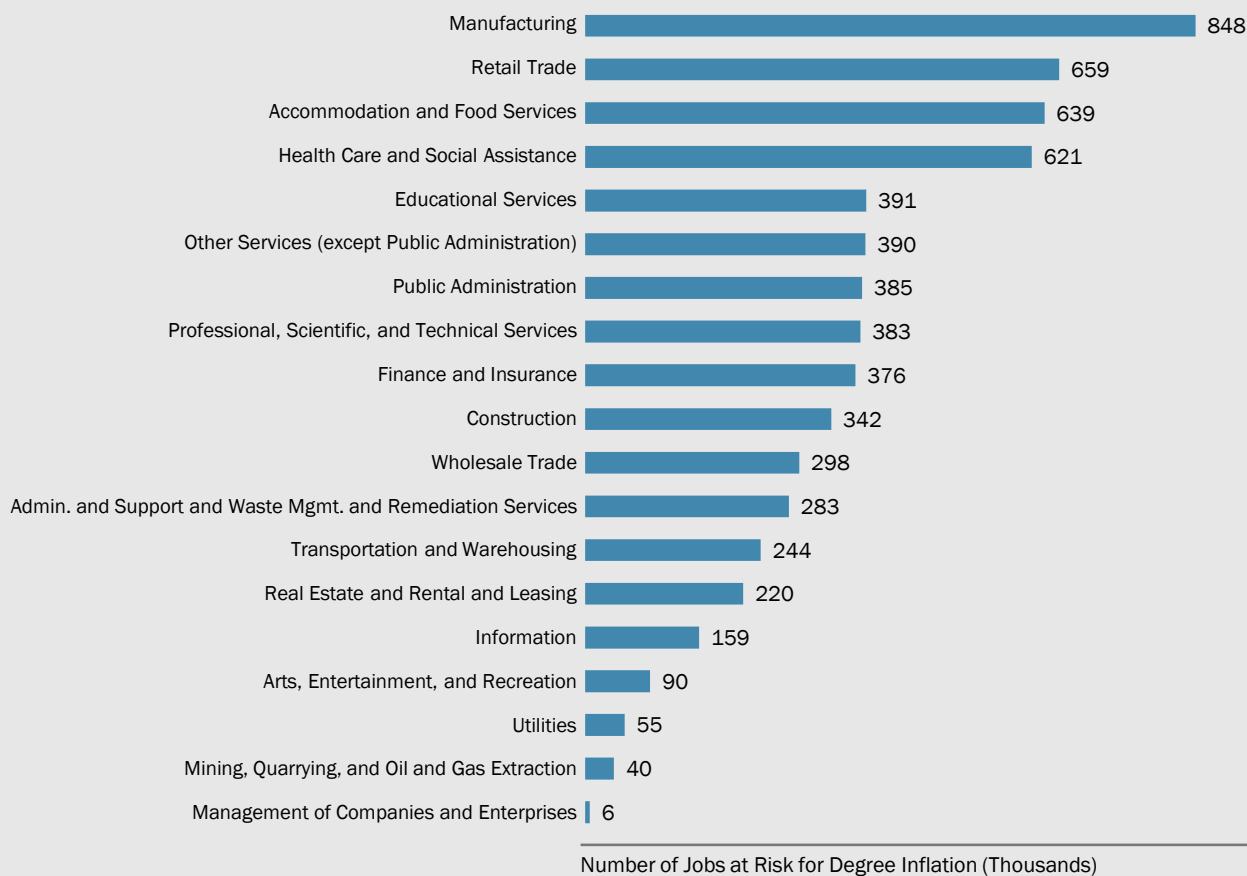
Between 2010 and 2015, the percentage of job postings for supervisors of production workers that required a four-year college degree was 49–52 percentage points higher than the education levels of existing workers—a significant credentials gap.<sup>68</sup> That occupation may account for more than 332,000 new jobs at risk for degree inflation over the next decade.<sup>69</sup> Many of the skills most often requested by employers in job postings that require a college degree are identical to those requested in job postings that don't require a college degree.

Recognizing that, some companies have begun creating their own apprenticeship programs to create non-graduate pipelines of talent. For example, John Deere launched a two-year associate's degree program that offers individuals the opportunity to gain the hands-on experience and skills necessary to secure a job with a John Deere dealership after the program's completion.<sup>70</sup> Most of the program's graduates who are offered a job have starting salaries at around \$40,000. This program serves as a compelling model for talent-pipeline development for companies across industries.<sup>71</sup>

### The accommodation and food services industry

In the accommodation and food services industry, 74 occupations representing 639,000 jobs are prone to degree inflation. Half of those at-risk jobs are for food-service managers. As many as one in three job postings stipulate a four-year college degree, while only one in five current workers within this occupation has such a degree.<sup>72</sup> According to O\*NET surveys of incumbent workers, 73% believe that some college (but no degree) or a high school diploma is sufficient to fulfill the responsibilities of this occupation.<sup>73</sup> Comparing job postings where a college degree is required with those in which it is not reveals that the types of skills requested are nearly identical.<sup>74</sup>

FIGURE 19: A HANDFUL OF INDUSTRIES HAVE THE MOST JOBS AT RISK OF DEGREE INFLATION



Source: Burning Glass Technologies' database of online job postings for 2015; accessed via Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool," February 2, 2017. Also includes data from U.S. Census Bureau, American Community Survey, 2010-2014 5-year estimate; IPUMS-USA, University of Minnesota, [www.ipums.org](http://www.ipums.org). See Appendix 2.

Employers in this industry would benefit by widening the pipeline of talent serving them.

To attract more talent to apply, Chipotle, the food services company, has built a distinct career path that starts with "no experience required." New employees start as members of the crew and can progress through seven clearly defined career stages, capped by the opportunity to run their own restaurant.<sup>75</sup> By clearly laying out the career progression within the organization and taking responsibility for developing its employees, Chipotle succeeded in 2016 in promoting 11,000 employees into management positions.<sup>76</sup>

### The health care and social assistance industry

In the health care and social assistance industry, 92 occupations representing 621,000 jobs are at risk for degree inflation. Within this industry, childcare workers

account for almost 40% of those at-risk jobs. In O\*NET's survey of incumbent childcare workers, 65% reported that an associate's degree or a lower level of educational attainment was sufficient to fulfill the responsibilities of that role. Once again, a comparison of job postings indicates that the skills requested in both groups of postings are nearly identical.<sup>77</sup>

While automation is often cited as a cause for making middle-skills jobs more sophisticated and, thus, prone to degree inflation, health care is starting to show interesting examples of reversing the trend: Technology is breeding more middle-skills jobs. The implementation of EPIC, an electronic health record system, created a swell in the number of people health care companies need trained on the technology—analysts, developers, trainers, registered nurses, registrars, schedulers.

Lifespan, a hospital system based in Rhode Island, could have opted to post job descriptions that required a college degree and experience using EPIC. As the Administrative Director of Talent Acquisition and Sourcing at Lifespan, Doug MacNeil realized that doing so would just make those positions hard to fill and escalate costs. Instead, MacNeil identified that one of the key roles in implementing EPIC was to have a strong army of patient-registrars—people who demonstrated an ability to serve patients well and could be trained on EPIC. Instead of asking for a college degree from applicants, MacNeil worked with Year Up—a national nonprofit training provider that empowers low-income young adults to go from poverty to professional careers in one year—to design a customized curriculum and to begin hiring interns. After six months of training, the interns were absorbed in full-time jobs at Lifespan. MacNeil estimates that, by year two of the program, Lifespan was saving \$7,000 to \$23,000 per patient-registrar and average retention jumped from 18 months to three years.

## II. Identify the relevant and specific hard and soft skills you need for critical middle-skills jobs

### DIAGNOSING DEGREE INFLATION

*Which specific hard and soft skills are you looking for in critical middle-skills jobs in your company?*

*Can you find viable candidates with those skills without asking for a college degree?*

*Should you update job descriptions to reflect your true needs in terms of functional, professional and technical competencies?*

*Instead of a four-year college degree, can your company identify the specific credentials, certifications, associate degrees, or licenses that would help access the hard skills you require?*

*Instead of a four-year college degree, can your company identify in-house training and work experience models, such as apprenticeships, to impart soft skills relevant to your organization?*

*Does your candidate evaluation process need to change?*

Degree inflation exposes companies in two ways. First, there is the high risk that, despite hiring a college graduate, a company may not secure the skills the job actually requires. Second, a company can raise its total cost of employment by denying itself access to middle-skills workers who have the relevant experience. By relying on the degree as a proxy, employers risk deluding themselves that they have upgraded their workforce when, in fact, they have raised their costs without a commensurate increase in productivity.

Despite recognizing those drawbacks, companies find it hard to reverse the process that led to degree inflation. It requires

revisiting many of the existing hiring practices and replacing them with a new approach. It also requires a substantial redesign in at least two areas where change requires a significant commitment:

- **Job descriptions.** Existing specifications have to be thoroughly reviewed and the key competencies required to do the job identified. They then need to be related to a specific degree, certificate, or internal training program to ensure a pathway exists for non-degree holders.
- **Reevaluating the processes used to vet candidates.** Instead of relying on a college degree or relying on automated evaluative tools, reversing degree inflation requires the company to design new tools that value a non-graduate candidate's work experience, competencies and potential.

According to LifePoint Health, once a company starts to view its hiring decisions through this new lens, it embarks on a path that is nothing less than transformational. A Fortune 500 company with more than \$6 billion in revenues, LifePoint grew exponentially in five years by acquiring different hospital systems across the country. As a result of the acquisitions, LifePoint found there was a wide disparity in job descriptions between a facility in Louisiana compared with a facility in Wyoming. One facility would post a job asking for a four-year college degree, while another facility would advertise the same job without specifying a college degree. Moreover, LifePoint's business strategy focused on rural communities, and it frequently struggled to find the talent it needed in the communities it served. Says Pam Belcher, Senior Vice President, Human Resources and Talent Management, who has been with LifePoint for more than a decade: "By including a B.A. requirement on our jobs, we were taking away job opportunities from people who were not going to move away from that location. Plus, we were not able to hire locally for middle skills employees, who constitute about 10% of our total workforce of more than 46,000 employees across the country."

Two years ago, therefore, LifePoint launched an organization-wide effort to resolve these dilemmas. The company systematically began reviewing job descriptions across its facilities to identify the specific job skills associated with each position. The focus: what do we need so that the worker succeeds in the job and LifePoint achieves its desired outcomes? Belcher and her team worked directly with managers in hiring roles evaluating job descriptions, drilling down to skill sets, the skills family and the competencies required. At every stage, they challenged conventional wisdom and past practice, asking: why do you need a person with a college degree for this? What is the specific skill you are looking for?

The approach proved so effective that Belcher has now taken the job descriptions challenge to the next level. Now she asks hiring managers: *Why does this job require even*

a high-school diploma? Says Belcher: “Very often we will find we are looking at say, a dietary position, for example. This person does the same thing again day after day, tray after tray, and we are told this position requires at least a high-school diploma.” Belcher adds: “So I ask them then: help me understand, why are you insisting on a person with a high-school diploma when your facility is located in an area where 25% of the population does not have a high-school diploma?”

### III. Evaluate the hidden costs of hiring degree workers versus non-degree workers

#### DIAGNOSING DEGREE INFLATION

*What are the relative economics of the two types of hires—those with a college degree and those without one?*

*How long does it take to fill the position when the job posting seeks a college degree versus when it does not?*

*Do you track each segment by workforce management indicators, including turnover, productivity, performance ratings, rate of promotion, time to promotion and engagement?*

*How do the metrics like mean time to productivity, mean time in position, and employee satisfaction compare between the two?*

*Is there a difference in compensation of employees with a college degree compared to those without a degree, when both are doing the same job?*

Few companies want to engage in an extensive reengineering of their workforce management processes without being assured of a handsome return on investment. That is difficult when many of the benefits entail eliminating hidden or indirect costs. Our research strongly suggests that organizations willing to invest in understanding the all-in economics of degree inflation will find an attractive case for investing in non-graduates (see Figure 20 on Page 28).

A key issue behind the growth of degree inflation is that few companies currently track all the costs associated with degree inflation. The survey found that fewer than half of all employers surveyed collect data about key indicators like the level of utilization, rate of absenteeism, rate of turnover, and time to promotion, between the two types of workers. Moreover, the costs are scattered across various elements of the organization. Understanding the investment case for developing middle-skills talent requires a sustained commitment.

At Hasbro, a global play and entertainment company based in Pawtucket, RI, the shift came when management realized that they had an opportunity to fill some of its entry-level positions with non-graduates. One of the company’s most important divisions, the U.S. regional marketing organization, had a relatively flat organizational structure, which required all employees to do all levels of work. While

the company had a successful summer MBA internship that brought in new post-graduate talent, there was no complementary entry-level pipeline of individuals who could help with the division’s more routine activities, especially those that did not require graduate-level skills.

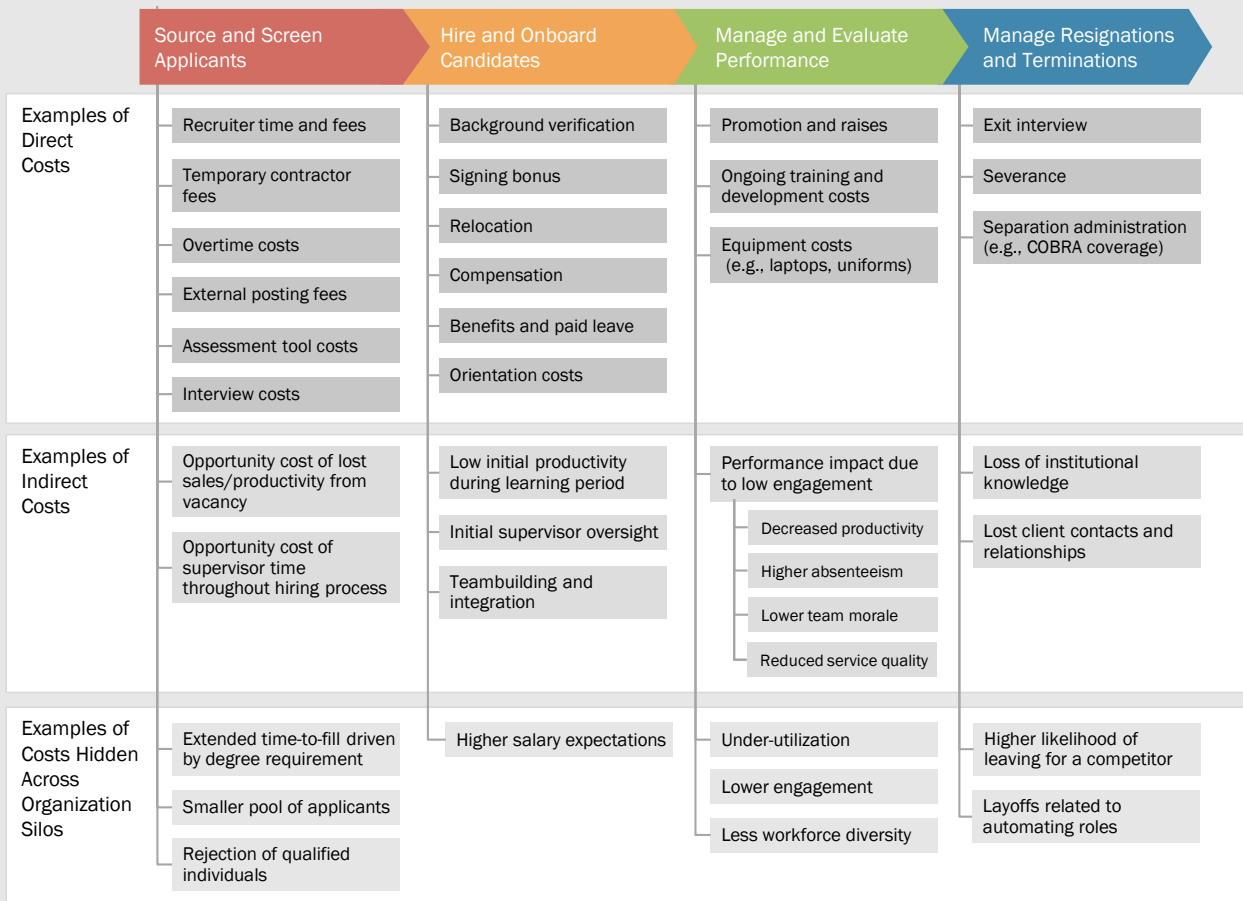
The company began by looking closely at the skills and competencies required for these support roles. Based on the analysis of the type of work, Hasbro identified four roles that would be appropriate for these individuals—marketing coordinator, retail planning analyst, trade merchandising, and retail activation. When Hasbro created job descriptions for those four positions, it initially sought employees with an associate’s degree. Says Jodie Neville, former Senior Director, Strategic Initiatives at Hasbro: “Then we realized, it wasn’t about the degree, it was about the person. There were the hard-skill issues of course: Did they have the core competency and professional skills. But then it was also about soft skills: Was the person accountable, did they follow through, could they communicate in a business setting, manage projects in an empowered way?”

To groom talent from the local community for these positions, Hasbro partnered with Year Up to create a new internship program. While Hasbro was only seeking a few interns to fill the four positions, the company received more than 100 applications. As subject matter experts, Hasbro employees developed a training curriculum to ready these young adults to excel in these positions. At the end of the training program, Hasbro ultimately acquired nine new full-time employees—three marketing coordinators, two trade merchandisers, three retail activation employees, and one retail planning analyst.

**A KEY ISSUE BEHIND THE GROWTH OF DEGREE INFLATION IS THAT FEW COMPANIES CURRENTLY TRACK ALL THE COSTS ASSOCIATED WITH DEGREE INFLATION.**

The net result of Hasbro right-sizing its roles and focusing on competencies rather than credentials resulted in several positive outcomes. One, Hasbro was able to effectively fill jobs that provided significant value to the organization. Two, it acquired a loyal group of employees committed to a career at Hasbro. Three, carving out the tasks that did not require a degree allowed Hasbro to redeploy its MBA interns to higher-skill tasks. According to Neville, hiring non-college degree workers is not just about eliminating hidden costs, it’s also about unearthing hidden benefits. Says Neville: “The process not only saved substantial resources, it completely revamped our approach to the sales and marketing function.”

FIGURE 20: THE HIDDEN COSTS OF DEGREE INFLATION DRIVE UP ALREADY HIGH HUMAN CAPITAL COSTS



Source: David G. Allen, "Retaining talent: A guide to analyzing and managing employee turnover," *SHRM Foundation's Effective Practice Guideline Series*, 2008. Josh Bersin, "Employee retention now a big issue: Why the tide has turned," Bersin by Deloitte, *LinkedIn blog*, August 2013. Accenture analysis.

#### IV. Create talent pipelines to ensure future access to competencies

##### DIAGNOSING DEGREE INFLATION

Has your company identified the critical middle-skills jobs that will require new skills requirements, based on feedback from vendors, customers and industry groups?

Has your company identified training resources available to upgrade skills, such as not-for-profit and for-profit training institutions, vendors, and industry associations?

Has your company developed metrics to compare the cost of hiring externally for specific skills versus grooming skills in-house through training?

Has your company developed proprietary internal training programs for strategic skills requirements in middle-skills jobs?

Has your company identified career paths to retain and advance middle-skills workers who have these strategic skills?

Many U.S. companies now sense the need to go back to the fundamentals and invest in grooming talent. Increasingly, companies claim that their new approach for middle-skills jobs is to "hire for attitude, train for skill." It's an approach that CVS Health has adhered to: Instead of simply requiring a college degree, CVS uses a combination of pre-employment and in-house training as a great leveler. The company uses a host of training technologies—classroom, web-based, and online—to develop the skills of employees irrespective of their educational attainment. Each role in the organization is evaluated for its training needs, and CVS Health develops the curriculum for each role. As employees advance within the company, their training ratchets up providing access to supervisory skills and eventually, leadership skills, says Ernie Dupont, CVS' Senior Director of Workforce Initiatives. He adds: "At CVS Health, we work with occupations from entry level to management level. We considered the idea of requiring a college degree for management positions on and off over the years, but decided it's not in our best interest. Frankly, we think it closes down a stream of potential candidates that are well



qualified or in some cases, exhibit potential. We need all the talent we can identify to bring into the organization and we recognize that people come from a variety of avenues.”

Why would an organization with more than 250,000 employees spend so much on developing its own talent rather than poaching talent from other companies? At CVS Health, the math is quite clear. First, the company believes that it benefits by establishing public private partnerships because it helps attract talent that CVS might otherwise not have access to. Second, it views spending on training, both pre- and post-employment, as a wise, strategic investment. As a result, the company finds that it has acquired a much more diverse workforce, one that is reflective of the communities in which it does business.

## MANY U.S. COMPANIES NOW SENSE THE NEED TO GO BACK TO THE FUNDAMENTALS AND INVEST IN GROOMING TALENT.

According to Dupont—who is leveraging an approach called “Expected Value, Return On Investment” for measuring the impact of workforce investments—for the past 15 to 20 years, CVS Health enjoys twice as high a retention rate for people who go through its Workforce Initiatives programs than people who come to the company through traditional channels. He reflects: “We are always thinking of how we can expand the pipeline of talent in the long term for CVS Health and bring more individuals into productive roles across our company. By investing in the many pre-employment initiatives we operate, we also provide a hand up to individuals who may go into fields outside of CVS Health, which creates a win for the individual and the community, not to mention other employers including small businesses. Expanding our own pipeline through various initiatives impacts in a positive way not only CVS Health, but also people who may have barriers to employment and the broader community.”

## V. Seek partners to build talent pipelines and attract non-traditional candidates

### DIAGNOSING DEGREE INFLATION

*Does your company focus on hiring sources that have historically provided productive, retainable talent?*

*Does your company cultivate workforce “suppliers” and apply supply-chain management techniques to govern the relationship?*

*Does your company identify and articulate the specific competencies required for success in important middle-skills positions?*

*Does your company update its competency requirements regularly and communicate them to skills providers?*

*Does your company align with other employers with similar needs to provide common competency requirements to skills providers and ensure sufficient demand?*

*Does your company reinvigorate workforce planning by making workforce requirements integral to all strategic planning and capital planning analysis?*

Degree inflation harms some Americans more severely than others. For example, the propensity for degree inflation appears to be higher among employers from metropolitan regions that have larger, more competitive labor markets. Such metros display characteristics like “a better-educated workforce, higher regional consumption prices, higher income and total factor productivity levels, higher home prices, lower poverty rates, and higher wage inequality.”<sup>78</sup>

Within those metropolitan regions, degree inflation becomes yet another hurdle for young job-seekers from low- and middle- income neighborhoods. While Millennials are vulnerable to degree inflation,<sup>79</sup> youth from poorer neighborhoods especially struggle to gain access to entry-level middle-skills jobs. They have fewer pathways to a four-year college degree and little or no access to internships and apprenticeships that provide the experience base to help offset the lack of a degree. They are the first to be shut off from joining the talent pool of local communities and last to be considered for hard-to-fill vacancies. Companies that sit in the heart of a city’s financial district and complain about a lack of workers are too often ignoring the pool of young, diverse talent eager to work, just a few blocks away.

State Street recognized this challenge early on and sought to diversify the manner in which it was sourcing talent locally. State Street recognized that by widening its approach to hiring, it could not only widen the pool of talent for hiring, it could also mindfully improve the diversity in its workforce, both in terms of gender and ethnicity. Says Richard Curtis, Vice President, Workforce Development, State Street in 2005, the year he joined the company: “There was a

misconception that we could only get talent from four-year colleges or universities. We had to show our hiring managers the light and break out of that model.”

Moving to a new model required a committed effort to not cling to past practices. State Street began to identify new ways by which it could attract applicants, especially those who would traditionally not even consider applying to the financial services firm. The solution: State Street began working with a number of community partners and not-for-profits to bring in entry-level interns with high school diplomas and train them alongside interns who were enrolled in local four-year colleges. Says Curtis: “If we were going to broaden our talent pipeline, we needed to think differently. It was a culture change and it was a gradual process.”

Interns were given access to training resources as they developed their professional skills. They were matched to mentors within State Street, who provided them with job and career guidance. Interns were also encouraged to shadow managers in different areas to experience what different jobs across the organization entailed. They were then given the opportunity to apply for entry level roles within State Street, and these interns-turned-employees were placed on the same career paths as other employees. Curtis points out with pride, that over the last 10 years, some of the earliest interns are now at the level of assistant vice presidents at State Street.

In 2015, State Street’s CEO Joseph “Jay” Hooley upped the ante by creating the Boston Workforce Investment Network—or Boston WINs—through which the firm partners with five local and national non-profits aimed at creating greater access to college and career opportunities.<sup>80</sup> With the help of Boston WINs, State Street plans to hire 1,000 graduates of Boston Public High Schools who have been served by one or more of the non-profit organizations. The approach engages organizations that have proven success in getting underprivileged students on the pathway from education to employment while providing multi-year funding that will allow these nonprofits to work together and develop talent at scale. The company has already hired 429 students through this program. Said Hooley in an article published in 2017: “This is not just feel-good stuff... We need employees who are very comfortable with data and know how to analyze it. We need more IT workers... We are hiring staffers in the compliance function as well. Boston WINs is helping us find great employees in these areas.”<sup>81</sup>

## THE UNTAPPED POTENTIAL OF OPPORTUNITY YOUTH

America's 16–24 year olds who are currently out of the workforce represent an untapped resource for companies that are eager to find new pools of labor. These nearly six million young adults<sup>82</sup> who are not in school or in jobs—known as Opportunity Youth—represent a pool of talent that is right in the employers' neighborhoods and communities.

While some see Opportunity Youth as a cost to society, innovative companies have seen great results by hiring such young talent. Those companies partner with community-based organizations, community colleges, and other nonprofit partners to build talent pipelines for Opportunity Youth, from their community into the workplace. In the process, they not only change the lives of the employees involved but improve their communities and strengthen their businesses.

While macro data on the costs to businesses by failing to tap into this source of talent are not yet available, emerging evidence suggests that companies that include Opportunity Youth as part of their talent strategy see significant business benefits in many areas, including:

- **Increased retention:** Investing in an Opportunity Youth talent pipeline is not a small undertaking, but it can provide substantial returns through improvements in employee retention. Since 2007, Gap Inc. has operated its "This Way Ahead" internship program to help young people gain the skills and experience they need to be successful in their first jobs. Program graduates hired into jobs stay with the company twice as long as their peers. The clear success of the initiative has led Gap Inc. to commit to hiring 5% of all new entry-level store employees from This Way Ahead by 2025.<sup>83</sup>
- **More efficient recruiting:** Opportunity Youth are eager to work and prove themselves. SK Food Group, a U.S. food service and manufacturing company, has taken concrete steps to integrate Opportunity Youth into its talent strategy and has seen a drastic decrease in its interview-to-hire ratio as a result. In 2014, members of SK Food Group's Human Resources team met with LeadersUp, a nonprofit talent development intermediary that works to connect young adults with career opportunities they want and businesses with the job candidates they need. SK Food Group provided LeadersUp a clear picture of the company's talent needs for its newest facility outside of Columbus, Ohio.

With this information, LeadersUp connected with local workforce training providers in the region and worked with them to develop a talent pipeline to fill entry-level production and warehouse operations roles in the company. In the first year of the partnership, SK Food Group made nearly 100 hires through its partnership

with LeadersUp. SK Food Group found a dramatic difference between the interview-to-hire ratio of LeadersUp applicants—2:1, compared with the industry standard of 18:1. By being open to a wider talent pool, SK Food Group greatly increased the efficiency of its recruiting pipeline, saving a substantial amount of time and money as it expanded its operations to this new market.<sup>84</sup>

- **Increased diversity:** Opportunity Youth bring a diverse array of life experiences, backgrounds, and perspectives to a company, which often helps them better reflect their customers and the communities they serve. Barclays, the multinational bank and financial services company, is an example of a company that has created an innovative program to meet its talent needs while increasing the diversity of its workforce. In 2016, Barclays launched a partnership with Per Scholas, a national nonprofit that provides free IT training to individuals from underserved populations. With the support of Barclays and AT&T, Per Scholas built a new location in Brooklyn, New York, to offer a 17-week training track to prepare graduates for jobs in the cybersecurity field. In alignment with Barclay's commitment to supporting diversity, more than 40% of the students in the pilot program were women, and 30% were military veterans. In January 2017, four of the 14 graduates of the program were hired into cybersecurity roles at Barclays.<sup>85</sup>

Employers need to recognize that degree inflation excludes these young adults from the job market, particularly from middle-skills jobs and the potential for long-term career growth. That, in turn, puts a high cost on our communities. A 2013 study suggested that the long-term "wage scarring" as a result of early unemployment would result in a decrease in earnings of approximately \$22,000 per young person per year for a decade.<sup>86</sup> Other research suggests that one unemployed young adult costs society between \$4,100 and \$9,900 annually in unrecognized tax revenue, adding up to nearly \$9 billion per year.<sup>87</sup>

By focusing on ways in which Opportunity Youth can gain work experience—especially that critical first job—companies can record several wins: They can gain access to a pool of young workers who are eager to prove themselves; put young adults on the pathway to careers, higher education, and lifetime employment; and strengthen the relationship with local customers and communities. *(For an in-depth analysis on the business case for hiring Opportunity Youth, see forthcoming whitepaper Workforce Wins: The Case for Opportunity Youth Talent Pipelines (working title) on [gradsoflife.org](http://gradsoflife.org))*

# A CALL TO ACTION FOR CEOs

A growing number of CEOs now believe that they need to own the issue of degree inflation. Only the top leadership of an organization can perceive how degree inflation inflicts pain on different critical middle-skills jobs and, thus, identify the total cost of upgrading credentials to a bachelor's degree across the organization. Only the CEO can drive the change that is required, given that it affects the entirety of the organization and is visible to every important constituency—employees, customers, investors, and policymakers.

Our research clearly shows that the impact of degree inflation goes far beyond the data and information accessible to a typical human resources department. Instead, the causes and the costs of degree inflation spread across diverse decision makers across an organization. Those include, for example, managers in different parts of the organization who are responsible for attracting, grooming, and managing middle-skills talent to human resource professionals and financial analysts. An effective strategy for addressing degree inflation can raise employee

## EXPEDITORS: LED BY COMPETENCY, NOT CREDENTIALS

Once the logic of resisting degree inflation takes root in an organization, it soon permeates different aspects of the organization's culture—and eventually embeds itself at the heart of its strategy. At Seattle, WA-based Expeditors, a Fortune 500 company that operates in 108 countries, both culture and corporate strategy are aligned on favoring competency over credentials, *whether it is an entry-level job or a top management position*. Expeditors' management and staff proudly cite the case of the company's founding CEO, Peter Rose. He only achieved an eighth-grade education, but he ran the company successfully for 20 years, until 2013, when he retired. During that era, Expeditors enjoyed 80 consecutive profitable quarters under his leadership.

He was not the lone non-graduate in top management. Currently, of the 22 top executives in the company, almost half started at Expeditors without a college degree. "At Expeditors, a degree is desirable; however we do not want a typical HR culture that limits who you can hire. Our approach is: Hire for attitude, train for skill," says Lenora Turner, previously Manager, Global Training Services and currently Director, Opportunity Knocks, at Expeditors, a paid internship program for youth that also has a direct-hire focus for veterans.

A doctrine like that reverberates across the organization. It manifests in a broader set of decisions that affect the culture of the organization. As a result of its hiring approach, Expeditors also grooms and grows talent from within. One of the company's boasts—which it uses on its website to attract even more talent—is that nearly a third of the company's worldwide staff of 16,000 has been with the company for 10 years or more.

This culture supports the core strategy of the organization. As Expeditors' business model is based on managing logistics without investing in its own

assets, the company works closely through a network of vendors that provide the planes, trains, and vehicles to move goods. Expeditors can be viewed in some aspects as a "travel agent for freight." That means some of the top requirements for any job in the company are superior customer service and a high attention to detail. According to Turner: "Our employees move things from point A to point B. It sounds simple, but it is ridiculously complicated due to regulations and customer needs. We have proprietary systems, so no one gets the specific knowledge on how to do the job in college. Instead, we look for people who will care about their customers, work hard, and be great at customer service."

While hiring, Expeditors interviews for applicants' ability to deliver customer service based on 10 critical success factors the company has identified. Every employee then goes through specific training over six months around customer service (including phone skills and communication skills), as well as department-specific training. The rigor does not end there; every year, every employee has to undergo 52 hours of training. While this goal is easy to achieve in the early years, over time, experience and additional training begin to build a pipeline for leadership within the organization. Says Turner: "We are big on promoting from within, we are big on wanting to be a company of unlimited opportunity."

Most employers under-invest in training because they worry about high turnover and losing their investment. At Expeditors, the approach is exactly the opposite. It hires right; invests in people; grows them within the organization; and, as the training becomes more and more proprietary to the way Expeditors does things, locks in its investment. This eventually results in employees staying longer, providing better customer service, and reducing the total cost of employment for the organization.

morale and bolster the belief that the employer has a purpose beyond maximizing profit.

By every measure, degree inflation presents itself as a strategic issue, one that affects an organization's very ability to compete. In the previous chapter, we outlined what employers can do—listing actions that can be undertaken by any manager. In this chapter, we focus specifically on the critical role a CEO can play in combatting degree inflation.

### Apply talent management strategies to middle-skills jobs that are critical for your company

Traditionally, CEOs focus on talent management for senior executives as a part of the broader succession planning process. To the extent middle-skills jobs are a strategic consideration, that discussion is generally limited to the most visible and highly skilled workers. However, as the labor market continues to tighten and the skills gap grows, CEOs will need to apply principles of talent management to a much broader array of jobs.

At Walmart, which has more than 1.5 million employees in the U.S., the search for skilled talent at many levels is seen as a core issue that has direct impact on the company's business model. Recognizing that some traditional tools and signals, such as drug tests and college degrees, are inaccurate measures of true skill or potential, the company has lowered or removed these artificial barriers to entry. Walmart never specifies required education credentials in its job postings, even for management jobs. "If other companies are focused on barriers to entry, that's fine, it's actually a strategic advantage for us. We can unearth diamonds in the rough," says Julie Gehrki, Vice President, Programs, Walmart Foundation.

**DEGREE INFLATION PRESENTS ITSELF AS A STRATEGIC ISSUE, ONE THAT AFFECTS AN ORGANIZATION'S VERY ABILITY TO COMPETE.**

It then grooms talent internally. Currently, 75% of all Walmart store managers joined the company as entry level employees and Walmart has trained more than 225,000 associates through Walmart Academies, an internal training program. Says Gehrki: "There's a large percentage of the country that doesn't always have the same opportunities as others and many people can't afford a degree. There are a lot of people out there with great skills being unfairly judged on whether they have the credentials. So are those credentials really demonstrating value in a way that translates to the business? Or are we setting up artificial barriers?"

### Break down silos within the organization between those who employ and those who hire middle-skills workers

One reason why companies do not track the impact of degree inflation in middle skills jobs is that relevant information about direct and indirect costs, productivity, and retention is either not gathered or is scattered across different parts of the organization. The Human Resources department manages the process of bringing in talent, while managers in operations, sales, production and procurement, live with the consequences of short-sighted recruiting and development policies. CEOs can catalyze the right conversations between the different parts of the organization by insisting that the true costs of degree inflation be documented and analyzed.

It took Swiss Post, a global entity with multiple subsidiaries including an outsourcing service provider, quite a few years to get to that point. The hiccup was that "the solution" the company identified—creating a centralized internship program for non-graduates—did not have the buy-in of top leadership, when it was initially started 14 years ago. But then, seven years ago, a leadership change led to the launch of Swiss Post's Leadership Academy to serve as a resource for talent. It went beyond training in traditional hard skills and began imparting essential skills training—such as communications and teamwork—needed for individuals to excel in their current role and advance in their careers in different parts of the organization. Says Paul Ortega, National Director of Training and Organizational Development at Swiss Post Solutions Inc., North America: "Although the U.S. economy is growing stronger, too many talented young adults struggle to gain access to education, job training and support services needed to bridge the gap towards economic mobility. Throughout the history of business, employees had to adapt to managers and managers had to adapt to organizations. In the future, this will be reversed with managers and organizations needing to adapt to employees. This means that in order to succeed and thrive organizations must rethink and challenge everything they know about work."

What started as a pilot with three young adults has now grown to over 1,300 interns in the U.S. alone. If interns come in without a high-school diploma, they are required to complete their GED by the end of the internship. In-house tutors help interns with literacy, writing, and math skills. Swiss Post's Leadership Academy then teaches them leadership and professional skills. Armed with those skills, graduates of the academy constitute a talent pipeline in various middle skills roles across the company such as concierges, mail clerks, and service associates. Swiss Post looks for talent from this group that can ascend to supervisor or manager roles in the future. While the Leadership Academy is now a supplier for talent across the organization, a good number of Swiss Post interns also get



hired by the company's clients. Says Ortega: "We empower our interns to not just hold a job, but to also build a career."

Out of Swiss Post's 48,000 employees globally, Ortega is the only full-time employee in the entire organization devoted solely to training and development. This is because the company has recognized the value of an environment where all employees participate in the training and development of other employees. Two of the Leadership Academy's top trainers are the Vice-President of Human Resource and the Director of Information Technology, who spend 10% of their time in this area. From the C-suite onwards, Swiss Post employees provide all the training at the Leadership Academy guaranteeing that there is shared responsibility across the organization for developing the next generation of talent.

According to Ortega, the new approach to talent helps the company stay ahead of the competition, attract and retain the best talent and create the organization of the future. Says Ortega: "As a Director of Training and Organizational Development of a global company, I have a responsibility to rethink our traditional structure, how we empower employees, and what they need to remain competitive in a rapidly changing world."

## Before focusing on labor replacement strategies, explore local talent pools

A key question CEOs need to ask is: Do we need new technology to rid us of hard-to-fill middle-skills occupations, or do we need to find new talent pipelines that would make these occupations easier to fill? Companies spend more time doing analysis on the merits of adopting labor-saving technologies than hunting for creative ways to improve their talent pipeline. CEOs can ensure that, when the organization identifies a critical middle-skills gap, the relevant leaders are tasked to find solutions for closing the gap.

At one financial services firm in the Midwest, the company had never faced a problem getting ample applicants for job postings. Eventually, however, the company found itself facing mounting competition in recruiting and retaining call-center personnel, as competition grew from other industries, including retailers and restaurants. When it surveyed departing employees, it learned that those other jobs were viewed as offering more training, better prospects of promotion, and better benefits.

As turnover rose and the call-center positions became hard to fill, the financial services company could have explored ways to automate call-center services or offshore those services. Instead, the company looked inward. A survey showed that, despite the competitive forces, one group of call-center employees consistently yielded above-average performers, and they tended to stay for a long time at the company's call center. It turned out that most of these employees tended to be middle-aged women without a

college degree. Instead of the more typical "exit" interview, the company began conducting "stay" interviews with these call-center employees. It learned that these women were looking for a steady second career; they were not seeking promotions or a career pathway; and they were mature enough to deal with the stress of call-center work without burning out. Says the Director of Talent Acquisition at the company: "These women felt that they found their home here in our company. It opened up a new pathway for us. We worked on a marketing campaign to actually target the demographic and bring in more such people when we did our hiring."

To attract more such middle-aged men and women to apply, the firm changed several legacy hiring practices. It began actively targeting women's magazines and social media that appealed to the demographic. It offered people the option to work from home after they were fully trained. It even experimented with part-time roles at the call center—to offer employees the opportunity to go back to school. According to the Director of Talent Acquisition, even though the company later changed its call-center location for unrelated reasons, the lesson resonated: "The collegial atmosphere of the call center, the ability to solve problems, and to work in a high-intensity atmosphere—these were people that really loved that. It focused us on communicating that you have an opportunity to be here and stay here."

**CEOS CAN ENSURE THAT, WHEN THE ORGANIZATION IDENTIFIES A CRITICAL MIDDLE-SKILLS GAP, THE RELEVANT LEADERS ARE TASKED TO FIND SOLUTIONS FOR CLOSING THE GAP.**

## "Cooperate" for talent, rather than compete for talent

In large and small companies, CEOs have the ability to reach out to other CEOs to collaborate on creating talent pipelines locally, regionally, and nationally. Companies—whether within an industry cluster or a supply chain—are increasingly recognizing that poaching talent is a lose-lose game. Eventually, as more and more companies wake up to the impact of degree inflation, their need for solutions will force them to look outward, where they will inevitably encounter suppliers, competitors, and other related businesses facing the same problems. By working together at the industry level, companies can far more efficiently unknit issues to create better talent pipelines. One such example: collaborating to develop industry-wide credentials for critical middle-skills operations.

JPMorgan Chase, for example, is exploring ways to improve the flow of middle-skills talent by what can be called



“investing in the commons,”<sup>88</sup> that is, creating collaboration between businesses and industries within a region to come together to increase the pool of skilled talent for critical middle-skills jobs. In 2013, JPMorgan Chase launched the first tranche of what has become a \$350 million investment in strengthening workforce systems and career-focused education in the United States and across the world. The New Skills at Work initiative, which includes investments in cities such as Chicago, Columbus, Dallas-Fort Worth, Detroit, Houston, Los Angeles, Miami, New York City, and San Francisco, aims to address the disconnect between what’s being taught in education and training systems and the requirements for middle-skills jobs, which include some post-secondary education but not necessarily a four-year degree.<sup>89</sup> In each city, JPMorgan Chase provides access to the latest data to identify the top target industries with the greatest opportunity for workers to move into middle-skills jobs; partners with local community organizations and education and training providers; and convenes business leaders and other stakeholders in those industries to share the data and work on solutions to close the middle-skills gap. Of note is that this is not done to only focus on financial services jobs—it’s done to focus on all those middle-skills jobs across a range of industries that are critical for that community’s future.

In Houston, for example, JPMorgan Chase partnered with the Greater Houston Partnership (a membership organization that includes more than 2,000 companies from the region) to first understand the scope of the problem. The research revealed that Houston had about 1.4 million middle-skills jobs in 2014, and over the next few years was expected to add more than 74,000 middle-skills jobs a year.<sup>90</sup> But it also revealed a challenge: “855,000 Houstonians aged 25 and older do not have the minimum

credentials for middle-skills jobs.”<sup>91</sup> That led to the creation of a new program—UpSkill Houston, focused on Houston’s seven industries where the middle-skills talent gap is acute: health care; advanced manufacturing; petrochemicals; oil and gas; ports and maritime; utilities; and commercial and industrial construction. With JPMorgan Chase’s support, UpSkill Houston is partnering with nine local community colleges to shape curriculum, update training facilities, and help students understand the opportunity to work in lifetime careers in these industries—without requiring a college degree. JPMorgan Chase is thus rallying the local business community, educators, and policy leaders to come together and develop the middle-skills talent pipelines required in these seven industries.<sup>92</sup>

In his 2016 annual letter to shareholders, Jamie Dimon, Chairman and CEO of JPMorgan Chase, urges his peers to invest in improving America’s education and skills, not just for their own organization’s benefit, but for the common good. Asking businesses to step up to close the middle-skills gap in their communities, Dimon asserts: “Whether they graduate from high school, vocational or training school, or go on to college, our students can and should be adequately prepared for good, decent paying jobs...Career and technical education, specifically, can give young people the skills they need for decent paying roles in hundreds of fields, including aviation, robotics, medical science, welding, accounting, and coding—all jobs that are in demand today...Businesses must be involved in this process. They need to partner with schools to let them know what skills are needed, help develop the appropriate curricula, help train teachers, and be prepared to hire the students.”<sup>93</sup>

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## CONCLUSION

The United States is a competitive location to the extent that companies operating in the U.S. are able to compete successfully in the global economy, while supporting high and rising living standards for average Americans.<sup>94</sup> For thousands of U.S. companies of all sizes, and for millions of Americans from all backgrounds, realizing that vision will require closing the middle-skills gap in the United States.

A college degree is a legitimate aspiration for all, and every effort should be made to remove barriers that impede any young person with the aptitude and motivation to attend. But the failure to earn a college degree should not become a barrier to entering the workforce or bar access to career paths that lead to economic independence. Degree inflation does more than inhibit aspiring workers' prospects of reaching the middle class; it undermines America's competitiveness by constraining growth and consumer purchasing power.

**EMPLOYERS SHOULD TAKE THE LEAD IN ADDRESSING THE SKILLS GAP, IN PART BY REVERSING DEGREE INFLATION.**

The perspective of employers that emerges from this research has important implications for policymakers and educators. They have to recognize that the skills gap originates in the education system. One of the major causes, if not the leading cause, of degree inflation is an employer's perception that workers without a degree are not capable of performing more of today's middle-skills tasks. Policymakers are more likely to advance the income

prospects of aspiring workers by ensuring that there is alignment between the skills required in today's economy and what is taught at high schools, community colleges, and workforce-training programs. Breathing new life into work-based learning experiences, such as apprenticeships and vocational programs, supporting the creation of industry-recognized credentials, and loosening restrictions on the use of federally provided student grants and loans should all be priorities.<sup>95</sup>

But above all, this research underscores how much companies can benefit by being more deliberate about their hiring practices. Employers should take the lead in addressing the skills gap, in part by reversing degree inflation. Millions of Americans are ready and willing to work. They may be young Millennials entering the workforce or older Baby Boomers keen to extend their working years. They may be found in dense urban centers or widely dispersed across rural counties. They may represent some of our society's most vulnerable populations, at risk by race, religion, ethnicity, or even a history of incarceration. By finding ways to attract, hire, and retain such talent, U.S. firms can make a tangible difference in their own ability to compete—as well as offer a lifetime of career opportunity to millions of Americans.

# APPENDIX 1: LABOR MARKET ANALYSIS METHODOLOGY: Calculating the degree gap and number of jobs at risk for degree inflation

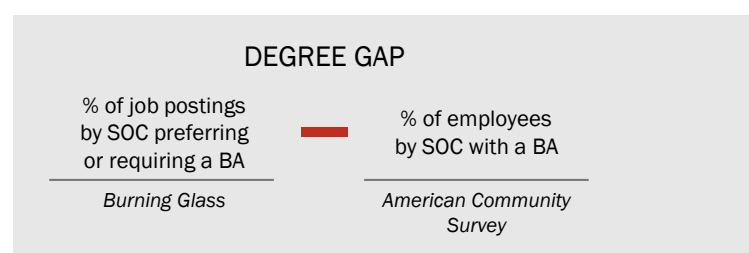
Our operational definition of the “number of jobs at risk for degree inflation” is based on Burning Glass’ credentials gap method from their 2014 report *Moving the Goalposts: How Demand for a Bachelor’s Degree is Reshaping the Workforce*. We started with Burning Glass’ database of 26 million job postings nationwide, that were posted in calendar year 2015. In 25% to 75% of the postings, we identified occupations (defined by the Standard Occupational Classification system) for which a bachelor’s degree is preferred or required. This range indicates differences among employers as to whether a bachelor’s degree is required to fulfill the responsibilities of a job within that occupation. For each of these occupations, we then calculated the difference between the percentage of postings preferring or requiring a college degree and the percentage of employees who have one. (We used Burning Glass’ Summary Tables, which aligned every occupation by SOC code with educational attainment levels sourced from the U.S. Census Bureau, American Community Survey, 2014 one-year estimates.) The former figure indicates employers’ *new* degree preference, while the latter figure is used as an indicator of employers’ *past* degree preference. The resulting “degree gap” is a directional indicator of employer pressure to hire workers with a bachelor’s degree in given occupations. The percent degree gap on its own demonstrates how demand for a four-year college degree in given occupations is changing relative to characteristics of the current workforce.

After calculating the degree gaps for selected occupations, we then went a step further to identify the scale of jobs at risk for degree inflation. We did this by multiplying the degree gap for each occupation by the total number of U.S. workers employed within that occupation. (We used Burning Glass’ Summary Tables, which aligned every occupation by SOC code with employment levels sourced from the 2015 Occupational Employment Statistics.) This index is critical to understanding the potential impact of upcredentialing to a college degree, since occupations that demonstrate very high degree gaps may employ only a small number of workers, while occupations that employ a significant number of workers may demonstrate very low degree gaps. In quantifying the number of jobs at risk for degree inflation within the entire labor market, our goal was not to be exact, but instead to calculate a ballpark number that showed the approximate scale of degree inflation.

As a hypothetical example, imagine that, in the previous year, 50% of job postings for “clerks” required a bachelor’s

degree, while only 10% of existing clerks had a bachelor’s degree. Following our degree gap methodology, we would calculate the difference  $50\% - 10\% = 40\%$ , with 40% being the degree gap for clerks. The 40% indicates the total percentage of the workforce that would now need to have a bachelor’s degree if employers replaced all their current non-degree workers with college graduates. Once 40% is applied against the number of clerks employed, the result of the calculation tells us, theoretically, the number of existing non-degree workers that would potentially be replaced by college degree-holders if all rates (including demand for labor) held constant over time. This number helps us understand how significant this occupation’s upcredentialing practices are with regard to a college degree, relative to other occupations within the U.S. labor market.

To perform calculations over time and across industries, we used Burning Glass’ database of online job postings for 2010–2015, the Bureau of Labor Statistics’ (BLS) Occupational Employment Statistics, and American Community Survey data for 2010–2015 from the U.S. Census Bureau. Please see the “Labor Market Analysis Methodology: Data Sources” appendix for additional information.



## DEGREE GAP



### Assumptions and limitations

There are various caveats associated with using online job postings data for analysis. First, job postings published online do not account for all occupations. Currently, of all the job postings in the U.S., only 60% to 70% are estimated to be online.<sup>96</sup> In addition, online job postings tend to be skewed toward high-skill jobs that require a bachelor's degree, leaving out a significant proportion of middle-skills jobs that are not posted online.<sup>97</sup> In other words, online job postings do not offer a representative sample of the occupations they represent. For example, occupations within the agriculture, forestry, fishing, and hunting sector; post-secondary teaching occupations; and military occupations are under-represented in online job posting data and have been excluded from this analysis.<sup>98</sup>

The Burning Glass "% Requiring a B.A." figure we have used for this report encapsulates job postings where an employer "requires" or "prefers" job candidates with a

bachelor's degree, relative to workers without one. For the purposes of this report, we interpret this metric as a means of capturing the scale of jobs within an occupation for which prospective workers with a bachelor's degree have an economic advantage over workers without one. There are some limitations to this interpretation of the data, given that there will be variances in the extent to which employers will actually fill roles on the basis of a bachelor's degree over other qualifications a worker might possess.

Finally, while the degree gap method attempts to show differences in the educational requirements for an occupation over time, it does not make a distinction between occupations that are becoming more complex and requiring highly skilled labor and occupations that aren't becoming more complex but are still demanding higher credentials. As a result, our aggregate calculations represent the number of jobs at risk of degree inflation.

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## APPENDIX 2: LABOR MARKET ANALYSIS METHODOLOGY: Data sources

To analyze the domestic labor market, we used data from a variety of sources: Burning Glass’s database of online job postings, the Bureau of Labor Statistics (BLS) Occupational Employment Statistics, and American Community Survey data from the U.S. Census Bureau. There are a small number of idiosyncrasies regarding the data we used for each analysis, and we’ve outlined them below.

### Summary

Each of the analyses uses Burning Glass job postings data collected nationwide from full year 2015. For the time series analysis, we also included Burning Glass data from 2010 to 2014 so that we could identify changes in credential requirements over time.

For analysis by occupation and major occupational group, we used the American Community Survey 2014 data provided in Burning Glass’ Summary Tables for job postings data from full year 2015. We also used Occupational Employment Statistics from the BLS included in the Burning Glass Summary Tables, which provided data on the number employed by occupation for 2015 and the projected national change in employment, 2016–2026.

For analysis of occupations cut by industry we used American Community Survey 2010–2014 five-year estimates for educational attainment and employment figures to ensure adequate sample sizes.

We then reexamined each industry for the percentage of job postings preferring or requiring a bachelor’s degree by occupation. We used the established 25% to 75% range and filtered out any occupations where fewer than 25% and more than 75% of employers in that industry preferred or required a bachelor’s degree or higher. Employer preferences by industry yielded different numbers than the aggregated nationwide occupational data. That is, for a given occupation some industries may have preferred or required bachelor’s degrees at a higher rate than others. For instance, while 70% of job postings overall preferred or required a degree from First-Line Supervisors of Office and Administrative Support Workers in 2015, this requirement was 64% and 90% in the Construction and Information industries, respectively.

Similarly, we segmented educational attainment and employment data by industry and occupation to calculate the percentage of workers with a bachelor’s degree. As a result, the degree gap and jobs at risk figures varied when looking at the national versus industry-segmented data.

For analysis of occupations over time, we used American Community Survey 2010–2015 one-year estimates for educational attainment and employment figures.

### In-text citations by analysis

#### Industry analysis

- Burning Glass Technologies’ database of online job postings for 2015; accessed via Burning Glass Technologies, “Labor Insight Real-Time Labor Market Information Tool,” February 2, 2017.
- U.S. Census Bureau, American Community Survey, 2010–2014 five-year estimate; IPUMS-USA, University of Minnesota, [www.ipums.org](http://www.ipums.org).

#### Occupation and major occupational group analysis

- Bureau of Labor Statistics, U.S. Department of Labor, 2015 Occupational Employment Statistics; accessed via Burning Glass Technologies, “Labor Insight Real-Time Labor Market Information Tool,” February 2, 2017.
- Burning Glass Technologies’ database of online job postings for 2015; accessed via Burning Glass Technologies, “Labor Insight Real-Time Labor Market Information Tool,” February 2, 2017.
- U.S. Census Bureau, American Community Survey, 2014 one-year estimate; accessed via Burning Glass Technologies, “Labor Insight Real-Time Labor Market Information Tool,” February 2, 2017.

#### Time series analysis

- Burning Glass Technologies’ database of online job postings for 2010–2015; accessed via Burning Glass Technologies, “Labor Insight Real-Time Labor Market Information Tool,” February 2, 2017.
- U.S. Census Bureau, American Community Survey, 2010–2015 one-year estimates; IPUMS-USA, University of Minnesota, [www.ipums.org](http://www.ipums.org).

## APPENDIX 3: LABOR MARKET ANALYSIS METHODOLOGY: Occupation code crosswalk

To complete the labor market analysis, we created a crosswalk for occupation-level data between the following two data sources:

- Burning Glass Technologies’ database of online job postings for 2010–2015; accessed via Burning Glass Technologies, “Labor Insight Real-Time Labor Market Information Tool.”
- U.S. Census Bureau, American Community Survey, 2010–2015 one- and five-year estimates (for geography, industry, and time series data); IPUMS-USA, University of Minnesota, [www.ipums.org](http://www.ipums.org).

Burning Glass job posting data are reported at the “Detailed Occupation” level (e.g., SOC 12-3456) with approximately 834 unique occupation codes. ACS data, including educational attainment, are generally reported at the “Broad Occupation” level (e.g., SOC 12-345X), at about 450–500 unique occupation codes. The number of codes varies year over year, depending on respondent sample sizes and minimums required for confidentiality.

To match occupations across the two datasets, we aligned the detailed occupation codes from Burning Glass with their corresponding broader occupation codes, as reported by the American Community Survey.

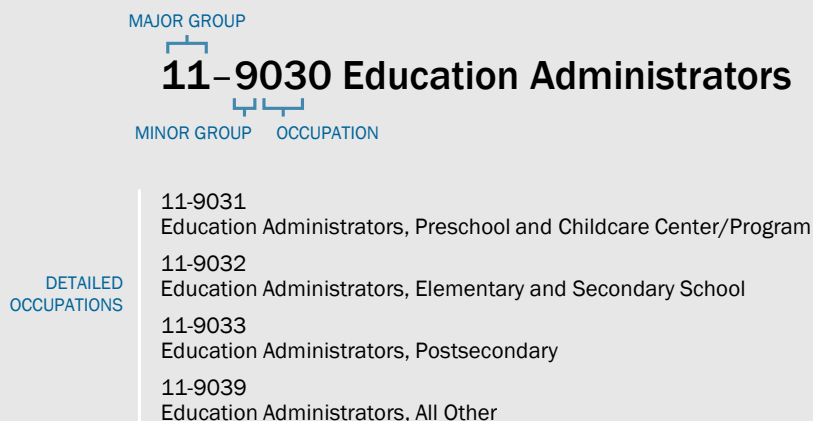
Example: The ACS reports data for Chief Executives and Legislators with the code 11-10XX, while Burning Glass provides the following more detailed codes:

- Chief Executives (11-1011)
- Legislators (11-1031)

### EXAMPLE

**ACS**  
471 codes

**Burning Glass**  
834 codes



Source: Bureau of Labor Statistics Standard Occupational Classification System



## APPENDIX 4: EMPLOYER SURVEY METHODOLOGY

The 2016–2017 employer survey was designed by Accenture, Grads of Life, and Harvard Business School researchers and fielded by a third-party firm. The survey investigated employer hiring practices for middle-skills jobs across the U.S. The survey also explored employer perceptions of the performance outcomes of middle-skills workers, relative to workers with college degrees.

The field period for the survey was December 16, 2016, to January 13, 2017. The survey’s 600 respondents represented businesses with operations in the United States from the 20 major NAICS sectors, with heavy representation from health care and social assistance, manufacturing, and

finance and insurance. Respondents represented an even spread across the Northeast, Midwest, South, and West regions of the United States. Of the respondents, 40% were Hiring Managers/Team Leads, 25% were HR Managers, and the remaining 35% were CEOs, SVPs/Heads of HR, VPs/Directors of HR, and Recruiters. More than one-third of the participating companies had revenues of more than \$1 billion. Almost one-third of respondents represented companies with between 1,000 and 9,999 employees, and one-fifth had 10,000 or more employees. The margin of error was +/-4 percentage points (95% confidence intervals).

### FINAL SURVEY RESULTS – RESPONDENT PROFILES

The following analysis summarizes data from the final data set.

#### CURRENT NUMBER OF RESPONDENTS

**600/600**

- Confidence interval: 95%
- Margin of error: +/- 4%

#### Headcount

Small (50-99)	24%
Small to Mid-Size (100-999)	25%
Mid-Size (1,000-9,999)	32%
Large (10,000+)	20%

#### Job Title

CEO	8%
Hiring Manager/Team Lead	40%
HR Manager	25%
HR VP/Director	15%
Recruiter	5%
SVP of HR/Head of HR	7%

#### Industry

Health Care and Social Assistance	13.83%
Manufacturing	11.83%
Finance and Insurance	9.83%
Information Technology, Communications, and Media Publishing	9.17%
Retail Trade	7.33%
Construction	6.50%
Professional, Scientific, and Technical Services	6.50%
Educational Services	5.00%
Transportation and Warehousing	4.00%
Utilities	3.83%
Wholesale Trade	3.67%
Public and Government Administration	2.83%
Management and Companies and Enterprises	2.67%
Accommodation and Food Services	2.50%
Administrative and Support Services	2.33%
Arts, Entertainment and Recreation	2.00%
Real Estate and Rental and Leasing	2.00%
Mining, Quarrying, Oil and Gas Extraction	2.00%
Agriculture, Forestry, Fishing and Hunting	1.33%
Other services (including repairs, maintenance and personal care)	0.83%
<b>TOTAL</b>	<b>100.00%</b>

## ENDNOTES

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