



# *An* EVOLVING ROLE *for* COLLEGE

*Will four-year  
degrees become less  
of a gateway for  
high-paying jobs?  
Should they?*

**BY NEERAJA DESHPANDE**

**T**here are 165.2 million student loan accounts in the United States that hold an aggregate student debt of \$1.57 trillion, a historic high. On its own, this situation might be fine: If students take out loans to finance an education they otherwise would not be able to afford, and if this education provides graduates with better employment prospects and an increased wage that allows them to repay their student loans, then the system is working.

What's concerning is that while a college wage premium exists for bachelor's degrees, it has been stagnating.

According to researchers at the Cleveland Fed, all growth in real wages for bachelor's degree holders since the 2000s was accounted for by those who also have a master's degree. Meanwhile, the wages of the bottom 60 percent of college graduates have actually fallen by 2.4 percent between 2000 and 2018, according to analysis by economist Elise Gould of the Economic Policy Institute. (See chart.) Simply put, college, with rising debt and falling payoffs, may be a shakier investment today than it has been in the past.

Some firms are starting to see degree requirements as needlessly

prohibitive and believe that dropping degree requirements for some positions can actually be a net advantage to their bottom lines. Moreover, especially in light of the COVID-19 pandemic's disruptions to labor markets, building a more open labor force for all has become a central aim of policymaking — the Federal Open Market Committee, for instance, has said in its 2020 Statement on Longer-Run Goals and Monetary Policy Strategy that maximum employment is “a broad-based and inclusive goal.” What is the role of higher education in a more inclusive labor force?

### COLLEGE AND WORK: A HISTORICAL PERSPECTIVE

While the importance of obtaining a university education in order to get a well-paying job is often perceived as a distinctly modern phenomenon, the American university's role in students' labor market preparedness began as far back as the 19th century. Advances in science as well as growing public interest in the social problems wrought by industrialization increased the returns to academic specialization along with the number of subjects that universities offered. By the end of the 19th century, universities shifted from being institutions of teaching to being institutions of teaching and research, giving them the capacity to grow their programs. Universities then began to supplant professional institutions, such as medical schools and law schools, that used to stand independently of the university system and usually did not require any college education prior to entry.

Informal apprenticeships that used to suffice as professional training were progressively deemed inadequate over the course of the 20th century. Scientific advancement, state credentialing requirements, and a greater desire for reputational legitimacy among professional fields made formal, academic education the default for anyone desiring to enter professions like medicine, dentistry, pharmacy, engineering, and law. Eventually, a four-year degree became a prerequisite to enter professional school.

There is, then, a historical precedent for today's pattern of employers

### Many College Grads Have Seen Wage Declines

Cumulative percentage change since 2000 in real hourly wages of college-educated workers, by wage percentile



NOTE: Sample based on workers with only a four-year college degree.

SOURCE: Economic Policy Institute analysis of Current Population Survey Outgoing Rotation Group microdata from the U.S. Census Bureau.

requiring higher and higher levels of formal education for jobs that previously did not require it. The primary difference between then and now is that the rising credential requirements that were once limited to professional careers have now spread to nearly all white-collar careers, a phenomenon that Harvard Business School's “Managing the Future of Work” project has labeled “degree inflation.”

The project's 2017 report, *Dismissed by Degrees: How Degree Inflation Is Undermining U.S. Competitiveness and Hurting America's Middle Class*, found that middle-skill positions — like those of secretaries, clerks, and sales representatives — that have been seen, culturally, as pathways to middle-class life, now mostly require college degrees, despite not having required them in the past. Bachelor's degree attainment has persistently climbed over the decades, having risen more than eightfold between 1940 and 2019, from 4.6 percent of the U.S. population to 36 percent.

Criticism of hiring practices that rely on college degrees has historical precedent too. As far back as 1970, University of Pennsylvania sociologist Ivar Berg wrote in *Education and Jobs: The Great Training Robbery* that workers were overeducated relative to their actual productivity gains, which meant society was overinvesting in

education. Likewise, in 1999, Stanford University historian of education David Labaree argued in *How to Succeed in School Without Really Learning: The Credentials Race in American Education* that social mobility, not learning, had become the primary goal of educational attainment, distorting education itself from a public good, to be shared by all, to a private good, reserved for each individual.

Two decades later, Labaree says the current educational system, for better and for worse, is a meritocracy. “The hierarchy is not just defined by who is capable, but the rewards are so much higher for being just a notch above other people,” he says. In other words, many of today's social and financial returns to college come from the competitive edge over non-college educated workers that college-educated workers gain from their degrees.

### WHERE THE COLLEGE PREMIUM COMES FROM

Despite stagnation in the college wage premium, it still exists and remains large. The field of economics has two theories as to why: human capital and signaling.

The idea of human capital was developed by economists Gary Becker, Jacob Mincer, and Theodore Schultz in the late 1950s and early 1960s.

Human capital functions much like regular capital, but instead of machines or natural resources, human capital is the stock of human ability, knowledge, and, more generally, the investments that people make in themselves and in each other — investments like education. If a well-prepared student goes to college, studies something that the labor market demands, and graduates with a degree, human capital theory states that his or her productivity will increase as a result of that education, which explains why his or her wage is higher than that of someone with only a high school diploma.

Signaling theory presents a perhaps less optimistic view of college education's effect on workers' productivity gains, in which the college premium is created less by the instructors than by the admissions office. Pioneered by economists Michael Spence, Kenneth Arrow, and Joseph Stiglitz, the signaling explanation of the college premium says that college completion has less to do with the attainment of certain skills or knowledge, and more to do with a credential that points to, say, competence, intelligence, timeliness, or motivation, among other attributes — traits that are valued by employers but difficult to assess directly. Employers may view a degree as a good, simple screening mechanism for these unobservable, and its primary usefulness, under this explanation of the wage premium, lies in its ability to provide a clear signal of traits that the worker may have already had before setting foot on campus.

If human capital explains the returns to education, the best societal response will likely be to invest in more college education, so that the workforce is more productive. Wellesley College professor of economics Philip Levine says that while there may be some signaling in labor market outcomes, a “very large component of labor market outcomes is the human capital attainment associated with education,” from preschool and kindergarten right through college, so the United States should invest more in education across the board. “The skills that are required by the modern workforce involve more sophistication than what a manual labor job would require,” he points out.

A degree provides requisite sophistication, meaning graduates gain that additional human capital they otherwise would not have without the degree. “The fact that this means more people need to go on to get more education is a market outcome.”

Conversely, if signaling explains the returns to education, the societal response should be to invest less in higher education, so that people don't find themselves trapped in expensive and time-consuming arms races for higher and higher levels of credentials. As Labaree notes, college is expensive, both in dollars and in time. “One issue is the huge investment in time at the age when you're actually going to be a productive member of the workforce. But the other problem is that as you move up the scale of education, from elementary school to college, it costs more and more to educate you.”

Ana Hernández Kent, a senior researcher for the Institute for Economic Equity at the St. Louis Fed, points to research on degree requirements during recessions to make the case that there is, in fact, a large amount of signaling going on in labor markets. “In times when the labor market has a little more slack, qualifications like education begin to be required more and more.” But in a tighter labor market, she notes, “Employers tend to drop those educational qualifications for the exact same jobs. So is it really the education that employers are interested in?” she says. “Or is it really a skill set for which education is acting as a proxy? I think workers would be better served across the board if employers could figure out what skills they need for the job instead of trying to use education as a proxy.”

It may also be the case that colleges are simply providing the skills education that employers themselves used to provide. Students are mostly choosing to major in areas that employers are interested in: The number of degrees awarded in fields like computer science and law enforcement has shot up in recent years, while the liberal arts have diminished in their prominence. In his 2012 book, *Why Good People Can't Get Jobs: The Skills Gap and What Companies Can Do About It*,

University of Pennsylvania Wharton School professor of management Peter Cappelli argued that the so-called skills gap between the needs of the employer and the abilities of the applicant pool exists in large part due to employers not investing in the employee training that was fairly commonplace in the recent past. That said, an employee spending all of his or her career with the same employer was also fairly commonplace in the recent past — that's far less common today, Capelli noted.

“What's interesting about training in this context is that there's specific training versus general training,” Levine explains. “If your employer teaches you how to use the firm's proprietary software, and you're never going to be able to use that anywhere else, your employer should pay you for that specific training.” And they have an incentive to do so, he notes.

“But with general training,” he continues, “if you can learn how to code with, say, Python, your employer is never going to train you for that because they'll just train you, and you'll leave to use those skills elsewhere.” It follows that college degrees may very well be the most efficient mechanism by which to match the labor supply of workers with the demand for labor from employers, if firms are, by and large, primarily looking for general training.

## A SHIFT AWAY FROM DEGREES?

What's clear amid all this discussion is that there is no easy answer. No one can say for sure whether the college wage premium is mostly driven by college graduates' human capital acquisition while getting their degrees, or whether it is mostly driven by signaling difficult-to-observe characteristics. By most economic accounts, both explanations drive the college wage premium in differing capacities and to differing extents. But regardless of which explanation dominates, there might be some career paths emerging that shelve degree requirements. Opportunity@Work, for example, is a nonprofit that advocates firms hiring non-college educated workers who are “skilled through alternative routes” (STARs), such as military service, bootcamps, micro-credential programs,



community colleges, trade schools, and apprenticeships. Citing “prohibitive costs,” “crippling debt,” and “education deserts” (locations where there is limited access to college), the organization states on its website, “By excluding candidates without four-year college degrees, employers overlook millions of Americans who are [STARS] and have the valuable skills, talent, and drive to succeed in today’s workforce.”

Similarly, Microsoft-owned LinkedIn started a new initiative in March called Skills Path, with the tag line, “A new way to help companies hire for skills.” In the social media platform’s press release, Hari Srinivasan, a LinkedIn vice president, wrote that “by taking a skills-based approach to opportunity we can remove barriers for candidates that might not have the degree or network, while also increasing the size of employer talent pools, often letting them pinpoint quality applicants for hard-to-fill roles.”

If a four-year college degree nowadays signals for many jobs what a high school diploma used to signal — maturity, competence, and drive, among other desirable traits — alternative routes could, at least in theory, signal those same traits at a lower individual and societal cost while potentially allowing skilled, but non-college educated, people to attain well-paying jobs for which they are otherwise qualified. Among those routes are apprenticeships and similar job-based programs in which employers can observe workers’ traits before moving them up. A recent National Bureau of Economic Research working paper about STARS by Peter Blair of Harvard University’s Graduate School of Education, along with co-authors, found that of the 16 million non-college educated workers with skills for high-wage work, 11 million workers, whom they termed “Rising STARS,” are employed in middle- to

low-wage work. The authors concluded that “there is a potentially vast pool of [non-college educated] skilled labor for US employers.”

Is anyone expanding hiring from this pool? According to January 2020 data from Glassdoor, a job search website, firms like Google, Apple, and Hilton have recently dropped degree requirements for some jobs. Kenneth Frazier, the CEO of Merck & Co., a Kenilworth, N.J.-based pharmaceutical company, told the *Wall Street Journal* in May, “It’s really important for us to recognize that because people haven’t had an opportunity early in their lives, it doesn’t mean that they can’t make a real contribution to your company.” Likewise, IBM’s chief human resources officer, Nickle LaMoreaux, noted in an interview for the website of the management consulting and polling firm Gallup that half of IBM’s jobs as of April did not require a degree. “When you break down what people actually do every day, whether it’s software development, or digital design testing, or security, or even artificial intelligence, you have to ask if that role needs a four-year degree or it’s a set of skills that’s needed,” she said.

Yet in the immediate future, there isn’t any indication that most companies are dropping four-year degree requirements, even if some are. With 55 percent of highly paid jobs going to workers with bachelor’s degrees, a college education is still probably the best decision for well-prepared students. From a societal perspective, though, the question remains whether this burden on individuals is equitable and socially efficient.

Moreover, society might want to collectively invest in college for reasons that are not explicitly tied to labor market outcomes. Beyond human capital attainment that results in productivity gains, and beyond a signaling mechanism that helps firms

hire efficiently, higher education of course has higher purposes in the eyes of its defenders. Columbia University professor of American Studies Andrew Delbanco is one of many who has made this case, arguing in his 2012 book *College: What It Was, Is, and Should Be* that the American university’s purpose is to aid students in self-discovery and to teach them how to think. For Delbanco, college ought to be “an aid to reflection, a place and process whereby young people take stock of their talents and passions and begin to sort out their lives in a way that is true to themselves and responsible to others.” Additionally, college-educated people are more likely to vote and to get married, and are less likely to commit crime, all of which might be socially desirable behaviors and outcomes. (Of course, the line of causation might run in the other direction: People more inclined in those directions might also be the ones most likely to opt for college.) Insofar as higher education carries some nonpecuniary benefits, society may want to continue investing significantly in college education and to encourage more people to get degrees.

Any considerations as to what college’s role should be in labor markets — and indeed, as to what college’s role should be in society at large — will involve coming to terms with real financial and social trade-offs, whether the United States as a whole invests more, invests less, or continues to invest the same amount in higher education. Making informed decisions about degree requirements and creating an education system that better supports workers’ future outcomes are likely going to be concerns of broader relevance and public discussion as policymakers and citizens alike seek better labor markets that work for all. **EF**

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## READINGS

Athreya, Kartik. “Why Do College Graduates Earn More?” *Econ Focus*, Second Quarter 2015.

Blair, Peter Q., et al. “Searching for STARS: Work Experience as a Job Market Signal for Workers without Bachelor’s Degrees.” National Bureau of Economic Research Working Paper No. 26844, March 2020.

Goldin, Claudia, and Lawrence F. Katz. “The Shaping of Higher Education: The Formative Years in the United States, 1890 to 1940.” *Journal of Economic Perspectives*, Winter 1999, vol. 13, no. 1, pp. 37-62.