

<https://www.bloomberg.com/opinion/articles/2022-02-04/2022-worker-shortage-u-s-needs-to-boost-top-talent-to-stack-up-to-china>

Opinion

Adrian Wooldridge

America Is Facing a Great Talent Recession

If the U.S. is to stand up to a resurgent China, it needs to think as hard about finding top talent as it does about promoting equity.

Another monthly jobs report finds employers across the U.S. still crying out in vain for workers. Goods are undelivered for want of truckers. Code is unwritten for want of coders. Hotel beds are unmade for want of bed makers, with both Hilton Worldwide Holdings Inc. and Marriott International Inc. dispensing with automatic daily housekeeping at their nonluxury properties. Even the Internal Revenue Service's struggle to have enough people to deal with taxes on time is bordering on the apocalyptic.

The obvious reason for all of this, of course, is the coronavirus pandemic, supercharged by the omicron strain. Yet in many ways the impact of the Covid-19 crisis on the workforce, whether through workers calling in sick or choosing to drop out, merely highlights problems that were already in place or at least on the horizon. What has been eagerly dubbed the Great Resignation has hastened a demographic squeeze that was the inevitable consequence of the retirement of the baby boomers and the decline in the birthrate.

The deeper problem is that the talent model that has served America so well, especially since World War II, is breaking down. Korn Ferry, a human resources consultancy, warns that "the United States faces one of the most alarming talent crunches of any country" in its [20-country study](#). The institutions, practices and mind-set that enabled the U.S. to create a workforce capable of powering the world's biggest and most dynamic economy are threatened by decay, disarray and disruption. And that is happening while China, a rival hostile power that poses an even greater challenge than the USSR once did, pulls ahead of it in world-defining technology. Once galvanized to action by the USSR's launch of Sputnik, the U.S. now witnesses the equivalent of the launch of a dozen Sputniks from Beijing every year, with no corresponding response.

In that respect, the Covid pandemic provides both a timely warning and a spur: a warning of what happens to a historically rumbustious economy when workers become scarce, and a spur to fixing America's long-term talent and labor-supply problems while there is still time.

The case for action is particularly urgent with top talent. After so many decades of economic and military supremacy, the U.S. has fallen into the habit of thinking that it has easy access to all the intellectual excellence it needs. The country's great universities will always be able to find geniuses hidden in the Great Plains or the swarming cities, the thinking goes, and if, by some chance, there aren't enough of those, then it can always raid the rest of the world. Yet today the demand for top talent in the corporate world and elsewhere is exploding just at a time when the supply is threatened, as the public school system allows exceptional

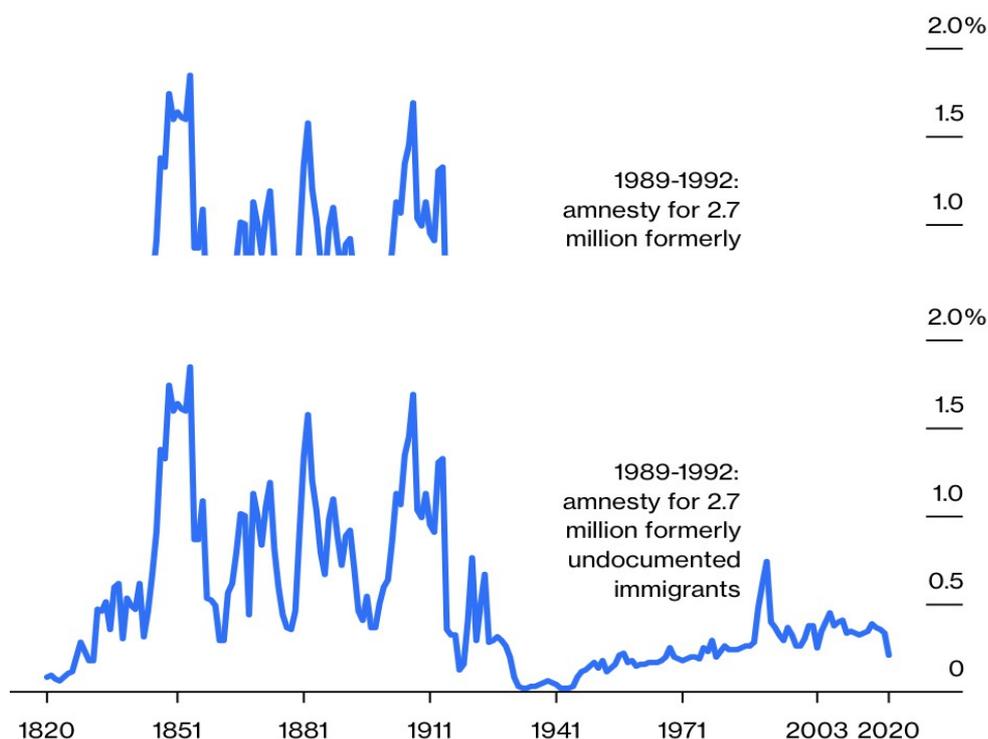
talent to molder and other countries do more to retain their own exceptional performers. The country needs to add a new strand to educational reform: not just giving a helping hand to the poor or average performers but also identifying and nurturing the superstars who will help the U.S. beat back the challenge from Xi Jinping’s China.

The American Talent Economy..

In 1958, historian David Potter published a book whose title captured the spirit of his country, at least as it appeared to the prosperous majority: “People of Plenty.” The “plenty” refers not only to the U.S.’s relative material abundance compared with other countries but also to demographic and educational abundance: America has thrived in the long term because of a generous supply of both people and skills, delivered by a combination of high fertility and immigration. In the 19th century, the population multiplied by a factor of almost 15, to 76 million from 5.3 million. By 1890, some 80% of New York’s citizens were immigrants or the children of immigrants, as were 87% of Chicago’s.

Two Centuries of Immigration Flows

New legal permanent residents as a percentage of U.S. population



Sources: U.S. Department of Homeland Security; U.S. Census Bureau
 Note: Fiscal years for immigration figures; 1976 includes the 15 months from July 1, 1975 to Sept. 30, 1976 because the end date of fiscal years changed from June 30 to Sept. 30. Share of population calculated using 10-year census figures.

There have been exceptions to this pattern. The [1924 Immigration Act](#) choked off immigration for decades, and the Great Depression [suppressed fertility](#) sharply. But they have not been enough to block the swelling demographic tide. The postwar baby boom sent the population soaring once again. In the 1960s, women began to enter the workforce in large numbers. In the 1970s, high immigration resumed. From the 1980s onward, a succession of presidents celebrated demographic abundance.

The U.S. led the world in three great revolutions in education — creating a mass primary school system in the 19th century, and then mass high school and university systems in the 20th. The proportion of 17-year-olds who completed high school rose from 6.4% in 1900 to 77% in 1970. The proportion of high school graduates who enrolled in universities rose from 45% in 1960 to 63% in 2000. Claudia Goldin and Lawrence Katz of Harvard University [estimate](#) that the mean educational attainment of the U.S. workforce increased by 0.7 years per decade over the nine decades from 1915 to 2005, and that the improvement in educational attainment contributed almost 0.5 percentage points per year to the growth of productivity and output per person.

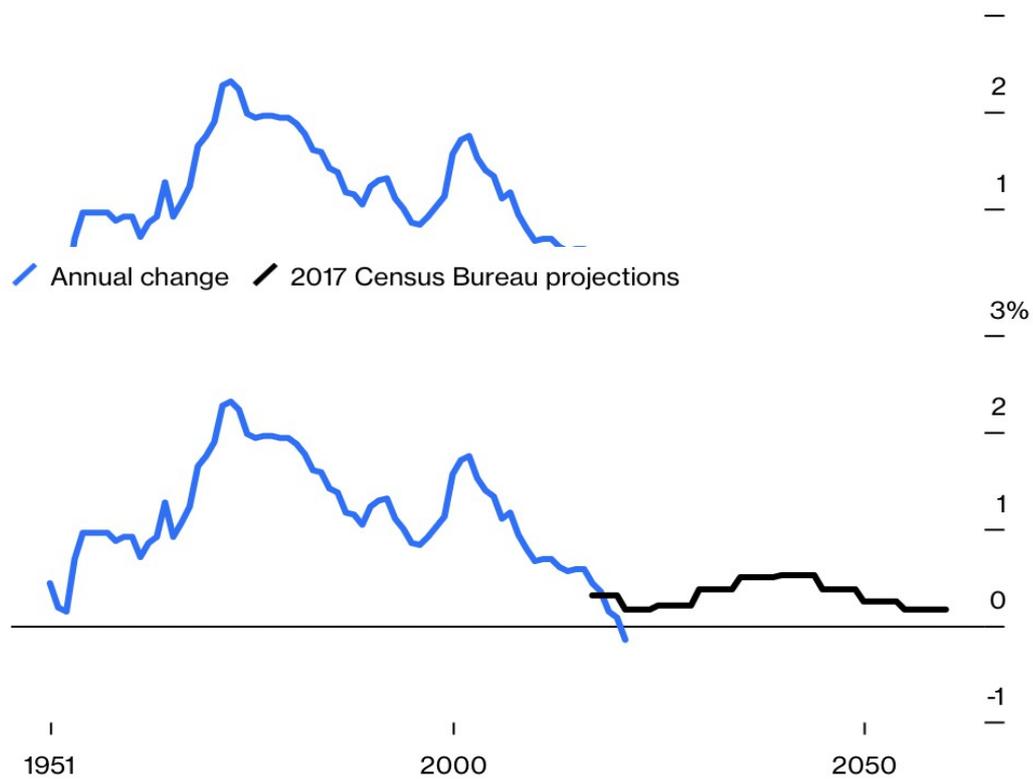
America was in a strong position in job-related skills, particularly in comparison with the world's former hegemonic power, Great Britain, where the educational world had an ingrained disdain for all things vocational. America's leadership in the creation of a mass educational system stood it in good stead for the industrialization of the late 19th century and the mass-production boom of the postwar era. America also had a due respect for practical education. Legislation in 1862 and 1890 established land-grant colleges, which were focused on science, engineering and agriculture. Technology- and science-centered institutions such as the Massachusetts Institute of Technology were designed to rival elite colleges such as Harvard in the practical world.

America's advantage was particularly marked in the realm of high-level cognitive skills, thanks to its elite universities and its ability to attract intellectual stars from across the world. It pulled off the remarkable (some thought impossible) feat of creating a mass university system while also perfecting the German model of the elite research university — creating what Clark Kerr, the president of the University of California from 1957 to 1967, called a multiversity. It also [turned immigration policy into a tool of intellectual supremacy](#). Great universities like Berkeley attracted the world's best scholars through the sheer force of their excellence, while the federal government went out of its way to recruit scientists who could contribute to military research, even to the extent of getting its hands on former Nazi scientists after World War II.

... Hits the Buffers

The age of plenty is now drawing to a close.

The United States is belatedly following the rest of the rich world into a low-fertility future. The 2020 census showed that the previous decade had the slowest growth rate since the Great Depression. And the 2020s don't look as if they will be any better: The population grew [by just 0.1% in 2021](#), the slowest rate since the nation's founding.

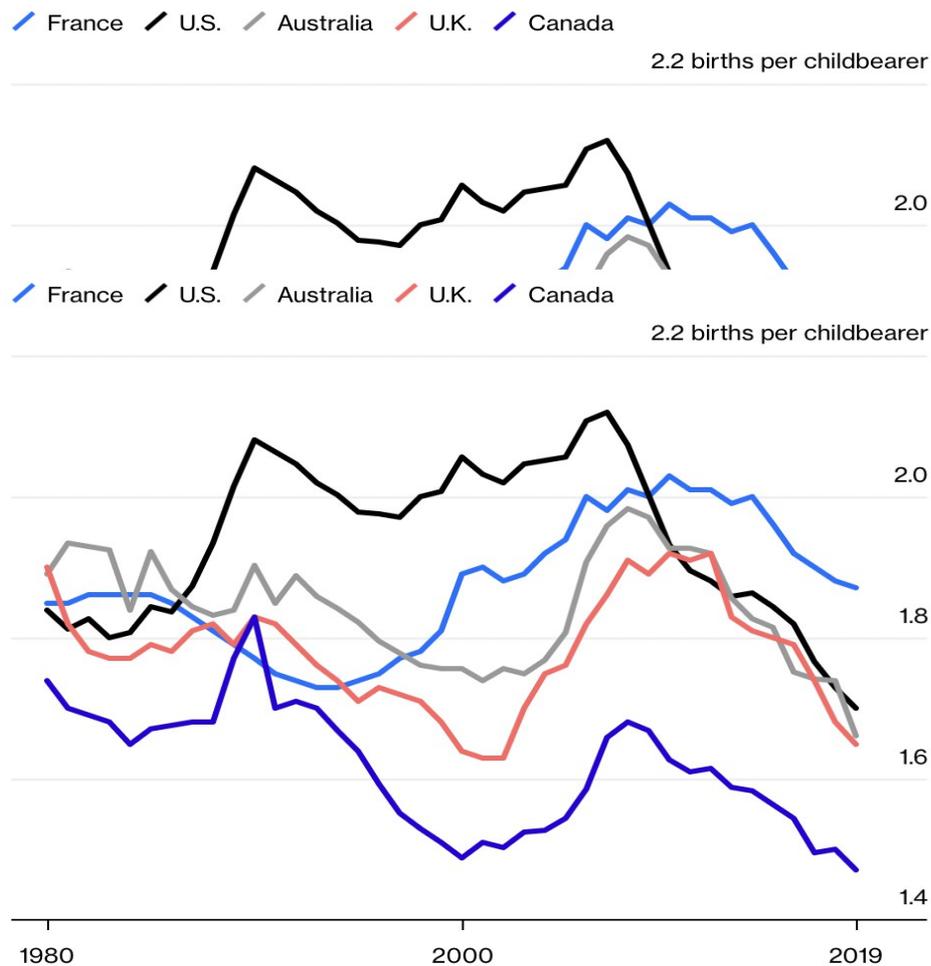


Sources: Calculations based on data from U.S. Bureau of Labor Statistics and U.S. Census Bureau
 Note: Annual change is averaged over three years and are for the civilian noninstitutional population; projections are for total 20 to 64 population.

There is little sign that the waning of the pandemic will lead to a new age of optimism and surging fertility like in the 1950s. Younger Americans are opting not to have children, whether because the cost of child-raising is so prohibitive or because they are worried about climate change. Indeed, San Francisco, the capital of the new tech economy, reportedly [has far more dogs than children](#).

Fewer Babies On the Way

Since 2010, the U.S. has lost its fertility advantage



Source: World Bank

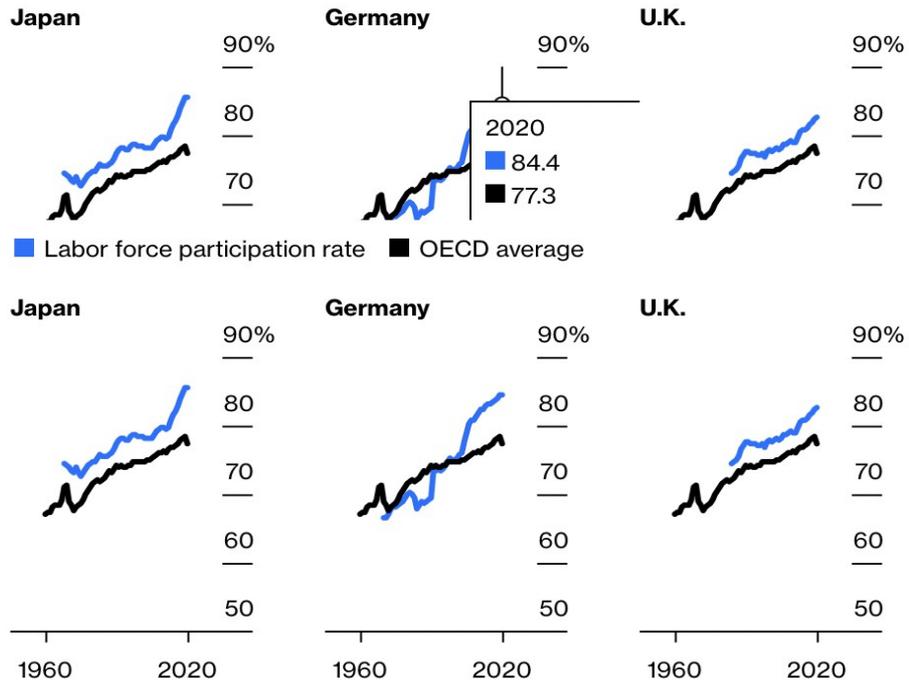
Compounding the fertility problem is the withdrawal of so many working-age people from the workforce. America’s **total civilian labor force participation rate**, which measures the share of working-age Americans who are either employed or looking for work, declined from 67% in 2000 to 62% in December 2021. By contrast, Britain’s rate stands at 77% and Germany’s at 76%. “We lag all of our peers in labor force participation now,” Federal Reserve Chair Jerome Powell told a Senate banking committee meeting in July 2021, “which is not where we want to be as a nation.”

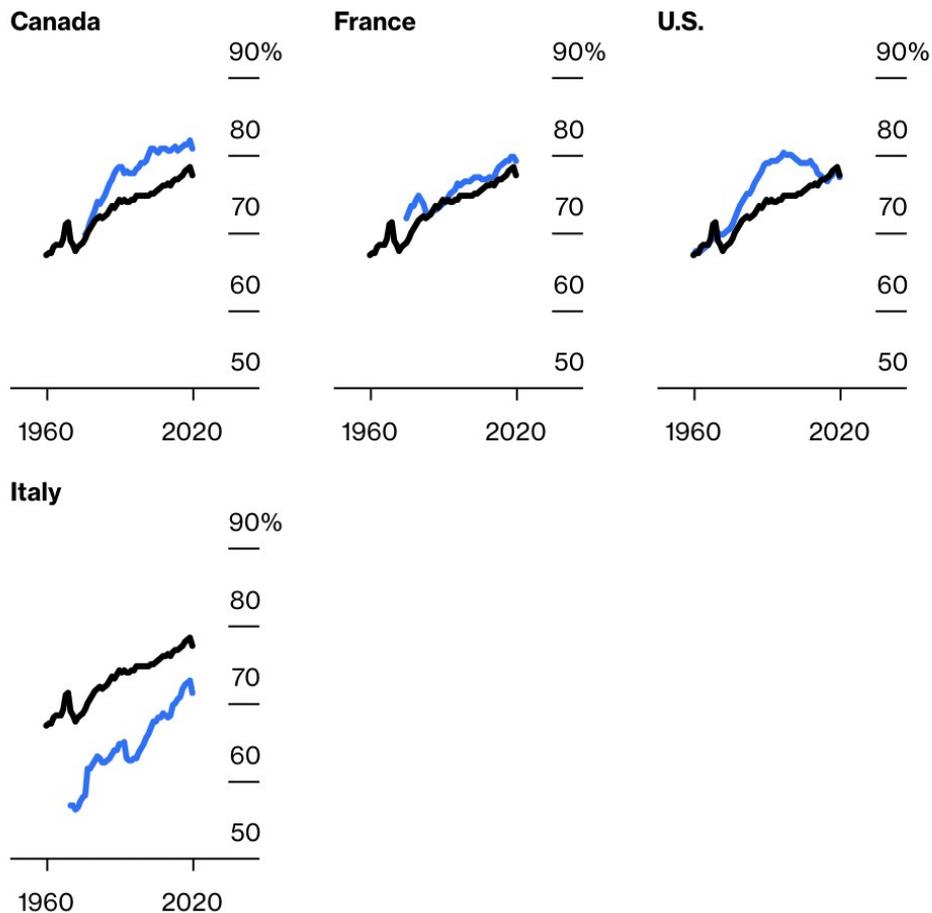
Less of the U.S. Is Working Than Its Peers

Percentage of 25 to 64-year-olds employed or looking for work

Percentage of 25 to 64-year-olds employed or looking for work

■ Labor force participation rate ■ OECD average



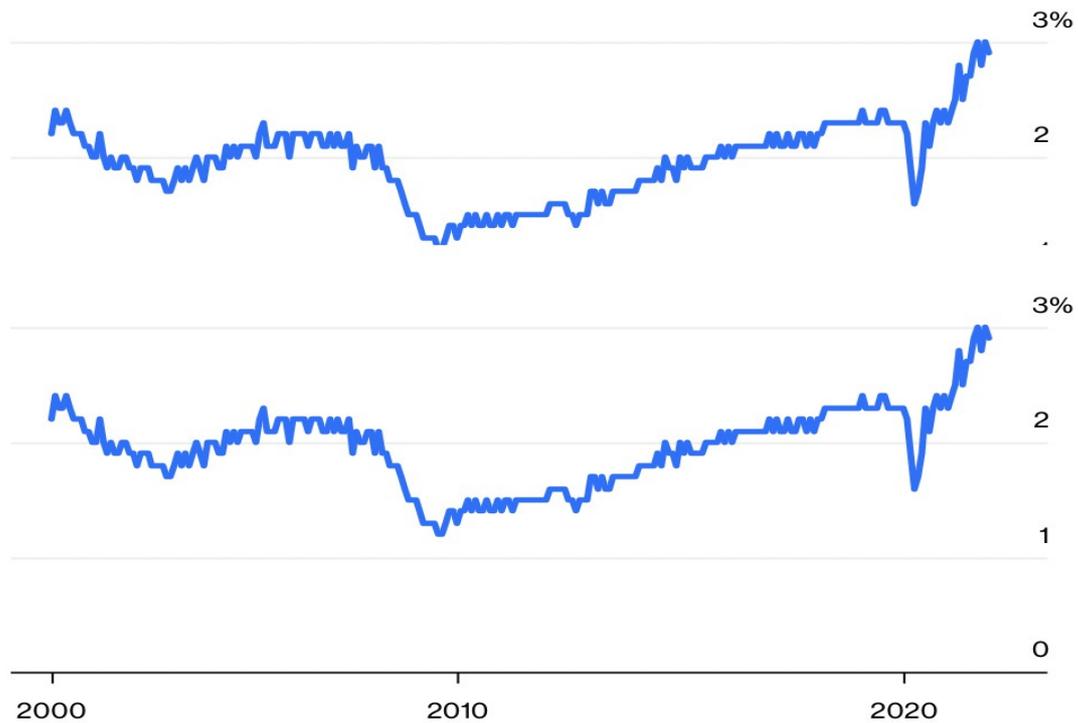


Source: OECD

A key driver of this depressing trend is the choice by so many men to [drop out of the labor force](#). In 1961, the labor force participation rate for prime-age men was 97%; today it is 88%, lower than during the Great Depression. In other words, 1 in 10 men ages 25 to 54 is neither employed nor looking for work.

A Whole Lot of Quitting Going On

Quits as a share of nonfarm payroll employment, seasonally adjusted

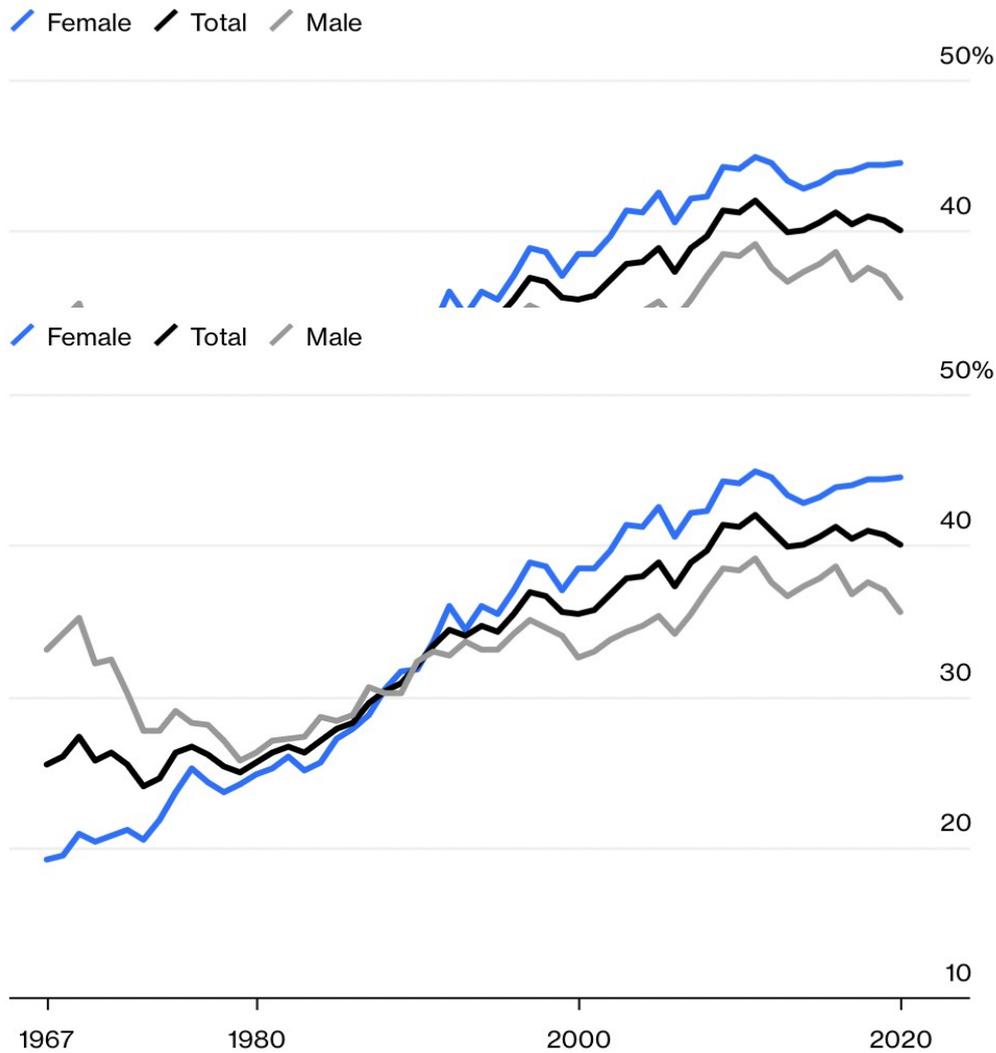


Source: U.S. Bureau of Labor Statistics

America's triumphant educational story has taken a darker turn. High school graduation rates have stagnated: America is the only member country of the Organization for Economic Cooperation and Development in which the graduation rate for those ages 24 to 34 is no higher than for those ages 55 to 64. The expansion of college education is hitting the twin buffers of debt and utility: Americans owe **\$1.75 trillion in student loan debt**, spread out among some 43 million borrowers, yet according to the Federal Reserve Bank of New York, **more than 40% of recent graduates** are underemployed in jobs that don't require a college education. That's a lot of money to spend on creating Nietzsche-reading baristas.

The Rise and Plateauing of College Enrollment

Percentage of U.S. 18- to 24-year-olds enrolled in college or graduate school



Source: U.S. Census Bureau Current Population Survey
 Note: As of October of each year.

America faces a growing problem with vocational education — that is, with the training of workers, particularly those who don't complete four-year college degrees, in job-related skills. People who leave school at 16 can't access a clear, well-designed training system as exists in many European countries. And if they are lucky enough to get a job, they don't have access to continuing education: Whereas you could once be promoted from the shop floor to, eventually, the executive suite, almost all the top jobs now go to people with college degrees. The result is a frustrating mess. More than 50 million Americans are stuck in [low-wage jobs](#) without much prospect of acquiring the skills that they need to climb out of poverty; at the same time, three-quarters of employers say that they can't hire people with the requisite skills. This is the equivalent of "the last mile" hurdle in supply chains where getting goods over the last mile of the journey is the most perilous and costly part of the whole undertaking.

At first glance, America retains a wide lead when it comes to top talent. [Fourteen of the world's 20 top](#) universities as measured by research output are located in the United States. [More than half of U.S. billion-dollar startups](#) were founded by people who were born abroad. Look more closely, however, and that lead is less solid. China is on track [to produce twice as many Ph.D.s in STEM subjects](#) as the U.S. by 2025. America's best universities are

in danger of becoming finishing schools for the already privileged rather than efficient capacity-catching machines: Harvard, for example, has more students from the richest 10% of the population than it does from the bottom 90%. Only about 20% of undergraduate places are awarded on the basis of pure intellectual merit (the others are awarded on a preferential basis to athletes and children of alumni and big donors); the U.S. Supreme Court has just agreed to take up a case examining whether the university's admissions policies discriminate against talented Asians. Similar problems can be found across the Ivy League.

At the same time, the tradition of relying on foreign talent might turn out to be a bear trap. A growing proportion of foreign-born Ph.D.s now return to their native countries either to teach or, more frequently, to start their own companies. From 1978 to 2007, only 25% of the 1.2 million Chinese who went abroad to study returned; from 2007 to 2017, that proportion had risen to 80%.

America's hold over top talent is under threat at a time when top talent is growing ever more important. Silicon Valley has famously applied the "10X" rule to programmers: The best programmers are 10 times more productive than the merely average programmers. Now, with the advance of technology, the "10X" rule is turning into the "100X rule." Marc Andreessen, the venture capitalist and founder of Netscape, claims that "the gap between what a highly productive person can do and what an average person can do is getting bigger and bigger. Five great programmers can completely outperform 1,000 mediocre programmers."

How Do You Fix a Talent Shortage?

The most obvious way for companies to address the crisis is to raise their wages or improve their working conditions. Apple Inc. recently surprised some of its engineers with unscheduled bonuses ranging from \$50,000 to \$180,000, presumably to prevent them from jumping ship to talent-hungry Meta Platforms Inc. Intel Corp. is moving to a "hybrid first" work model in order to attract and retain employees. Amazon.com Inc. and Walmart Inc. are covering college tuition costs for some of their employees. That option is plainly available more to fat incumbents than to scrawny startups.

Boris Groysberg of Harvard Business School suggests some more subtle techniques that companies can use to find talent. They can look more closely at underrepresented groups such as [women](#), ethnic minorities and people who live in out-of-the-way places. They can make more use of freelancers and part-time workers. They can rehire former workers who have moved on ("boomerangs"). They can recruit top graduates from state schools rather than scrambling over middle-ranking candidates from Ivy League schools: Domino's Pizza Inc. is hiring recent tech graduates from Michigan State University and Wayne State University to improve its technological capabilities. Companies can cut down on labor by installing automatic checkouts or redesigning work processes.

Groysberg points out that companies sabotage themselves by screening out potential recruits. The automated recruitment systems that most companies now use routinely reject candidates for formulaic reasons — for example, because they have committed a minor offense in the past or because they don't have exactly the right qualifications. They could be reset. Many companies unthinkingly demand a college education as a condition for employment despite the fact that more than 60% of the population doesn't have a degree, and that many degrees don't have any relevance to the job. Companies can "shift the supply curve dramatically," Groysberg says, if they simply "get rid of this filter."

Still, even the most enlightened companies can only do so much unless America addresses the structural problems that underlie the shortages. America needs to start thinking about “talent” differently, not as a problem that can be solved but as [a supply chain](#) that needs to be sustained. Just as car companies think in terms of years when planning their supply of car parts rather than rely on the spot market, so America needs to think in terms of decades when considering its supply of people. Companies also need to take a more constructive interest in public policy. Rather than trying to buy their way out of the crisis with higher wages, they will have to band together to address the systemic problem. Overcoming supply-chain disruptions will involve taking on both the Republican right and the Democratic left. It will also require reexamining some of the most ingrained assumptions of the broader American political tradition.

Expanding the Workforce

America’s problem with its labor force participation rate starts with its failure to raise the retirement age. The average American can still retire at 65 despite the 19.5 years of life ahead of them, compared with 13.7 years after the retirement system was introduced in the 1930s. Swedes and Brits by contrast have to wait until they are 70.

When it comes to prime-age workers, two problems need to be addressed: drugs and disability. A [2018 paper published by the Federal Reserve Bank of Cleveland](#) estimated that 44% of the decrease in labor force participation observed since 2001 could be ascribed to prescription opioids. The share of working-age Americans claiming Social Security Disability Insurance has roughly doubled in the past half-century, from 2.2% in 1977 to 4.3% last year. Local governments have a financial incentive to classify people as disabled because they then become the federal government’s responsibility, even as disability programs provide scant training and work placement to people who are thus classified.

Improving Vocational Training

Some companies are responding to the shortage of job-related skills with innovative solutions. Capital One Financial Corp., in banking IT, and DaVita Inc., in kidney dialysis, are establishing internal boot camps where they pay their employees to learn for a month or so and then quickly move them to a job. Others are reengineering work to reduce the amount of human labor it requires, building up the army of checkout machines that beep at us in shops or the tablets in restaurants that allow us to order without seeing a member of staff. Revature LLC, based in Reston, Virginia, [blends training and temporary staffing](#) into an “earn and learn” business: It takes on recent college graduates, trains them in high-demand software skills, and then hires them out, for a consideration, to its corporate clients. Recruits have to work for Revature for two years, by which time they have plenty of experience to put on their resumes.

Still, why not address skills shortages earlier in the educational system so that students come out of school ready to work rather than having to spend four years in college only to find themselves unemployable? Why not reinvent America’s great tradition of providing technical education at school rather than expecting everybody to go to college?

Over recent decades, America’s training system has been sacrificed to the cult of the university. Schools have focused overwhelmingly on getting their students into college while empire-building universities have taken over as much of post-school education as they can, from nursing to journalism training. Professors are selected on the basis of their ability to advance research rather than transmit market-ready skills. This has reduced the number of educational on-ramps into the middle class into just one, marked “college” and with a hefty toll. It has simultaneously created a mismatch between the labor market and the educational system: However well designed to produce recruits to the learned

professions, universities are ill-suited to training people in practical skills, particularly in fast-changing ones such as new programming languages.

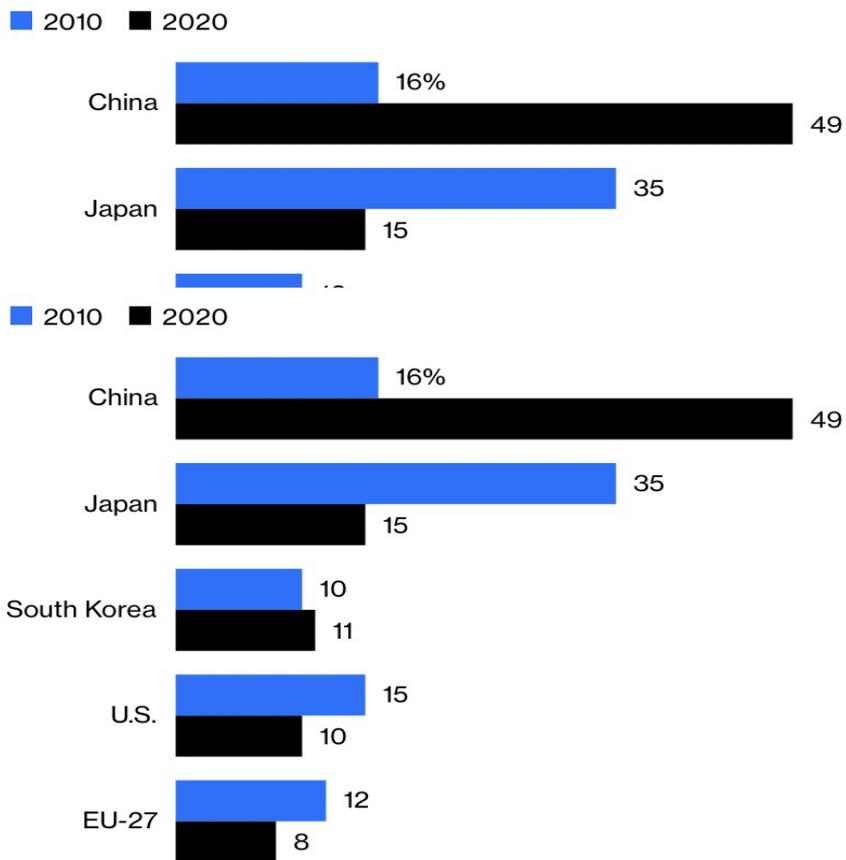
Germany's system provides a successful alternative to the U.S.'s college-first model: technical schools that enjoy "parity of esteem" with academic schools, and apprenticeships that give young people a chance to earn a living (and avoid accumulating debt) while at the same time learning a useful trade. Far from ignoring general principles, Germany's vocational education provides a different way of teaching them, starting with the particular and working to the general — an approach that appeals to many practical-minded young people. And Germany's system does more to integrate non-academically-inclined young people into the labor market than one that confronts students with a choice between loading themselves down with student debt in return for a degree that might not render them employable, or being treated as a failure because they haven't been to college.

Can China Surpass the U.S.?

America is also confronting a problem of unprecedented historical scale: a fast-growing rival power forging ahead of it in critical sectors. In each of the foundational technologies of the 21st century — artificial intelligence, semiconductors, 5G wireless, quantum information science, biotechnology and green energy — China is either competitive with the U.S. or outstripping it. The National Science Foundation just [confirmed](#) that China has overtaken the U.S. in several key scientific metrics, including the overall number of papers published and patents awarded. China has five times more 5G base stations than the U.S., for example, and produces four times as many electric cars

Where Have You Gone, Thomas Edison?

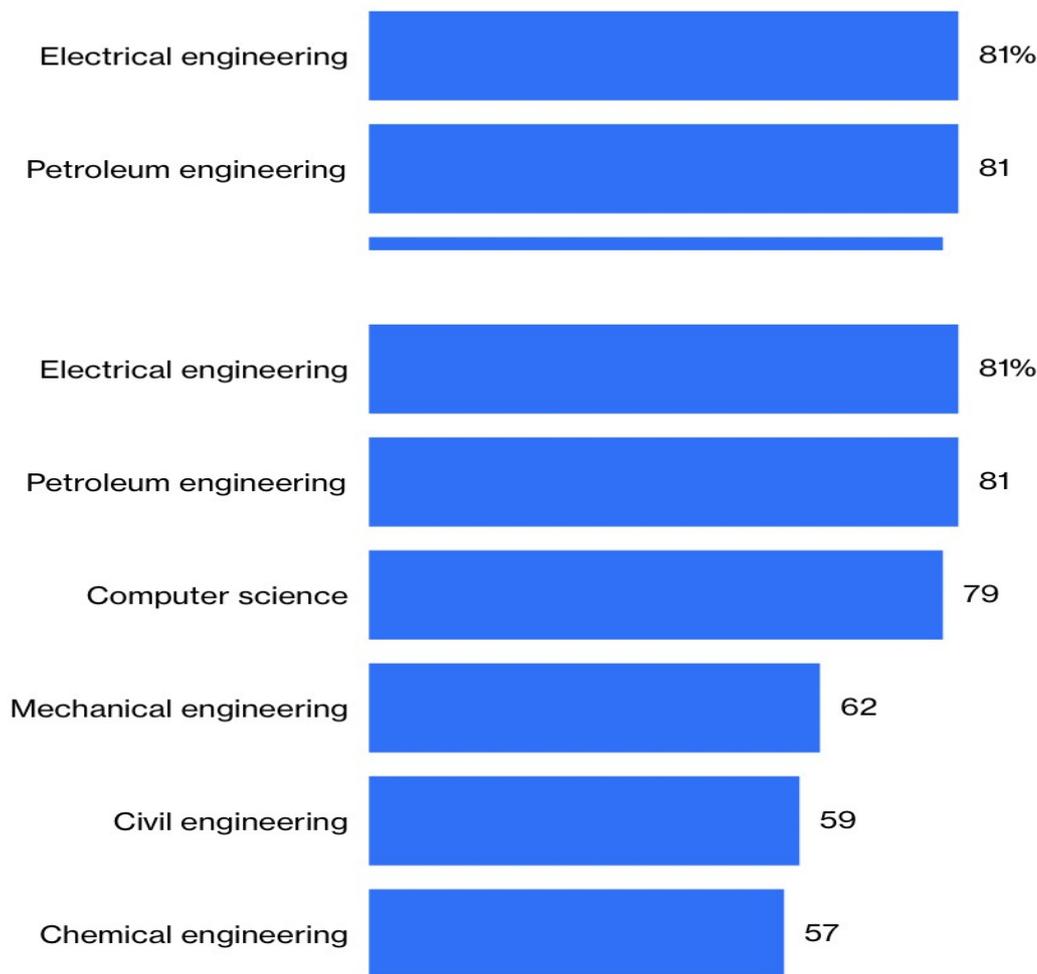
Percentage of international patents granted to inventors, by selected country



Source: National Science Board

What can be done about this challenge? Graham Allison, of Harvard University, argues that America needs a [“million talents”](#) program to match China’s “thousand talents” program. In particular, the U.S. should make it easier for foreign students earning advanced degrees in STEM fields to get a green card.

The Backbone of U.S. Science
Share of full-time graduate students from overseas



Source: Insider Higher Ed

But it's not enough. Remaining dependent on foreign sources of talent at a time when other countries are offering better opportunities for their best talent — and as China threatens to turn off its talent spigot — is risky. The sine qua non for reviving America's economic and technological dynamism is improving its ability to generate more top-class talent internally: first by spotting talent that is currently lying fallow, then by cultivating it more carefully and, it is important to add, more lovingly. That will require reorienting its educational system away from equality of results and toward equality of opportunity.

America has always had two rival traditions when it comes to its foundational doctrine of equality of opportunity. The first emphasizes the opportunity part of the formula: Everybody should be provided with equal opportunities to reach their natural level, but those natural levels will be unequal. The Founding Fathers, particularly Thomas Jefferson and Alexander Hamilton, talked of “natural aristocrats.” W.E.B. Du Bois, a founding father of the civil rights movement, wrote about “the talented tenth.” Cold War warriors stressed the importance of recruiting talent to beat Russia in the intellectual arms race. In his [address to Amherst College](#) in October 1963, John F. Kennedy said that “I look forward to a world which is safe not only for democracy and diversity but also for personal distinction.”

The second tradition puts its emphasis on the equality part of the formula. Populists from Andrew Jackson to William Jennings Bryan to Donald Trump have led rebellions against

the fancy-pants “sneering elite.” Horace Mann declared that common schools would be “the great equalizer of the conditions of men — the balance-wheel of the social machinery.” Recent educational reform movements, most notably George W. Bush’s No Child Left Behind, have all focused on improving the performance of the disadvantaged.

The American public education system has been profoundly shaped by the second tradition. Out of some 24,000 public high schools, [only 165](#) admit students on the basis of academic promise rather than catchment area. Twenty states don’t have a single such school. The country’s only federal program for the gifted received all of [\\$12 million in 2019](#), a tiny fraction of the money spent on the disadvantaged. The progressive wing of the Democratic Party, particularly the Black Lives Matter movement, is convinced that even this nugatory provision is too much. In one of his last acts as New York City mayor, Bill de Blasio [tried to close down](#) both the city’s elite schools and its gifted education programs. The city governments of both San Francisco and Boston are trying to kill off their leading selective high schools (Lowell High School and Boston Latin School, respectively) by forcing them to replace entrance examinations with lotteries. Universities across the country are replacing standardized tests with “holistic assessments,” which rely on things like teacher evaluations and extracurricular activities.

This one-size-fits-all tradition is actually not very good at promoting its stated aim of equality. Parents of the middle class and higher can do everything in their power to stretch their (sometimes talented) children to the maximum — algebra classes in the evening, academic summer camps, weekend violin lessons. Gifted children from more humble backgrounds can expect none of this and may be destined to turn into what the poet Thomas Gray called “mute inglorious Miltons” and [economists now call “lost Einsteins.”](#) Though the one-size-fits-all approach might have been well-suited to the age of mass production and identikit managers, it is incompatible with one in which high ability drives a disproportionate amount of economic growth.

The U.S. responded to Sputnik’s 1957 launch with a raft of initiatives from both the public and private sector to counter the USSR’s success. Congress declared “an educational emergency.” The federal government passed the National Defense Education Act to increase the supply of brainpower and established the National Aeronautics and Space Administration in 1958 to reassert America’s mastery of the heavens. Funding for the National Science Foundation more than tripled. John Gardner, the president of the Carnegie Corporation of New York, [noted](#) in 1962 that gifted children who had once been treated with “an almost savage rejection” were now feted as agents of national survival.

Today, in the face of the multifaceted economic and technological challenges posed by the ascent of an autocratic China, the U.S. Needs to adopt the same seriousness about intellectual leadership that it mustered following the beep, beep, beep [heard round the world](#). Massively increase spending on gifted children. Improve selection into gifted programs so that they choose the truly able rather than the socially advantaged. Expand the academically selective schools like Lowell that did such a formidable job of providing opportunities for poor immigrants after the great wave of immigration in the late 19th century. Understand that diversity is a tool of excellence, not its antithesis. Force universities to broaden their social catchment as a condition of keeping federal money.

Official America seems to have concluded that the pandemic is over: CEOs are preparing assaults on the “work from home” culture; central bankers are preparing to raise interest rates; the federal government is removing income support. But normality is likely to prove illusive. Workers have more power now than they have had for decades. The immigration spigot is harder to turn than before. Universities are not churning out enough homegrown

first-rate technologists. The age of unearned plenty is over. To thrive in the coming age of talent shortages and meet the challenge posed by China, America will have to reengineer what first made it great.

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