

POSTSECONDARY
VALUE COMMISSION

NAVIGATING THE COLLEGE-TO-CAREER PATHWAY: THE 10 RULES OF MOVING FROM YOUTH DEPENDENCY TO ADULT ECONOMIC INDEPENDENCE

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This paper is one in a foundational research series for the Postsecondary Value Commission authored in summer 2019 by scholars with diverse backgrounds and expertise. The research presented in these papers applies an equity lens to the philosophical, measurement, and policy considerations and assumptions underlying key components of postsecondary value to students and society, including investment, economic and non-economic returns, mobility, and racial and socioeconomic justice.

The Postsecondary Value Commission consulted this foundational research as it developed a conceptual definition of postsecondary value, a framework for measuring how institutions and programs create value and ensure equitable outcomes, and an action agenda with recommendations for applying the definition and framework to change policies and practices. Through this breadth of scholarship, the commission was better able to define the value of postsecondary education and the role institutions can play in creating a more equitable and fair United States.

Following the May 2021 release of the commission's findings, these foundational papers were prepared for publication. The views and opinions expressed in these papers do not necessarily reflect the positions of individual members of the Postsecondary Value Commission or the organizations they represent.

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Over the past half century, postsecondary education has taken on an increasingly important role in career preparation in the United States, with profound effects on the life experiences of young adults. Having a college credential has become both more valuable in the labor market and more expensive, with much of the burden falling directly on students and their families. At the same time, postsecondary institutions are not doing enough to equip students to lead economically independent and fulfilling lives. Too often, these institutions downplay the primary connection between college and careers instead of leaning into their crucial role in preparing Americans for meaningful and well-paying jobs. Too many young adults are taking on significant college debt only to be left struggling to latch on to good jobs. Moreover, educational attainment gaps between demographic groups represent substantial barriers to economic, racial, and gender justice.¹

Compounding these challenges is the disjointed nature of current youth policy and youth programs. Youth policy should guide all young people in the transition from economic dependency to adult economic independence, with youth programs providing additional support based on individual needs. Effective policy and programs must recognize the relationships among pre-K–12 education, college, and careers instead of partitioning elements of the journey to economic independence into silos focused on different aspects of educational governance, financing, or practice.² It is only by connecting the dots among these separate silos that we can address the larger challenge before us: that of ensuring economic opportunity for all Americans.³

The COVID-19 pandemic has deepened the cracks on the pathway through higher education to economic independence, while also widening equity gaps among groups. Among adults in households in which at least one adult planned to take postsecondary coursework in the fall of 2020, 73 percent reported that those plans had changed in some way, and 31 percent reported that those plans had been canceled. At least one-third of Latinx adults (37 percent) and Black adults (33 percent) reported that someone in their household had canceled all plans to take classes in the fall, compared to 29 percent of White adults; for adults of other races and ethnicities, the share was 36 percent.⁴ On the whole, undergraduate enrollments were down in fall 2020, especially at community colleges.⁵

These trends have potential long-term consequences for people’s future educational attainment and earnings. Before the COVID-19 crisis, about 60 percent of college students who delayed postsecondary enrollment after high school had not earned any degree or certificate five years later, compared to 37 percent who did not delay their college enrollment. Black students in particular were more likely than students of other races and ethnicities to delay enrolling in college after completing high school.⁶ Thus, the pandemic has accelerated existing racial disparities in education and the economy.

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Our research at the Georgetown University Center on Education and the Workforce (CEW) suggests that combating longstanding injustices as the economy and society emerge from the COVID-19 pandemic will require seamlessly connecting pre-K–12 to postsecondary education and both sectors to the workforce. This will involve the following:

- **Transparency of outcomes at the program level, including likelihood of employment, earnings potential, and potential for working in field**, particularly among programs that promise occupational preparation. The Department of Education’s College Scorecard recently began adding program-level data about factors such as debt load, repayment rates, and earnings, in keeping with new mandates proposed in the College Transparency Act.⁷ These data should be expanded to include earnings beyond the first two years after program completion, demonstrating the importance of medium- and long-term measurements when assessing the economic value of college. These ROI metrics should be accessible to the public in an easily navigated dashboard that improves significantly on the current College Scorecard interface. Enhanced student counseling guidelines should mandate sharing these data with students so they can take full advantage of this information when considering their investment in education.
- **Accountability for all postsecondary institutions based on standardized metrics for measuring value at the program level.** We recommend creating a **minimum standard** for accountability based on value added in terms of employment and earnings to determine whether a program should receive public funding. This minimal value-added metric would need to be accompanied by clearly marked education and career pathways to jobs paying earnings above the median high school wage. The dynamic combination of an initial value-added standard accompanied by clearly marked education and career pathways to jobs that pay at least the high school median wage is the best way to ensure that students are not trained for dead-end jobs and reflects a concerted effort to create a meaningful measurement of program efficiency and return. Optimal use of these metrics would involve adjusting for student characteristics, as well as for actual vs. expected outcomes.

In addition, CEW has developed a **good jobs metric** for measuring short- and long-term value associated with program-level and institutional outcomes. CEW worked with a team of economists to define the minimum earnings associated with a good job that provides economic self-sufficiency. Based on the earnings required to reach middle-class status, ensure an adequate standard of living across all geographic areas, and exceed poverty thresholds, we defined good jobs as paying at least \$35,000 for workers ages 25 to 44 and at least \$45,000 for workers ages 45 to 64. In 2016, these jobs paid a median of \$65,000. (See Appendix A for a more detailed discussion of the considerations we applied in defining good jobs.) Future work is needed to adjust the good jobs metric to account for household size, family structure, and locality (see Appendix B for more details), as well as to inform policy and practice.

These metrics will be crucial to make sense of the value of college in an increasingly complex labor market that now faces an uncharted road to recovery. This essay explores several current trends, including the following: the role of the COVID-19 pandemic in both exacerbating the challenges young adults face on the way to economic self-sufficiency and amplifying postsecondary education’s relationship to economic security; the increasing number of jobs that will require at least some postsecondary education and training; and the role that separate and unequal postsecondary institutions play in perpetuating and exacerbating racial and socioeconomic injustice. Based on these trends, we outline 10 rules of the college game for students and their families as they choose among different postsecondary institutions and programs. Finally, the essay concludes with recommendations to measure educational value to better align the classroom and the workplace, which will ensure that postsecondary education better fulfills its economic, political, and cultural missions.

COVID-19 will likely exacerbate delayed transitions to economic self-sufficiency among young adults and amplify the importance of postsecondary education in economic security.

Over the past half-century, economic change favoring skilled over unskilled labor has had dramatic effects on the youth-to-adulthood transition. One measure of this structural change is the age at which young people latch on to a good job, which has increased dramatically in the United States: youth are reaching this milestone later, and some never reach it at all. By the time they reached age 27, more than half of young people in the labor force who were born between 1946 and 1950 had a good job; in contrast, it took young people born between 1981 and 1985 until age 30 to reach the same threshold. Among this early 1980s birth cohort, there are significant equity gaps: by age 30, 59 percent of men in the labor force had a good job, while only 45 percent of women had reached the same threshold; among young White workers, 59 percent had a good job by age 30, while only 37 percent of Black workers and 37 percent of Latinx workers had reached the same threshold.⁸

The extended time required for youth to reach the threshold of a good job is primarily due to increases in formal postsecondary education and on-the-job training requirements,⁹ as well as the growing need for access to meaningful work experience tied to education and career pathways,¹⁰ although discrimination based on race, ethnicity, and gender still plays a role.

The COVID-19 recession has made these challenges even more acute for young adults. Recent college graduates with bachelor's degrees saw their unemployment rate more than triple during the early months of the pandemic, from 4 percent in February 2020 to 15 percent in July 2020.¹¹ The long-term scarring effects that can be anticipated as a result of such a decline in employment¹² are likely to further complicate young adults' transitions to adulthood. At the same time, history suggests that the COVID-19 recession is likely to accelerate the structural economic changes that have increased the value of education and experience. Past recessions have been shown to cause permanent structural change in the labor market, driven in part by technological changes; the current recession is likely to do the same, particularly as new technologies gain traction among knowledge workers who are increasingly working remotely.¹³ By mid-spring 2020, it was already apparent that workers with higher levels of education had an advantage in the COVID-19 economy, in that they were less likely to lose income from employment and more likely to be able to work from home.¹⁴ By the fall of 2020, 60 percent of adults with a bachelor's degree or higher lived in households where at least one person was teleworking due to the pandemic, compared to 17 percent of adults with a high school diploma or the equivalent.¹⁵ While there has been a short-term boost in demand for workers with less education as the leisure and hospitality, travel, and retail sectors rebound after the pandemic, we expect the economic advantage enjoyed by workers with more postsecondary education to continue over the long term.¹⁶

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The growing importance of postsecondary education and high-quality work experience is complicated by two other factors. First, since the *A Nation at Risk* report in 1983, the high school curriculum has shifted from vocational education toward academic preparation. On balance, the effects of providing more access to the new academic basics have been positive: students' basic skills and their high school completion rates have improved, and vocational tracking by race,

ethnicity, class, and sex has declined greatly,¹⁷ although with the regrettable result that some tracking has moved to the postsecondary system.

Second, the burden of workforce preparation has shifted from secondary to postsecondary education. Only about 20 percent of today's recent high school graduates have good jobs directly out of high school, and three in four of these are young men.¹⁸ As a result, the vast majority of high school graduates cannot become career-ready without postsecondary education and training. Moreover, more than 40 percent of high school graduates do not receive any kind of postsecondary award within eight years of graduation, and are thus increasingly likely to fall through the cracks and get trapped in the unstable low-wage economy.¹⁹

Tying postsecondary outcomes to individual economic independence has far-reaching implications for postsecondary policy and practice. Education providers can prepare young people to achieve economic independence through career education and exposure beginning as early as middle school, internships and other forms of reflective work experience in high school, and direct career education in the postsecondary system. But the new focus on connecting education and careers is a challenge that can't be met independently by the pre-K–12 education system, colleges, and the labor market. We need to take an “all-one-system” perspective and continue breaking down the silos among pre-K–12 education, college, and early careers.

We can begin by conducting new research that follows students from early childhood to adult economic independence and identifies critical junctures at which new policies and practices can make a difference. This research, which parallels work using predictive analytics, will allow us to strengthen the pathways from youth to adulthood for disadvantaged groups while also helping us to identify gateways to opportunity for working adults seeking to improve their earnings potential through lifelong learning.

Postsecondary programs in combination with high-quality work experience are the most direct pathway to individual economic independence in the United States and will very likely remain so for the foreseeable future—even after the COVID-19 pandemic has subsided. These education and career pathways play a more important role in the United States than in most other modern economies.

Two issues that arise on these education-to-workforce pathways call for a greatly expanded commitment to the social safety net. First, our economy relies heavily on intellectual and caring professions, such as teaching and health care support, that are commonly held by women and do not pay well.²⁰ Second, many Americans have been shortchanged by underfunded pre-K–12 schools and struggle to escape the low-wage job trap. One study shows that 70 percent of job change among low-wage workers is between low-wage jobs.²¹ The American welfare state is relatively weak and ill-equipped to resolve such problems, making the relationship between education and earnings more important in providing both economic and non-economic value to individuals.

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The weakness of our welfare state originates, in no small part, in the fact that Americans generally won't vote for public benefits that accrue to people whose children do not have the same race, ethnicity, religion, or economic class as themselves.²² In addition, our country's core individualist values ensure that we prefer people's successes to be self-made, regardless of the underlying social or economic barriers they face.²³ Education has always been the exception when it comes to our support for public assistance, because it is a public intervention that increases individual opportunity through individual responsibility and deters or obviates more direct redistributive economic interventions.²⁴

To date, the American faith in education has paid off, particularly for advantaged White workers. Especially since the 1980s, our broad support for educational opportunity has made economic as well as political sense: presently, 34 percent of jobs in the United States are held by workers with a high school diploma or less, 30 percent by middle-skills workers with some college education but no bachelor's degree, and 35 percent by workers with a bachelor's degree or higher.²⁵ Workers with no more than a high school education hold only 20 percent of the nation's good jobs, and most of those workers are men. But workers with middle skills and bachelor's degrees hold 24 percent and 56 percent of good jobs, respectively, making a bachelor's degree a strong investment among those seeking economic security.²⁶ (See Appendix C for the share of all jobs and good jobs on each educational pathway by race and ethnicity.)

The future promises more of the same. Prior to the pandemic, we had projected that, by 2030, 7 out of 10 jobs would require some form of postsecondary education.²⁷ We expected the fastest-growing occupations to be the ones that use postsecondary education most intensely, but anticipated that even blue-collar occupations requiring lower levels of education would continue to experience upskilling.

It is too early to say how the pandemic will affect these predictions in the long term, but we do know that job loss in the COVID-19 recession has fallen heavily on the shoulders of workers with less formal education. This suggests that history will repeat itself, as recessions tend to accelerate the technological changes that favor upskilling in the workforce: for example, following the Great Recession, the most-affected metropolitan areas experienced permanent increases in the skill levels required for jobs.²⁸ The growing use of new technologies to facilitate telework during the pandemic may further accelerate such changes.²⁹ For example, the emerging adoption of robots to sanitize warehouses could further erode the human presence in routine jobs. With history as our guide, we might expect that the predominant effect of technology will be to upskill jobs by reordering tasks and activities within existing occupations rather than eliminating whole occupations.³⁰ The creation of jobs for workers with postsecondary credentials will likely continue to outpace losses in relatively unskilled jobs. Moreover, the growing retirements of baby boomers and declining immigration may mean we need more robots, not fewer.³¹

More inequality looms as access to postsecondary economic value becomes more segregated. As a result, higher education has become the capstone for an education system that perpetuates the intergenerational transmission of racial, ethnic, and class advantages.³²

Racial, ethnic, and class differences in education are prevalent throughout the pre-K–12 system, long before college admissions officers get involved. However, separate and unequal postsecondary institutions magnify these divides and project them into the labor market, fueling the spiral of racial and economic injustice. The heightened importance of postsecondary education in the economy has widened these gaps: the evidence is plain that since the mid-1980s, postsecondary education has

increasingly been a fountain of opportunity for economically advantaged White workers, sometimes at the expense of Black, Latinx, and working-class White workers.³³

A few statistics illustrate the point:

- More than 60 percent of the increase in earnings inequality among Americans since 1980 is due to increases in the economic returns to educational attainment.³⁴ Postsecondary attainment is stratified by race, ethnicity, and class in ways that prove it is better to be born rich than to be talented in America. A child from a family in the highest quartile of socioeconomic status (SES) who has test scores in the bottom quartile in kindergarten has a 71 percent chance of graduating from college and getting a good job by age 25. By contrast, a child from a family in the lowest SES quartile with high test scores in kindergarten has only a 31 percent chance of graduating from college and getting a good job by age 25. The chances of moving from low SES as a child to high SES as a young adult are even smaller for Black and Latinx students than for their White and Asian peers.³⁵
- Since 1995, more than 80 percent of new White enrollments have been at the top 468 colleges according to the Barron's Admissions Competitiveness Index, and more than 70 percent of new Black and Latinx enrollments have been at the nation's open-access two- and four-year colleges.³⁶ Furthermore, as White students are moving up into the top 468 colleges, they are vacating seats at the open-access two- and four-year colleges. Between 1995 and 2009, the White share of enrollments in the open-access two- and four-year colleges declined from 69 percent to 57 percent. These separate higher education pathways matter because resources matter: selective colleges spend anywhere from two to five times as much on instruction per student as open-access colleges.³⁷
- Even students who are well-prepared by the pre-K–12 system are falling through the cracks. Every year, more than 500,000 students who graduate with SAT/ACT scores above 1,000 do not go on to get a two- or four-year degree within eight years of graduating from high school, even though they have good chances of graduating if they attend one of the top colleges and universities in the country. Among these students, 235,000 who graduate in the top half of their high school class come from families in the bottom half of the income distribution.³⁸ More than 111,000 of these students who graduate in the top half are Black or Latinx. If these Black and Latinx students had attended one of the top 468 colleges and graduated at rates similar to those of their Black and Latinx counterparts who did attend these institutions, 73 percent would have graduated.³⁹ Instead, these students represent immense lost potential, reflecting both admissions practices that exclude them from selective institutions and the fact that underrepresented minority students are disproportionately likely to undershoot their academic potential when selecting a postsecondary institution to attend.⁴⁰
- Of concern during the COVID-19 crisis is the fact that students who do not enroll in college directly after finishing high school are far less likely to complete a college degree than those who do. Among students who do enroll in college, 57 percent of those who did not delay enrollment after high school had attained a bachelor's or associate's degree five years later, compared to 29 percent of those who delayed enrollment for one or two years and 23 percent of those

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who delayed enrollment for three or more years.⁴¹ Even before the COVID-19 crisis, these gaps had consequences for racial equity, as only 62 percent of Black college students did not delay enrollment in college, compared to 79 percent of Asian students, 71 percent of White students, and 69 percent of Latinx students.⁴² The COVID-19 era stands to exacerbate the problem: in contrast to the Great Recession, when college enrollment increased with rising unemployment, the COVID-19 crisis has so far resulted in decreased enrollments. This is especially true among Black and Latinx students, as well as students from low-income backgrounds who may not have access to high-speed internet at home.⁴³ Students who took a “gap year” in 2020, whether by choice or necessity, may never get back on the pathway to a degree.

- White workers, especially White men, have historically dominated the political, cultural, and economic high ground. Moreover, irrespective of educational preparation, Black, Latinx, and female workers are paid less on average than their White male counterparts.⁴⁴

Again, the future promises more of the same racial, ethnic, and class divisions. White workers’ educational and economic momentum in the post-World War II era has grown enormously in the transition from the industrial to the postindustrial knowledge economy, suggesting that a new surge in racial, ethnic, and class inequality will occur as we move further into the 21st century. Between 1991 and 2016, White workers gained 7.5 million good jobs, even as employment among White workers overall increased by only 1.9 million jobs. During the same period, Black workers gained 2.4 million good jobs, compared to the 4 million job increase in their overall employment. For Latinx workers, the number of good jobs increased by 5.4 million, representing less than half of their net employment growth of 13.1 million jobs. Much of this growth in good jobs occurred among workers with bachelor’s degrees. On the whole, in 2016, the inequitable distribution of good jobs and earnings from good jobs added \$554 billion to White workers’ total earnings from good jobs, while reducing the total earnings from good jobs of Black workers by \$202 billion and those of Latinx workers by \$352 billion in the same year.⁴⁵

The trends described above suggest **10 rules of the college game for students and their families** as they choose among different postsecondary institutions and programs⁴⁶:

Rule 1: Know before you go. Understanding potential return on investment (ROI) before choosing a college and a program of study is crucial and complicated. For example, much has been written about the steady rise in student debt, but not all debt is equally bad. We find that the colleges at which students have high levels of debt are often those with high graduation rates and high earnings for students who attend them. Moreover, the colleges that have the highest ROI 10 years after students’ graduation are not the same ones that have the highest ROI 40 years after graduation, since higher investments can take longer to produce high returns. In the short term, community colleges and certificate programs tend to have high ROI, while in the long term, colleges that award bachelor’s degrees are often the better investment.⁴⁷ Much of this information is already publicly available, but students don’t always take it into account when making college decisions. The missing link on transparency in labor market outcomes is holistic and culturally competent counseling, so all students benefit from access to new and existing information about their postsecondary options.

Rule 2: When faced with poor job prospects due to recession, go to school.⁴⁸ It’s much better to enter the labor market during a recovery because a first job influences the earning and learning trajectory of a career.⁴⁹ In contrast, entering the labor market during a recession can hinder advancement along an optimal career trajectory.⁵⁰ Not everyone has the flexibility to decide when to enroll in school and when to work based on economic cycles, but those who do should recognize

the high value of pursuing education during economic downturns. To be sure, the COVID-19 crisis has complicated the decision of whether and how to enroll in college, but higher education still seems to be a solid bet. Workers should also recognize the value of learning that occurs on the job: career advancement can depend on the quality of learning opportunities accessed through a succession of learning-intensive jobs or job assignments.⁵¹ Access to high-quality work experience, formal and informal training on the job, employer-provided education benefits, and state-of-the-art technology has a powerful effect on economic returns.

Rule 3: Get more postsecondary education if you can, because more education typically pays better and yields better employee benefits than less education. With each level of educational attainment, workers have higher median earnings. Workers with certificates earn an average of 20 percent more than those with no more than a high school diploma. Workers with an associate's degree earn 32 percent more than workers with no more than a high school diploma. Workers with a bachelor's degree earn 74 percent more than workers with a high school diploma, and workers with graduate degrees earn more than double the median earnings of workers with a high school diploma.⁵² But race, ethnicity, and sex still matter: women earn less than men, and workers from underrepresented racial and ethnic groups earn less than White workers at the same levels of education (see Rule 10).⁵³

In addition to higher earnings, people with higher levels of education are more likely to have better access to key employee benefits. Among workers with a bachelor's degree, 42 percent have retirement plans through their jobs, compared to 40 percent of workers with an associate's degree, 35 percent of those with some college, and 29 percent of those with a high school diploma. Likewise, access to health insurance through a job is better at higher levels of educational attainment. Among workers with a bachelor's degree, 85 percent have access to health insurance through their jobs, compared to 81 percent of workers with an associate's degree, 77 percent of those with some college, and 71 percent of those with a high school diploma.⁵⁴

Rule 4: Choose carefully when selecting a major and program of study, since these factors may matter more than your education level.⁵⁵ There is significant variation in earnings by field of study.⁵⁶ At the bachelor's degree level, for instance, median earnings for those with degrees in petroleum engineering are \$140,000 a year, while median earnings for those with degrees in early childhood education are \$40,000 a year. This expansive variation in earnings means that lower levels of education can pay more than higher levels, depending on the field of study. On average, more than 35 percent of full-time, full-year workers ages 25 to 64 with only a bachelor's degree make more than the median earnings for workers with a master's degree. Twenty-seven percent of workers with an associate's degree make more than the median for those with a bachelor's degree.⁵⁷ For example, workers with an associate's degree in engineering have higher median earnings (\$50,000–\$60,000) than workers with a bachelor's degree in psychology and social work (\$49,000). Many certificates can also yield higher earnings than degrees. For example, workers with a certificate in engineering technologies have higher median earnings (\$75,000–\$100,000) than workers with a bachelor's degree in education (\$46,000).⁵⁸ (See Appendix D.)

Many fields of study provide students with transferable skills, leading to high earnings for workers regardless of occupation. For example, workers with STEM knowledge and skills are in high demand in business and are well-paid across fields. Similarly, American history majors are among the top-earning humanities majors, but very few of them work as historians.⁵⁹ Therefore, program of study and major matter not only in cases in which they provide a direct link to a job with high earning

potential, but also when they convey competencies that have occupational transferability and are in high demand.⁶⁰

Rule 5: Do not worry too much about where you go to school: institutional brand adds value, but not nearly as much as most people believe. College selectivity matters primarily because money matters: students are better off investing their time and money at institutions with high per-student spending, because per-student spending increases graduation rates and access to additional educational opportunities. A major factor affecting student graduation rates is spending per student, especially in two-year colleges and open access four-year schools.⁶¹ At less-selective public universities with declining completion rates, increases in student-to-faculty ratios are often the main contributing factor.⁶² The 500 most selective colleges spend anywhere from two to almost five times as much per student as open-access schools,⁶³ and these higher spending rates contribute to higher graduation rates, greater access to graduate and professional schools, and better earnings and employment outcomes, even when compared with outcomes for students who are equally qualified but attend less competitive schools.⁶⁴ Instructional spending and student support spending make a difference in student outcomes across institutional types; at less-selective institutions, spending on student support services has also been found to make a bigger difference than instructional spending.⁶⁵

The growth of informal hiring networks might increase the value of being an alumnus of an institution with an extensive and prestigious alumni network.⁶⁶ At the same time, the jury is still out on the elitist presumption that connecting the best students with the best professors and best infrastructure produces a substantial public dividend. What is evident from this work is that disadvantaged students clearly benefit from the resources, networks, and other supports provided by well-endowed selective institutions.⁶⁷

Further, the role institutions play in determining the ultimate value of education extends beyond colleges to employers. An employee's industry, employer, and sector (whether for-profit, not-for-profit, or public) affect the individual's wages and access to benefits, formal and informal on-the-job learning, state-of-the-art technology, tuition assistance, potential for managerial status, and acquisition of social capital—all crucial factors in determining the college payoff. At the same time, when it comes to labor-market returns, occupation is generally what matters most,⁶⁸ although more research could show how the value of institutions might vary according to students' race, ethnicity, economic status, and gender. If low-income or underrepresented minority students are not familiar with the "hidden curriculum" (that is, the unspoken rules about how to navigate the college experience), their potential for better outcomes at selective colleges is quickly eroded.⁶⁹

Rule 6: Realize that field of study alone does not determine workforce outcomes. As our previous research has underscored, earnings within majors range widely. For example, the top 25 percent of bachelor's degree holders in the humanities and liberal arts majors earn more than the bottom 25 percent of architecture and engineering majors. A business major in the bottom quartile earns less than \$50,000 per year, while a business major in the top quartile earns more than \$100,000 annually.⁷⁰

Other factors are also at play in determining earnings. Wage inequality is a persistent issue: women and members of racial and ethnic minority groups make less on average than their male and White counterparts, even with equal educational attainment. For example, women generally need one more degree than men to earn comparable pay. Economists also attribute pay gaps that remain after

accounting for other observable factors to discrimination, while acknowledging that the impact of discrimination is difficult to measure directly.⁷¹

Rule 7: Know the costs and benefits of your choice of major: at the median, majors like humanities, liberal arts, education, and psychology rarely catch up with the highest-earning majors.

Long-term earnings trajectories vary considerably by major, much as they vary by education level. While graduate education lifts most boats, it also tends to widen the disparities between STEM majors and humanities majors.⁷² This is not to say that degrees that yield lower pay don't have value: their social value may be quite high, although difficult to quantify. From a labor economist's perspective, when we say something has high social value but low economic value, we often are indicating that workers do not receive monetary rewards for some positive aspect of their work. For example, a preschool educator may provide education and childcare services that are of significant value to both parents and society, but may not be compensated at a level equivalent to the true value of those services. Many jobs that traditionally have been filled by women—including those in intellectual and caring professions such as early childhood education and social work—have high social value but low economic value.⁷³

The data suggest that race also plays a role. For instance, Black women are overrepresented among child, family, and school social workers, and workers with postsecondary education in this occupation earn less than the overall median for workers with the same level of education. Black women represent 24 percent of prime-age workers in this occupation, compared to 7 percent of all prime-age workers; prime-age workers with a bachelor's degree in this occupation earn \$39,000 at the median, compared to \$58,000 for all prime-age workers with a bachelor's degree.⁷⁴ The social value of these jobs—like the social value of the humanities and the liberal arts—is highly subjective. Another metric related to social value is the measure of occupational prestige. Much work has been done on the topic of occupational prestige to separate uncompensated social value from earnings,⁷⁵ and some professions—such as the police, the clergy, and teaching—might be said to have high prestige but low earnings.

Rule 8: Seek out a curriculum that provides broad learning across disciplines as well as deep learning in a subject area.

In any field where there is a hierarchy of degrees, the richest mix of general and specific education is often what matters most. Both general liberal arts education and specific career education have value, and they can act as complements and substitutes for one another. The most enduring economic value from higher education comes from the optimal mix of general and specific learning in each field of study. As technology evolves and workforce demands become more complex, both workers and the US economy benefit from the flexibility conveyed by the signature American approach to higher education: the American college degree, which is typically distinguished by a mix of general and specific education designed to confer creativity, adaptability, and transferable skills over the long term.⁷⁶ The bachelor's degree conveys an optimal balance of learning tailored to a field as well as learning about a wide range of subjects.⁷⁷

Moreover, this signature mix of general and specific education may help explain why American education has a particularly strong association with weaker preferences for authoritarianism. Exposure to the liberal arts is central to most students' general education programs, and liberal arts majors tend to be less inclined toward authoritarianism than STEM or business majors.⁷⁸

“ Wage inequality is a persistent issue: women and members of racial and ethnic minority groups make less on average than their male and White counterparts, even with equal educational attainment.

Rule 9: Focus on competencies required in individual occupations and common occupational clusters. Postsecondary programs link with occupations more than industries; many have a direct occupational link. This is especially true of career-specific graduate degrees and associate’s degrees, but it is also true of many bachelor’s degrees, which is why working in one’s field of study while in college and thereafter creates economic advantages.⁷⁹ It is also why occupational competencies are a crucial outcome standard for career preparation and advancement, but one that is largely ignored except in regulated professions and industry-based certifications. Ultimately, the cutting edge in tying postsecondary programs to careers involves drilling down below educational attainment levels and program curriculums to the underlying occupational competencies. People need a nuanced set of technical and interpersonal competencies to succeed in the modern economy,⁸⁰ and education and training programs need to be designed to help them develop those competencies.

Occupational competencies include three categories of competencies (occupational knowledge, skills, and abilities) that tend to be cognitive, which are connected in turn with three categories of characteristics that mix cognitive and personal elements (occupational interests, work values, and personality traits).⁸¹ Individual earnings depend on the richest combinations of education levels and occupational competencies. For example, data from the US Department of Labor’s O*NET database suggest that at the lowest levels of critical thinking, the difference in annual earnings between workers with a graduate degree and those with a high school diploma is \$6,000, but at the highest levels of critical thinking, this difference increases to \$40,000.⁸² We need to design our educational programming to yield both the general competencies that are valued across the workplace—specifically, (1) communication, (2) teamwork, (3) sales and customer service, (4) leadership, and (5) problem solving and complex thinking—and the specific competencies that are valued within various occupations.⁸³

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Rule 10: If you are a woman or a member of an underrepresented racial or ethnic group, the deck is stacked against you—so you will need to take additional measures to optimize your outcomes as long as our education and labor market systems remain unjust. Even if you follow every rule outlined above, systemic bias means that you will likely need to navigate around additional barriers on the pathway to a good job. The system needs to change. In the meantime, the rules for you are different.

If you are a woman, you might need to get an extra degree to earn what a man with a lower degree earns on average. For women, factors that lead to pay inequity include gender discrimination and women’s historical concentration in lower-paying majors and occupations. Social and cultural expectations influence women’s interests and factor into their choices of college majors and occupations, as well as their decisions about balancing work with family life. As a result, women must hold one more degree than men to achieve pay parity.⁸⁴

If you are a member of an underrepresented racial or ethnic group, systemic disparities stemming from bias and discrimination may have negative impacts on your educational trajectory, career

outcomes, and earnings. For example, students who are members of underrepresented racial and ethnic groups are less likely than White students to attend selective institutions with greater per-student spending and higher completion rates, higher advanced degree attainment, and higher earnings, and are more likely to enroll in lower-tuition, open-access, two- or four-year institutions with limited resources. Resource disparities and de facto racial segregation between institutions are systemic problems that cannot be fixed through individual choices; nor will differences in access, completion, and earnings among equally qualified White, Black, and Latinx groups be remedied without systemic change.⁸⁵ All the same, contrary to the advice of Rule 5, it is in your best interest to enroll in the most selective institution you can to ensure that you maximize the benefits of your college experience.

Underlying these 10 rules is an abiding truth: the core mission of education in democratic societies with capitalist economies is to empower individuals to live fully in their time, free from poverty and public dependency. While the general public seems comfortable with the new role of postsecondary education in allocating economic opportunity, many college educators are not. Many in four-year liberal arts colleges, in particular, seem concerned that the new focus on economic outcomes will sound the death knell for liberal education. But our findings suggest the opposite: we find that the emerging mass system of higher education can be the engine of liberal education's democratization.

Most people go to college to get a job but also want to get a general education along the way.⁸⁶ Because every American two- and four-year degree includes a mix of field-specific learning and general learning requirements across a broad set of fields, anyone who earns a degree from a two- or four-year college should be exposed to liberal learning while working toward the degree. The number of Americans engaging in such learning has spiked over the past generation. There are at least 46 million more people with an associate's or bachelor's degree in the United States today than there were in 1983, when economic demand began shifting from high school to college.⁸⁷ In this way, the expansion of access to liberal learning is already underway, especially for White and relatively affluent Americans.

Recommendations

College is a good investment on average, but involves significant risk based primarily on program of study, level of educational attainment, and occupation after completion.⁸⁸ With this in mind, we offer the following recommendations to measure educational value and to better align the classroom and the workplace. Doing so will ensure that education prepares students for work and that students have the information they need to make informed educational choices.

1. Mandate transparency and economic accountability for all postsecondary programs and institutions. Students need detailed information about the programs they are considering in order to make informed decisions about their futures. Educators need similar information to improve their programs and institutions. Policymakers need information in order to hold colleges and universities accountable. To satisfy the needs of all these stakeholders, we need mandatory transparency and accountability standards at the program level for all postsecondary institutions.

In the interest of transparency, colleges and universities should be required to provide the following information about all programs. In all cases, and to the degree permitted by student records laws, information should be **disaggregated and reported by race, ethnicity, socioeconomic status, and sex**, and calculated at **10, 20, 30, and 40 years after initial**

enrollment. For each of these metrics, both **actual** and **expected** measures should be provided to indicate whether a program over- or under-performs compared to similar institutions serving similar student populations:

- **Median earnings** among both those who enrolled in and those who completed a program, offering a point of comparison with our good jobs standard and an understanding of the costs of non-completion
- **Capacity to repay student loan debt**, including debt repayment rates at the program level and information about students' ability to pay back their loans
- **Median student loan debt** among both those who enrolled in and those who completed a program
- **Net price** estimated in association with a program
- **Earnings-to-price return**, based on the ratio of median earnings at a specified number of years after initial enrollment to median net price of the program
- **Earnings-to-debt return**, based on the ratio of median earnings at a point in time to the median debt
- **Net present value**, or the value of earnings over a fixed period of time minus the direct and opportunity costs incurred to obtain those earnings
- **Completion rates** among those who enroll
- **Median time-to-completion** among those who complete
- **Adjustments for actual versus expected outcomes** to account for differences in the characteristics of student bodies and other factors

These metrics should also be used to set accountability standards for programs and institutions, with programs required to meet minimum standards in order to participate in federal student financial aid programs. In the future, new metrics should be developed to measure institutional value added and more fully represent returns to all students and programs, with strategies to include programs that do not meet sample size restrictions. Institutional value added could be captured through variables such as spending per student, availability of student services, and access to professional networks (based on the occupations and employer characteristics of graduates, for example).

- 2. Enhance counseling and other student services.** To help students make sense of the metrics proposed above and optimize their decision-making, strong counseling services will be essential. Preferably, these services will be provided by individuals and entities with the professional independence to serve the interests of students rather than the interests of institutions, and will be available to young people along their journeys through the education system and into the workplace. At its best, education-to-career counseling can help students choose a major that aligns with their interests, consider the breadth of job opportunities associated with that major, and understand their likely economic outcomes, such as projected earnings and debt.

Counseling is particularly important for students who do not have access to financial and social supports at home or who may be unfamiliar with the expectations and norms of college life. But students from low-income backgrounds tend to go to under-resourced schools that struggle to provide sufficient counseling and services. To ensure that these students receive effective

counseling, we need to take an all-one-system approach to providing education-to-career counseling and ensure that all counselors have the necessary training to provide culturally competent counseling.

Advancements in information technology can be used to deliver counseling services to optimal effect. In some instances, students just need information, and their needs can be met through web-based applications, freeing up counselors' time for face-to-face interaction when it would be most beneficial. Educators can ensure that students are able to make the best use of web-based applications by teaching information literacy. At the same time, personal relationships are an important contributor to positive student outcomes, and institutions should not expect information technology to replace face-to-face counseling anytime soon.

Predictive analytics are also being used effectively at some colleges to identify loss-momentum points and prevent students from falling off track academically. Expanding these efforts could have a positive impact on the pre-K–12 and postsecondary systems at large. At the same time, care must be taken to ensure that predictive analytics are not used to reinforce existing inequalities by tracking students toward specific fields of study or credentials according to their race, ethnicity, class, or gender.⁸⁹

- 3. Provide high-quality experiences that align education and work.** As early and as often as possible, provide opportunities for students to learn and earn on the job. Students who work while attending school will get the best value from jobs that relate to their professional goals. Coursework that offers opportunities for applied learning on the job, such as internships or class projects involving collaboration with a local business, can allow students to explore their interests and career options while gaining valuable experience and may lead to job opportunities after graduation. Programs that provide direct connections to career opportunities such as interview placement can set students up for success in the labor market.
- 4. Come to terms with the underrecognized value of the intellectual and caring professions.** As a society, we claim to hold teachers and others in intellectual and caring professions in high regard, yet we barely pay a living wage at the entry level for many occupations with high social value. To prevent high rates of attrition and attract top students to these occupations, we need to either pay higher wages to workers in these professions or offer housing and transit subsidies, tax benefits, loan forgiveness, and other forms of remuneration that recognize the social value of these professions and allow workers who pursue them to live and work with the comfort of true economic security.
- 5. Conduct research on the economic and noneconomic value of different mixes of general and specific education.** The value derived from a rich mix of general and specific education is crucial to the overall value of postsecondary education in the United States and implicit in the transparency and accountability metrics described above.⁹⁰ That said, more research is needed to advance our understanding of how to operationalize a mix of general and specific education to support both the economic and noneconomic value of college. We recommend pursuit of a complete research agenda to explore this topic.

Ultimately, for students and educators, there is no getting around the need for more focus on the career outcomes of postsecondary education.⁹¹ We do not have any infrastructure to prepare people for work other than our educational system—and the inescapable reality is that ours is a society based on work. Those who are not equipped with the knowledge and skills necessary to get and

keep good jobs are denied full social inclusion and tend to disengage from the mainstream culture, polity, and economy. If postsecondary educators cannot fulfill their economic mission to help youth and adults become successful workers, they also will fail in their cultural and political missions to create good neighbors and good citizens. Increasing the economic relevance of a college education should, if done properly, extend the educator's ability to empower Americans to do more work on the world rather than retreat from it.⁹²

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APPENDIX A: ESTABLISHING A MINIMUM EARNINGS THRESHOLD FOR GOOD JOBS

The technical working group formed in support of our Good Jobs project accounted for a number of considerations when establishing \$35,000 as the minimum earnings threshold for a good job:

- The \$35,000 threshold corresponds with the lowest earnings at which workers are considered “middle class” in the United States. We interpret “middle class” as encompassing the middle four deciles of the full-time, full-year earnings distribution.
- Comparing the \$35,000 minimum threshold to MIT’s Living Wage Calculator (<http://livingwage.mit.edu>) and to US Department of Agriculture living standards charts, we found that our good jobs minimum (corresponding to a wage of \$17 per hour) exceeds the minimum living wage for a single individual in New York City and Washington, DC, which are among the country’s geographic areas with the highest cost of living.
- We compared our minimum earnings threshold for good jobs to guidelines for calculating poverty levels published by the US Department of Health and Human Services and found that our threshold was more than 200 percent of the poverty standard for a two-person household living on the US mainland (\$16,910 in 2019).⁹³

Based on these considerations, we determined that our good jobs standard represents an easily communicated minimum earnings threshold for economic independence.

APPENDIX B: ADJUSTING FOR LOCALITY

While a complete geographic analysis is outside the scope of this short essay, it is important to recognize place-based differences in measures of postsecondary value. Above, we propose metrics tied to national data, and we recommend using national medians and minimums in general discussion for ease of communication. At the same time, we recognize that practical application of these metrics will require adjustments based on local considerations.

A brief comparison of the living wage in two different locations underscores why adjustments for locality are important. The MIT Living Wage Calculator places the living wage for one person in Cullman, Alabama, at \$10.65 per hour, compared to \$15.97 per hour for one person living in the New York City metropolitan area. This indicates that living in New York City is roughly 50 percent more expensive for an individual than living in Cullman. A practical application of our good jobs definition would take such differences into account—for example, by norming our minimum earnings threshold to the national living wage and by establishing an index to adjust the minimum earnings for good jobs based on locality.⁹⁴ For example, the living wage in Cullman is 41 percent less than the \$15 hourly rate often cited as a minimum national living wage, while the living wage in New York City is 6 percent higher than this standard. Adjusting our good jobs standard accordingly would place the minimum annual earnings threshold at \$20,704 in Cullman and at \$37,125 in New York City.

Another consideration based on location is the question of whether the education wage premium varies depending on urban vs. rural location. There is some evidence, recently put forth by Autor, that metropolitan areas are experiencing disproportionate skill bias.⁹⁵ At the same time, we speculate that median wages within specific localities generally adjust to align with the cost of living in those localities. To account for urban/rural differences within states, we propose indexing a state's good jobs minimum to the state living wage, and adjusting accordingly for rural vs. urban location.

While these adjustments will add texture to the national data sets, they will not fully capture the role of geography in institutional value. More work is needed to develop a standard approach for measuring the effect of localized factors in postsecondary value, including the value added of institutional ties to the local business community and how student migration after graduation affects earnings outcomes.

APPENDIX C: DISTRIBUTION OF GOOD JOBS AND ALL JOBS BY RACE OR ETHNICITY

All Jobs by Race or Ethnicity (2019)								
	White	Black	Hispanic	American Indian, Alaska Native	Asian	Hawaiian/Pacific Islander	Other/Multiracial	Total
High School Diploma or Less	51%	13%	30%	1%	4%	0.5%	1%	100%
Middle Skills	64%	14%	16%	1%	3%	1%	2%	100%
Bachelor's Degree or Higher	68%	9%	10%	0.4%	11%	0.3%	1%	100%
All Jobs	62%	11%	17%	1%	7%	0.4%	1%	100%

Source: Georgetown University Center on Education and the Workforce analysis of data from the US Census Bureau and Bureau of Labor Statistics, Current Population Survey, 2020.

Notes: Distribution based on workers ages 25 to 64; percentages may not sum to 100 percent due to rounding. The race/ethnicity categories reflect the terms used by the US Census Bureau and Bureau of Labor Statistics.

Good Jobs by Race or Ethnicity (2019)								
	White	Black	Hispanic	American Indian, Alaska Native	Asian	Hawaiian/Pacific Islander	Other/Multiracial	Total
High School Diploma or Less	60%	10%	25%	1%	3%	0.5%	1%	100%
Middle Skills	68%	12%	15%	1%	3%	1%	2%	100%
Bachelor's Degree or Higher	70%	9%	8%	0.3%	11%	0.2%	1%	100%
All Good Jobs	67%	10%	13%	1%	8%	0.3%	1%	100%

Source: Georgetown University Center on Education and the Workforce analysis of data from the US Census Bureau and Bureau of Labor Statistics, Current Population Survey, 2020.

Notes: Distribution based on workers ages 25 to 64; percentages may not sum to 100 percent due to rounding. The race/ethnicity categories reflect the terms used by the US Census Bureau and Bureau of Labor Statistics.

APPENDIX D: MEDIAN EARNINGS OF BACHELOR'S DEGREE HOLDERS BY META-MAJOR AND DEMOGRAPHIC CHARACTERISTICS

Median Earnings by Meta-Major and Sex for Bachelor's Degree Holders

Major	Median	P25	P75	Major	Median	P25	P75
Agriculture and Natural Resources	\$58,000	\$41,000	\$87,000	Health	\$67,000	\$49,000	\$89,000
Men	\$63,000	\$44,000	\$93,000	Men	\$75,000	\$52,000	\$107,000
Women	\$48,000	\$34,000	\$69,000	Women	\$66,000	\$48,000	\$86,000
Architecture and Engineering	\$87,000	\$61,000	\$120,000	Humanities and Liberal Arts	\$54,000	\$37,000	\$83,000
Men	\$90,000	\$63,000	\$123,000	Men	\$59,000	\$40,000	\$93,000
Women	\$74,000	\$51,000	\$103,000	Women	\$50,000	\$36,000	\$73,000
Arts	\$51,000	\$35,000	\$77,000	Industrial Arts, Consumer Services, and Recreation	\$54,000	\$38,000	\$81,000
Men	\$56,000	\$38,000	\$86,000	Men	\$63,000	\$43,000	\$93,000
Women	\$47,000	\$34,000	\$68,000	Women	\$46,000	\$33,000	\$64,000
Biology and Life Sciences	\$58,000	\$40,000	\$87,000	Law and Public Policy	\$57,000	\$40,000	\$83,000
Men	\$64,000	\$43,000	\$98,000	Men	\$65,000	\$45,000	\$92,000
Women	\$53,000	\$37,000	\$76,000	Women	\$48,000	\$35,000	\$67,000
Business	\$68,000	\$46,000	\$103,000	Physical Sciences	\$66,000	\$44,000	\$101,000
Men	\$78,000	\$52,000	\$116,000	Men	\$75,000	\$49,000	\$112,000
Women	\$59,000	\$41,000	\$86,000	Women	\$56,000	\$39,000	\$81,000
Communications and Journalism	\$59,000	\$41,000	\$90,000	Psychology and Social Work	\$49,000	\$35,000	\$72,000
Men	\$65,000	\$43,000	\$102,000	Men	\$58,000	\$40,000	\$90,000
Women	\$55,000	\$39,000	\$81,000	Women	\$46,000	\$34,000	\$64,000
Computers, Statistics, and Mathematics	\$82,000	\$54,000	\$114,000	Social Sciences	\$63,000	\$42,000	\$100,000
Men	\$86,000	\$57,000	\$119,000	Men	\$73,000	\$47,000	\$114,000
Women	\$71,000	\$46,000	\$102,000	Women	\$53,000	\$38,000	\$80,000
Education	\$46,000	\$36,000	\$61,000				
Men	\$53,000	\$40,000	\$74,000				
Women	\$45,000	\$35,000	\$57,000				

Source: Georgetown University Center on Education and the Workforce analysis of data from the US Census Bureau, American Community Survey, 2009–17 (pooled sample).

Note: P25 represents the cutoff for the 25th percentile, meaning that 25 percent of workers earn less than this number. P75 represents the cutoff for the 75th percentile, meaning that 75 percent of workers earn less than this number.

Median Earnings by Meta-Major and Race or Ethnicity for Bachelor's Degree Holders

	Agriculture and Natural Resources	Architecture and Engineering	Arts	Biology and Life Sciences	Business	Communications and Journalism	Computers, Statistics, and Mathematics	Education	Health	Humanities and Liberal Arts	Industrial Arts, Consumer Services, and Recreation	Law and Public Policy	Physical Sciences	Psychology and Social Work	Social Sciences
White															
Median	\$60,000	\$92,000	\$52,000	\$60,000	\$73,000	\$61,000	\$86,000	\$47,000	\$67,000	\$56,000	\$57,000	\$61,000	\$71,000	\$51,000	\$68,000
P25	\$41,000	\$66,000	\$36,000	\$41,000	\$50,000	\$42,000	\$57,000	\$37,000	\$51,000	\$38,000	\$40,000	\$42,000	\$47,000	\$36,000	\$45,000
P75	\$88,000	\$126,000	\$79,000	\$90,000	\$110,000	\$93,000	\$120,000	\$62,000	\$88,000	\$86,000	\$86,000	\$87,000	\$105,000	\$75,000	\$106,000
Black/African American															
Median	\$48,000	\$69,000	\$45,000	\$50,000	\$54,000	\$50,000	\$64,000	\$46,000	\$62,000	\$47,000	\$43,000	\$49,000	\$53,000	\$44,000	\$51,000
P25	\$34,000	\$46,000	\$32,000	\$35,000	\$38,000	\$36,000	\$44,000	\$34,000	\$42,000	\$34,000	\$31,000	\$35,000	\$36,000	\$33,000	\$36,000
P75	\$70,000	\$98,000	\$63,000	\$71,000	\$78,000	\$72,000	\$93,000	\$60,000	\$83,000	\$68,000	\$62,000	\$69,000	\$80,000	\$62,000	\$73,000
Hispanic															
Median	\$51,000	\$66,000	\$47,000	\$51,000	\$55,000	\$51,000	\$64,000	\$44,000	\$59,000	\$49,000	\$47,000	\$53,000	\$53,000	\$45,000	\$53,000
P25	\$31,000	\$41,000	\$32,000	\$34,000	\$37,000	\$36,000	\$41,000	\$31,000	\$39,000	\$34,000	\$32,000	\$37,000	\$36,000	\$33,000	\$36,000
P75	\$76,000	\$98,000	\$69,000	\$74,000	\$82,000	\$74,000	\$96,000	\$56,000	\$82,000	\$69,000	\$69,000	\$79,000	\$81,000	\$62,000	\$80,000
Asian															
Median	\$52,000	\$87,000	\$55,000	\$61,000	\$61,000	\$59,000	\$86,000	\$44,000	\$78,000	\$52,000	\$51,000	\$60,000	\$62,000	\$54,000	\$62,000
P25	\$34,000	\$62,000	\$36,000	\$39,000	\$41,000	\$41,000	\$60,000	\$29,000	\$53,000	\$33,000	\$34,000	\$39,000	\$39,000	\$37,000	\$41,000
P75	\$82,000	\$114,000	\$82,000	\$91,000	\$92,000	\$89,000	\$114,000	\$63,000	\$102,000	\$80,000	\$74,000	\$86,000	\$95,000	\$80,000	\$97,000

Source: Georgetown University Center on Education and the Workforce analysis of data from the US Census Bureau, American Community Survey, 2009–17 (pooled sample).

Notes: P25 represents the cutoff for the 25th percentile, meaning that 25 percent of workers earn less than this number. P75 represents the cutoff for the 75th percentile, meaning that 75 percent of workers earn less than this number. The race/ethnicity categories reflect the terms used by the US Census Bureau.

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