AMERICAN ACADEMY
OF ARTS & SCIENCES

A Primer on the College Student Journey

Commission on the Future of Undergraduate Education

A Primer on the College Student Journey

Commission on the Future of Undergraduate Education

AMERICAN ACADEMY OF ARTS & SCIENCES
Cambridge, Massachusetts

ISBN: 0-87724-111-2

This publication is available online at https://www.amacad.org/cfue.

Please direct inquiries to:
American Academy of Arts & Sciences
136 Irving Street
Cambridge MA 02138-1996
Telephone: 617-576-6117
Fax: 617-576-5050
Web: www.amacad.org

Contents

Figures

Preface

Undergraduate education continues to be one of the most important avenues of opportunity in American society, though the landscape is changing rapidly: there are more options than ever before for how and when Americans receive some form of a college experience. New populations of students attend nonprofit public and private colleges and universities as well as for-profit institutions to earn bachelor's and associate degrees and certificates through face-to-face, online, and hybrid courses. Students of all ages study part time or full time, often at multiple institutions according to schedules that fit their lives, earning credentials ranging from a bachelor's in philosophy after four years of study to a certificate in medical assisting after four months of study. At the same time, emerging opportunities outside of the traditional boundaries of colleges and universities are increasingly responding to learner's needs, blurring the lines across postsecondary educational providers and student learning opportunities.

To address these topics and provide ideas for ensuring that individual Americans receive the education they need to thrive in the twenty-first century, the American Academy of Arts and Sciences, with generous funding from the Carnegie Corporation of New York, established the Commission on the Future of Undergraduate Education. Over the next several years, the Commission, comprising national leaders in education, business, and government, will study how well students are being served by today's higher education models and will seek to identify the challenges and opportunities that higher education will encounter in the decades ahead.

As a starting point, the Commission requested the creation of a publication that compiled the best data and research available to convey the story of the major trends in undergraduate education through the framework of the student journey into, through, and beyond college. *A Primer on the College Student Journey* will both serve as a foundation for the Commission's ongoing work and be of significant interest to college and university employees, higher education policy-makers and philanthropists, business and industry leaders, and students and their families. This brief volume focuses on the pathways students of various backgrounds follow through the abundance of higher education options ostensibly available to them. Further Commission reports will focus more narrowly on topics including student learning, effective teaching, and financial aid.

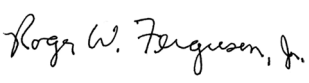
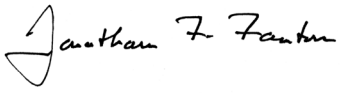
In view of the data presented throughout this publication, we want to acknowledge areas of real strength and accomplishment. It is encouraging to see increasingly higher rates of college enrollment across diverse student populations, with almost 90 percent of high school graduates eventually spending some time in college. We are also encouraged by serious efforts at inclusiveness on traditional residential campuses as well as by the expansion of learning opportunities better suited to the goals and life situations of millions of people who in an earlier day could not realistically consider college as an option.

Conversely, our greatest concerns center on the disparities in educational attainment associated with race and ethnicity, income level, and gender. We also note that more students are borrowing more money to pay for college and that those students most likely to default on their loans are those who do not graduate. And we believe that colleges and universities of all types must graduate students at higher rates in a timelier manner.

The complexities and challenges our student learners bring to our college campuses need to be at the forefront of our understanding of how our country can best anticipate and respond to their individual needs, as well as the needs of our nation.

We want to thank the Commission's Data Advisory Group—a team of five nationally recognized higher education researchers—who provided invaluable guidance in this data-rich portrait of American postsecondary education, as well as Zack Mabel, Esperanza Johnson, Eliza Berg, and Francesca Purcell, who assisted in its writing.

We invite you to keep up to date with subsequent publications, meetings, and activities by visiting www.amacad.org/cfue.

Michael S. McPherson
President,
Spencer Foundation

Roger W. Ferguson, Jr.
President and CEO,
TIAA

Jonathan F. Fanton
President, American Academy
of Arts and Sciences

Top Ten Takeaways about Undergraduates

Of greatest concern . . .

1 **College attainment rates are troublingly unequal:** Among twenty-five- to twenty-nine-year-olds, in 2015, 50 percent of women had a bachelor's degree or higher compared with 41 percent of men. Similarly, 72 percent of Asian students earned an associate degree or higher compared with 54 percent of white, 31 percent of black, and 27 percent of Hispanic students. In a related study, only 36 percent of students from low-income families earned a bachelor's degree compared with 54 percent of students from high-income families.

2 **Many college students are academically unprepared for college:** One-half of all college students take remedial courses.

3 **More students are borrowing more:** The proportion of college graduates who took out federal loans increased from about 50 to 60 percent from 2000 to 2012; the median cumulative loan amount increased nearly 25 percent from about $16,500 to $20,400.

4 **Students who do not graduate are most likely to default:** Students who do not graduate and who take out the smallest loan amounts have the highest default rates.

5 **Too few students graduate and too few graduate on time:** Only about 60 percent of students earn a bachelor's degree, taking, on average, almost six years to complete their studies. Only 29 percent of students who start a certificate or associate degree at a two-year college earn a credential within three years.

And to be clear . . .

6 **The vast majority of students go to college:** More than 85 percent of students who graduated from high school enrolled in college within eight years.

7 **Most students get in:** More than 70 percent of undergraduates attend colleges that accept over 50 percent of their applicants, while only 1 percent of students attend colleges that accept less than 10 percent of applicants.

8 **Students overwhelmingly go public:** Choosing among over 4,700 different higher education institutions, almost 80 percent of fall undergraduates are enrolled in public colleges and universities.

9 **Adults and part-timers matter:** Students over the age of twenty-five make up 31 percent of the undergraduate population and students who study part time make up 37 percent; an additional 20 percent of American adults have earned some college credit but no degree.

10 **It's not just about the baccalaureate:** Of recently awarded undergraduate credentials, less than half (48 percent) were bachelor's degrees, while 26 percent were associate degrees and 25 percent were certificates.

Introduction

We sometimes think of getting a college degree as an event, much like getting a car. But rather than an event, getting a college degree really represents the outcome of a *process* or, perhaps better, of a *journey*. Too often, though, that journey proves hazardous. Of those who set out to earn a bachelor's degree, only about 60 percent succeed, and many of those who seek shorter-term qualifications, like associate degrees or certificates, also fail to attain them. The paths students follow on their journey toward college completion and their likelihood of success vary tremendously depending on their family background, the kind of college they start at, and the highly varied circumstances that arise along the way.

The paths students follow on their journey toward college completion and their likelihood of success vary tremendously depending on their family background, the kind of college they start at, and the highly varied circumstances that arise along the way.

Before we begin in later sections of this primer to report on the most up-to-date evidence on the current state of affairs in higher education, we want first to review the college journeys of the oft-discussed "millennial generation," here defined as those born between 1981 and 1997. As it happens, the U.S. Department of Education undertook an intensive study of students drawn at random from the high school graduating class of 2004, students who are right in the heart of the millennial generation.[1]

These young people, eighteen years old in 2004, are turning thirty in 2015–2016, and their situation is complex. Emerging into a labor market shaped by the Great Recession, people who came of age in the first decade of the new century have found it difficult to get their lives started. They have been hesitant or unable to move out of their parents' houses and have found their average hourly earnings lower in 2014 than the average in 2004, after adjusting for inflation. They face these problems despite emerging into adulthood with greater investment in college than earlier generations. "I think people are kind of stuck in a catch-22 where they feel they need to get these skills in order to compete in the 21st century economy, but on the other hand they have to pay more tuition and take on more debt in order to do that," explained Brendan Duke, the author of a Center for American Progress report on the millennial generation.[2] It is not surprising that young people who were just turning twenty-two when the economy collapsed would face a challenging future. And while it is somewhat idle to ask whether they would have done better if born at a different time, it is quite germane to ask whether, in facing this challenging future, going to college has (so far) played a positive role in their lives and their futures. That is how we will begin our report.

Back in 2004, when today's thirty-year-olds were just finishing high school, they were quickly sorted along a myriad of pathways. Nearly one-third (32 percent) of high school graduates entered a public four-year college or university, and nearly one-quarter (23 percent)

1. The data in this introduction are drawn from a National Center for Education Statistics survey on the transition of American youth from high school to subsequent education and work experiences. It follows students who were sophomores in high school in 2002 for ten years. See National Center for Education Statistics, "Educational Longitudinal Study of 2002 (ELS: 2002)," https://nces.ed.gov/surveys/els2002/.

2. Brendan Duke quoted in Gillian B. White, "Can Millennials Undo What the Recession Did to Their Earnings?" *The Atlantic*, March 3, 2016, http://www.theatlantic.com/business/archive/2016/03/the-problem-with-millennials-pay/472011/.

entered a public two-year college. Just under 14 percent enrolled in a private nonprofit four-year college or university, while 3 percent enrolled in a for-profit two- or four-year college or university. One percent enrolled in a career/technical school that takes less than two years to complete. However, not all students started postsecondary education right away, with 16 percent of the high school graduating class later enrolling in some institution within the next eight years, the majority of those attending public two-year or for-profit colleges. The remaining 12 percent of the graduating class of 2004 did not enroll in a postsecondary institution at all within eight years of finishing high school. And while about 17 percent of the age group in 2004 did not graduate high school, some of them found their way into postsecondary education, typically after earning a GED certificate.

Eight years after their senior year of high school, a remarkable 88 percent of the class of 2004 had some experience of postsecondary education. But over one-third of those who started college (36 percent) never earned a credential.

Of course, these students leaving high school in 2004 had no way of knowing what was awaiting them just four years down the road. In 2004, the American economy had recovered substantially from both the "dotcom bust" of 2001–2002 and the devastating impact of 9/11. Students had reasons for optimism: the United States had a relatively low unemployment rate, a boom in home construction, and a surge in house prices that added to household wealth. But those students who were completing (or dropping out of) college in the years after 2004 found themselves in a world characterized by plummeting GDP, skyrocketing unemployment, and personal wealth disappearing in a collapsing real estate market.

The economic distress that the Great Recession imposed on millennials is reflected in the employment experience of those high school seniors the Department of Education began following in 2004. By 2012, early in the slow economic recovery, most of these young people were out in the world seeking jobs, and the overall unemployment rate of these twenty-six-year-olds was 9.9 percent. But college experience mattered greatly. Those with only a high school diploma had a 13.3 percent unemployment rate. People who had attained an associate degree had a 9 percent rate, and among graduates with baccalaureate degrees, unemployment was just 5.1 percent. Even in a weak economy, higher levels of education still mattered.

Unfortunately, many of these students had not progressed as far as they probably hoped. Eight years after their senior year of high school, a remarkable 88 percent of the class of 2004 had some experience of postsecondary education. But over one-third of those who started college (36 percent) never earned a credential. Another 22 percent either got an occupational certificate or an associate degree, with 42 percent attaining at least a bachelor's degree.

For the high school graduates of 2004, their employment and educational outcomes by their mid-twenties were strongly influenced by the college at which they first enrolled. More than 60 percent of those who started at a baccalaureate-granting institution earned a bachelor's degree (implying that nearly 40 percent had either dropped out or were still in school), while among those beginning at two-year colleges, only about half earned some credential, split roughly equally among occupational certificates, associate degrees, and baccalaureate degrees.

While where you start college strongly influences how far you manage to get, it is important to look at other factors, especially students' backgrounds, affecting those 2004 high school graduates. One way of getting at stu-

dents' backgrounds is to examine their family's socioeconomic status (SES): an index constructed from parents' education level, occupational status, and earnings. About 40 percent of the class of 2004 started college at four-year institutions, the main source of bachelor's degrees. Among this group, 39 percent are students from the top quartile of the SES distribution, while only 12 percent are students from the bottom quartile. Conversely, among students who started at two-year institutions, 27 percent are from the bottom quartile, and just 18 percent are from the top.

Affordability, familial expectations, access to information about options, and precollege preparation combine to influence how students became sorted among different types of institutions.

The story in terms of race and ethnicity is similar. While white students composed 63 percent of the 2004 high school seniors under study, they made up 68 percent of those who started at four-year institutions, and 45 percent of those in the "less-than-two-year" population. However, while black and Hispanic students accounted for 28 percent of the population of high school seniors, they made up only 21 percent of the four-year college enrollees and 47 percent of the group who first enrolled at less-than-two-year institutions. The roots of these inequalities and their implications for equal opportunity will be the focus of later sections in this and subsequent publications. But for now, it is important to understand that affordability, familial expectations, access to information about options, and precollege preparation combine to influence how students became sorted among different types of institutions.

College is expensive, not only for students, and not only in dollars spent. Even if students and their families paid no tuition, students would still face the problem of how to cover their living expenses (which might be covered by full-time work if they weren't in school) and colleges would face the problem of how to fund faculty, administrators, support personnel, and buildings without tuition revenues from those who attend. The substantial social investment in higher education forces the question of just what individual students and society as a whole gain as a result of these large social and personal investments.

Even though our group of 2004 seniors were only eight years removed from high school when last surveyed, we can at least begin to see some answers to the "payoff" question: simply put, students with more successful careers in higher education are less likely to be unemployed. But it is perhaps more interesting—certainly more surprising—to note differences among young people in relation to their progress through college:

- Among the class of 2004, 24 percent of those who did not attend college were living in their parental home in 2012, while only 19 percent of bachelor's degree recipients were.
- Including the Obama-McCain presidential election of 2008, 71 percent of the class of 2004 voted in an election between 2008 and 2012. Broken down by educational attainment, 64 percent of those without a college credential voted, while 77 percent of those with a bachelor's or higher did. Promoting participation in our public life is an important goal of education at all levels, at least in the American tradition.
- Among our group of millennials, 55 percent of bachelor's degree recipients volunteer at least once per month, while only 22 percent of those with no postsecondary education volunteer at that rate. The propensity of college attendees to give back through unpaid volunteer service is a useful indicator of the social benefits of higher education.

The economic payoff to a college degree is an important factor to consider when weighing considerations like the burden of college debt and the returns of public investments in higher education.

Not all of these differences can be properly viewed as effects of college. College graduates generally have higher incomes than others and are privileged in ways that may make it easier for them to vote or to volunteer. These issues of causation will be touched on in the conclusion of this primer. That said, the best evidence is that at least part of the observed differences can be fairly attributed to the college experience itself.

When the economic payoff to college is so central to public discourse, we cannot leave the subject of the advantages of college without touching briefly on the financial payoff to college. Twenty-six is a young age at which to judge information about the economic benefits of college attendance: many young people are continuing their schooling in graduate and professional school, while others are exploring alternative career paths. Generally, the picture of people's employment and earnings paths is much clearer by age thirty than at age twenty-six.

Nonetheless, we do have some data about the status of our 2004 high school seniors as of 2011 and 2012. Focusing on the median earnings of young people (among those who had positive earnings), we find that in the sample as a whole, median earnings were approximately $25,000. However, for those who had no postsecondary experience or some college and no degree, earnings were lower, between $22,000 and $23,000. For students with associate degrees, earnings matched the overall median of $25,000. But for students with baccalaureate degrees, the median earnings were $32,000. This $10,000 per year earnings gap between those having a bachelor's degree and those having no credential is very likely an underestimate of the longer run gap, as the gains for those with more education tend to build over time. Even this initial difference, however, is enough to suggest that the economic payoff to a college degree is an important factor to consider when weighing considerations like the burden of college debt and the returns to public investments in higher education.

OBSERVATIONS

What have we learned from this preliminary look at the progress of the class of 2004? It is hard to avoid the proverbial question: is the glass half empty or half full? The achievements of undergraduate education are in some ways very impressive: enrollments both in absolute terms and as a share of population have grown consistently—albeit with occasional ups and downs—for a long time. The fact that more than 85 percent of our 2004 high school seniors have had at least some experience of college within eight years of leaving high school is notable by historical standards. And despite the continuing increase in the supply of people with some amount of college experience, the benefit of attending college in material terms remains at historically high levels, and evidence indicates that college experience continues to be positively associated with better health, greater civic activity, and other nonmonetary benefits.

Yet along with these achievements have come great challenges. The burgeoning demand to attend American colleges and universities has been one of several forces squeezing state government higher education budgets, which is the main driver of growing public college tuitions in recent decades. The expansion in the share of high school graduates enrolling in college and an increased need for developmental or remedial education create new challenges for colleges. At the same time, anxieties about labor market opportunities and atten-

tion to the purely financial benefits of college enrollment have sometimes threatened to eclipse attention to the important personal and social benefits of college that cannot be readily reduced to a monetary reward.

The United States' impressive, if still incomplete, efforts to expand *access* to college have not been matched by comparable progress in achieving college *success*.

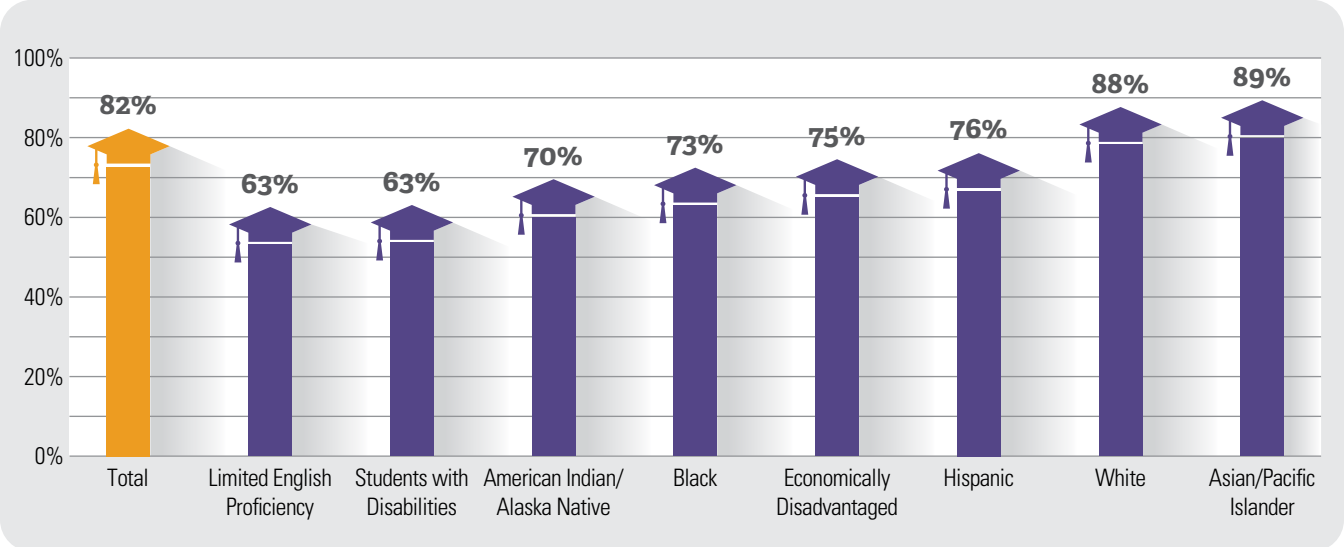
Perhaps most markedly, the United States' impressive, if still incomplete, efforts to expand access to college have not been matched by comparable progress in achieving college success. A good deal of evidence indicates that many of the benefits of college redound to those who complete degrees and, in some cases, certificates. And the people most likely to default on their student loans are not the biggest borrowers, who often have graduate degrees, but borrowers of modest amounts, who have little to nothing to show for their efforts. Yet completion rates remain stubbornly below desired levels, and the amount of time it takes to complete degrees continues to rise. Thus, the story of undergraduate education, as it exists now in the United States, combines a history of great achievement with a challenging future.

Section One: Getting Ready for College

Admission criteria and selectivity levels vary widely across colleges and universities in the United States.[3] However, with few exceptions, the common denominator is that American applicants must complete a high school diploma or equivalent to be considered for postsecondary enrollment. The nation's high school graduation rate has climbed gradually and hit a new record high at 82 percent in 2014.[4] Much of this success is attributable to increases in performance by black and Hispanic students and the declining number of high schools with high dropout rates.[5] Despite such improvements, variation in graduation rates associated with race/ethnicity, socioeconomic status, English proficiency, and disability persists (Figure A).

Furthermore, despite the overall increase in graduation rates, the total number of high school graduates leveled off over the last decade and will likely remain steady for

Figure A: U.S. Public High School Four-Year Adjusted Cohort Graduation Rate, by Race/Ethnicity and Selected Demographics: 2013–2014



SOURCE: National Center for Education Statistics, Common Core of Data, Table 1, "Public High School 4-Year Adjusted Cohort Graduation Rate (ACGR), by Race/Ethnicity and Selected Demographics for the United States, the 50 States, and the District of Columbia: School Year 2013–14," https://nces.ed.gov/ccd/tables/ACGR_RE_and_characteristics_2013-14.asp.

3. For the purposes of this document, the terms *college*, *university*, and *postsecondary institution* may be used interchangeably, but all refer to degree-granting institutions that grant associate or higher degrees and participate in Title IV federal financial aid programs.

4. National Center for Education Statistics, Common Core of Data, Table 1, "Public High School 4-Year Adjusted Cohort Graduation Rate: School Year 2013–14," Common Core of Data, https://nces.ed.gov/ccd/tables/ACGR_RE_and_characteristics_2013-14.asp.

5. See Civic Enterprises and Everyone Graduates Center at John Hopkins University, *Building a Grad Nation Report: Progress and Challenge in Ending the High School Dropout Epidemic* (Washington, D.C.: America's Promise Alliance, 2015), http://www.gradnation.org/report/2015-building-grad-nation-report; and Richard J. Murnane, *U.S. High School Graduation Rates: Patterns and Explanations* (Cambridge, Mass.: National Bureau of Economic Research, 2013), http://www.nber.org/papers/w18701.pdf.

the next decade at approximately 3.3 million annually due to projected declines in the size of the eighteen-year-old population cohorts.[6]

Approximately **68 percent of students** who graduate from high school enroll in college within a few months of graduation.

PATHWAYS AND PITFALLS TOWARD COLLEGE

Approximately 68 percent of students who graduate from high school enroll in college within a few months of graduation, an enrollment rate that has increased gradually from 60 percent in 1990.[7] A mix of academic, financial, and aspirational factors affect a high school student's trajectory through high school and into college, but one recent research review[8] identified the high school behaviors that most strongly correlate with college enrollment:

- Missing no more than 10 percent of school days per grade level;
- Maintaining a 3.0 GPA or higher;
- Passing high school exit or college entrance exams that assess ability to complete college-level coursework;
- Meeting or exceeding benchmark state and national assessments;
- Completing mathematics courses including algebra, geometry, trigonometry, and calculus; and
- Dual enrollment participation.

Conversely, well-documented barriers that prevent high school students from pursuing college fall into four broad categories: academic struggles, financial hurdles, low college awareness and/or aspirations, and an inability to complete instrumental requirements such as applying for financial aid.[9] A growing number of studies address the mismatch between the high school curriculum and entry-level college course expectations, while others document factors including family and peer influences and limited resources.[10] Moreover, along the pathway from college consideration to matriculation, students—particularly those from lower-income, immigrant, and/or noncollege-educated families—face complicated choices and may lack sufficient support and structure to navigate burdensome processes and institutional bureaucracy.[11] And for those high school students who do continue on to college, a substantial proportion of students find that they are not adequately prepared academically to succeed in college-level coursework.

6. National Center for Education Statistics, Digest of Education Statistics, Table 219.10, "High School Graduates, by Sex and Control of School: Selected Years, 1869–70 through 2023–24," http://nces.ed.gov/programs/digest/d13/tables/dt13_219.10.asp.

7. Bureau of Labor Statistics, U.S. Department of Labor, "College Enrollment and Work Activity of 2015 High School Graduates," news release, April 28, 2016, http://www.bls.gov/news.release/pdf/hsgec.pdf.

8. American Institutes for Research, "Predictors of Postsecondary Success," November 25, 2013, http://www.ccrscenter.org/products-resources/predictors-postsecondary-success.

9. See, for example, Eric Bettinger, Bridget T. Long, Philip Oreopoulos et al., "The Role of Application Assistance and Information in College Decisions: Results from the H&R Block FAFSA Experiment," *Quarterly Journal of Economics* (2012); Mandy Savitz-Romer and Suzanne M. Bouffard, *Ready, Willing and Able: A Developmental Approach to College Access and Success* (Cambridge, Mass.: Harvard Education Press, 2014); Daniel Klasik, "The College Application Gauntlet: A Systematic Analysis of the Steps to Four-Year College Enrollment," *Research in Higher Education* 53 (5) (2012): 506–549; and Andrea Venezia and Laura Jaeger, "Transitions from High School to College," *Postsecondary Education in the United States* 23 (1) (2013): 117–136.

10. See, for example, Patricia Gandara and Deborah Bial, *Paving the Way to Postsecondary Education: K–12 Intervention Programs for Underrepresented Youth* (Washington, D.C.: National Center for Education Statistics, 2001), http://nces.ed.gov/pubs2001/2001205.pdf.

11. Lindsay Page and Judith Scott-Clayton, *Improving College Access in the United States: Barriers and Policy Responses* (Cambridge, Mass.: National Bureau of Economic Research, 2015), http://www.nber.org/papers/w21781.pdf.

College readiness—generally understood as possessing a sufficient level of preparedness to enroll and succeed in a college program of study without the need for remedial courses—is a complex standard and has been measured in several ways, including through standardized test scores and transcript analysis.[12] However measured, approximately one-half of all college students will take one or more developmental or remedial courses while enrolled.[13]

However measured, approximately **one-half of all college students** will take one or more developmental or remedial courses while enrolled.

INTERVENTIONS TO IMPROVE HIGH SCHOOL STUDENTS' COLLEGE READINESS

A complete overview of the tremendous range of school-level reforms that aim to encourage and support high school students' pathways to college is beyond the scope of this primer. But programs also exist at the national and state levels. For example, the Federal TRiO Programs Upward Bound and Talent Search provide outreach and student services to low-income and first-generation students, as well as to students with disabilities, while GEAR UP works with students attending high-poverty schools and their families. Dual-enrollment programs, often supported through state funding, allow high school students to take college-level courses and earn high school and college credit simultaneously. Middle college high schools and early college high schools are small schools that provide students with comprehensive, structured, and supported opportunities to earn college credits and even degrees while attending high school. Many states have legislated default high school curriculum requirements that align with college entrance expectations.[14]

While these school-, state-, and federal-level programs are well-intentioned, rigorous research is needed to determine their effectiveness. Analyses on school-level reforms and precollege outreach programs raise concerns about the scope and rigor of the evidence regarding the effectiveness of these interventions; it has so far proved difficult to isolate specific effective strategies.[15]

ADULTS PREPARING FOR COLLEGE

Approximately 31 percent of undergraduate students are aged twenty-five years or older.[16] These students range from veterans returning from service to displaced work-

12. American College Testing, *Crisis at the Core: Preparing All Students for College and Work* (Iowa City: American College Testing, 2005), http://www.csun.edu/~rinstitute/Content/policy/Crisis%20at%20the%20Core.pdf; and Clifford Adelman, *The Toolbox Revisited: Paths to Degree Completion from High School Through College* (Washington, D.C.: United States Department of Education, 2006), https://www2.ed.gov/rschstat/research/pubs/toolboxrevisit/toolbox.pdf.

13. Judith Scott-Clayton, Peter Crosta, and Clive Belfield, *Improving the Targeting of Treatment: Evidence from College Remediation* (Cambridge, Mass.: National Bureau of Economic Research, 2012), http://www.nber.org/papers/w18457.pdf?new_window=.

14. See Education Commission of the States, "50-State Comparison: High School Graduation Requirements," http://www.ecs.org/high-school-graduation-requirements/.

15. Bridget Terry Long, "Dropout Prevention and College Prep," in *Targeting Investments in Children: Fighting Poverty When Resources are Limited*, ed. Phillip B. Levine and David J. Zimmerman (Chicago: University of Chicago Press, 2010), http://www.nber.org/chapters/c11729.pdf; Venezia and Jaeger, "Transitions from High School to College"; and Murnane, *U.S. High School Graduation Rates: Patterns and Explanations*.

16. National Center for Education Statistics, Digest of Education Statistics, Table 303.50, "Total Fall Enrollment in Degree-Granting Postsecondary Institutions, by Level of Enrollment, Control and Level of Institution, Attendance Status, and Age of Student: 2013," https://nces.ed.gov/programs/digest/d14/tables/dt14_303.50.asp?current=yes.

ers seeking to change careers to working parents wanting to improve their job prospects. Over the past several years, an increasing amount of attention has focused on adults who have earned some college credit but have not completed an undergraduate credential. According to the U.S. Census Bureau, about one-fifth of Americans aged twenty-five and older have some college experience but no credential.[17] The most common motivations for adults who return to college to complete a degree are career advancement and personal satisfaction.[18]

APPROACHES TO PRIOR LEARNING ASSESSMENT

The awarding of college-level credit for the knowledge and skills adults gain outside of the classroom commenced when large numbers of veterans started enrolling in postsecondary institutions through the G.I. Bill in 1944. The American Council on Education (ACE) introduced a new service to review military experience and make recommendations for equivalent college credit. ACE currently reports providing academic credit recommendations for more than thirty-five thousand courses, exams, and certifications offered by more than six hundred organizations. Other methods of assessing a student's prior learning include several national standardized testing programs, individualized student portfolio assessments, campus-developed challenge exams, and evaluations by colleges of noncollegiate instructional and training programs. Currently, no national system tracks the acceptance and use of college-level credits earned through prior learning.

About one-fifth of Americans aged twenty-five and older **have some college experience but no credential**.

17. See analysis in Doug Shapiro, Afet Dundar, Xin Yuan et al., *Some College, No Degree: A National View of Students with Some College Enrollment, but No Completion* (Herndon, Va.: National Student Clearinghouse Research Center, 2014), https://nscresearchcenter.org/wp-content/uploads/NSC_Signature_Report_7.pdf. See also United States Census Bureau, Table 3, "Detailed Years of School Completed by People 25 Years and Over," http://www.census.gov/hhes/socdemo/education/data/cps/2014/tables.html.

18. For example, see Andrew P. Kelly, *High Costs, Uncertain Benefits: What Do Americans Without a College Degree Think About Postsecondary Education?* (Washington, D.C.: Center on Higher Education Reform, American Enterprise Institute, 2015), https://www.aei.org/wp-content/uploads/2015/04/High-Costs-Uncertain-Benefits.pdf; and Carolin Hagelskamp, David Schleifer, and Christopher DiStasi, *Is College Worth It For Me? How Adults Without Degrees Think About Going (Back) to School* (New York: Public Agenda, 2013), http://kresge.org/sites/default/files/Is-College-Worth-It-For-Me-Public-Agenda-2013.pdf.

Key Facts and Figures

Getting Ready for College

1 At **82 percent**, the overall U.S. high school graduation rate is at its highest level ever, but it varies by race/ethnicity, socioeconomic status, and gender.

2 The percentage of high school students enrolling in college within a few months of graduation has grown to **68 percent**.

3 Over **85 percent** of high school graduates eventually spend some time in college.

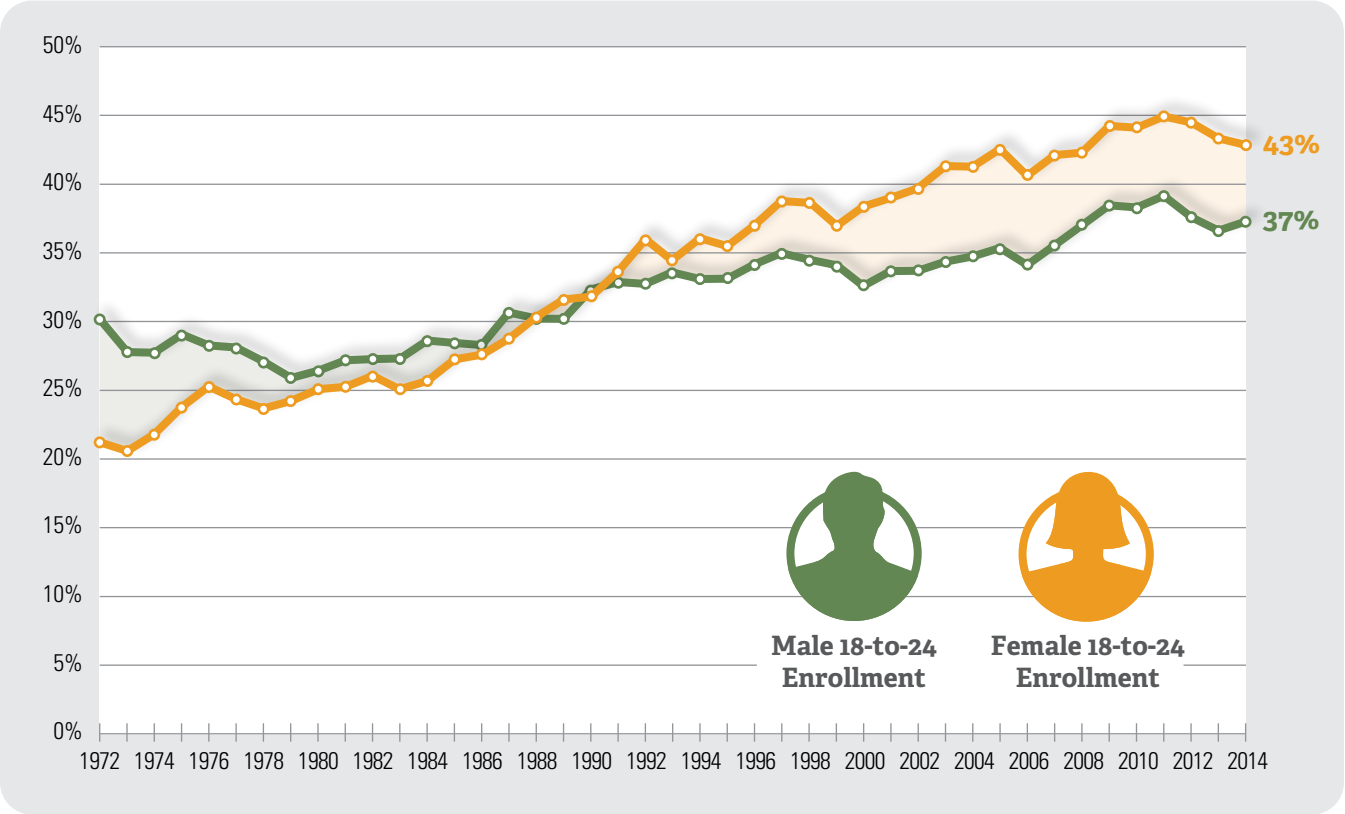
4 Many incoming college students, whether recent high school graduates or adults, are academically unprepared for college: **one-half** of all college students take remedial courses.

5 Despite increasing high school graduation and college enrollment rates, an anticipated decline in the eighteen-year-old population implies that the number of high school graduates entering college over the next decade will remain flat at about **3.3 million** annually.

6 The **20 percent** of American adults who have earned some college credit but no credential represent a significant component of potential adult college students.

Section Two: Getting into College

Figure B: Undergraduate Enrollment Rates by Gender for 18- to 24-Year-Olds: 1972–2014



SOURCE: National Center for Education Statistics, Digest of Education Statistics, Table 302.60, "Percentage of 18- to 24-Year-Olds Enrolled in Degree-Granting Postsecondary Institutions, by Level of Institution and Sex and Race/Ethnicity of Student: 1970 through 2014," https://nces.ed.gov/programs/digest/d15/tables/dt15_302.60.asp?current=yes.

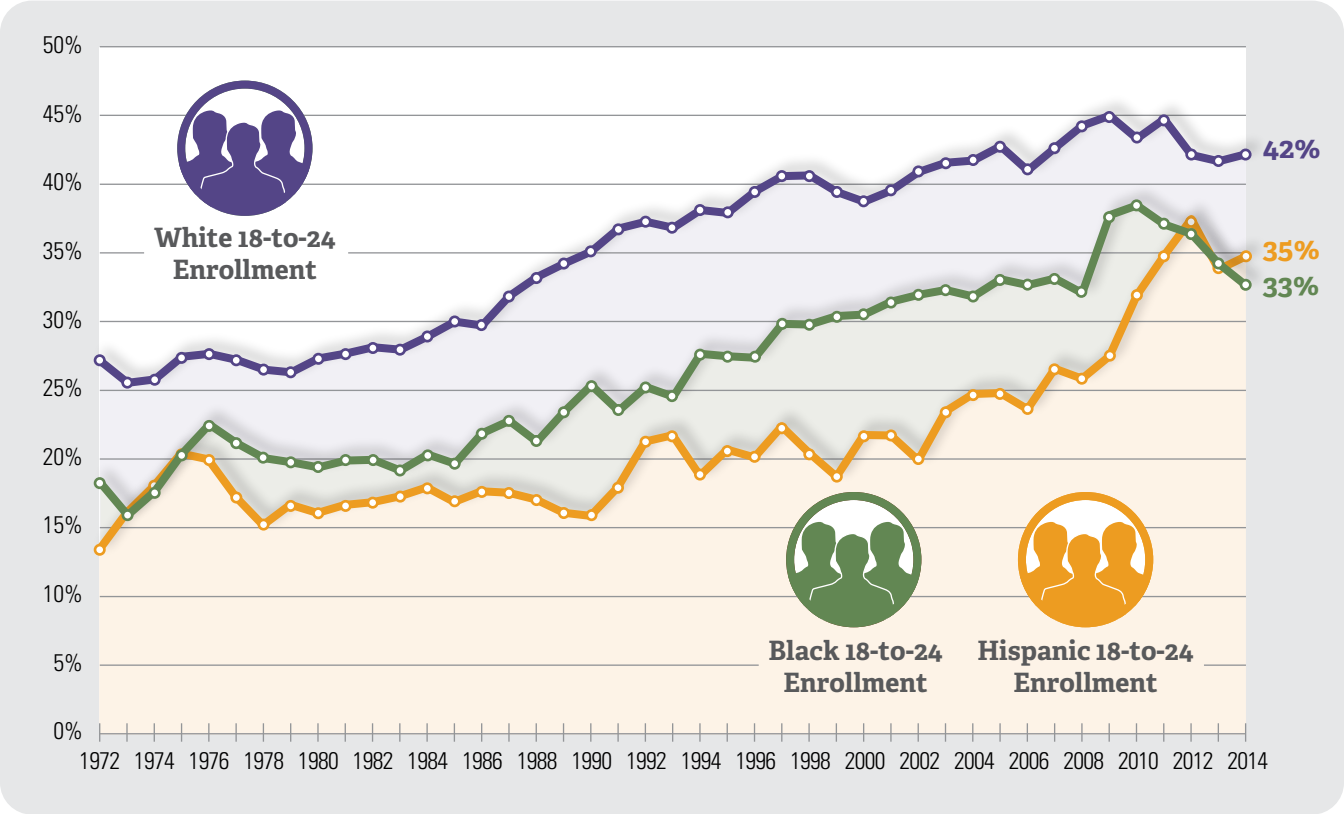
Undergraduate student enrollment increased dramatically over the past several decades, more than doubling from 7.4 million students in 1970 to 17.3 million students today.[19] The student body, including both full- and part-time students, is also increasingly diverse in terms of race and ethnicity and includes students of all ages and from a variety of backgrounds. The types of undergraduate institutions have also expanded, with students now attending some 4,700 varied institutions awarding an ever widening array of credentials. This section explores student enrollment trends and the institutions students attend.

TRENDS IN STUDENT ENROLLMENT: GENDER, RACE/ETHNICITY, AND INCOME

The numbers of both men and women enrolling in college have increased over recent decades, but since the late 1980s, women have outpaced men both in terms of high school graduates heading off to college and the propor-

19. National Center for Education Statistics, Digest of Education Statistics, Table 303.70, "Total Undergraduate Fall Enrollment in Degree-Granting Postsecondary Institutions, by Attendance Status, Sex of Student, and Control and Level of Institution: Selected Years, 1970 through 2025," https://nces.ed.gov/programs/digest/d15/tables/dt15_303.70.asp?current=yes.

Figure C: Undergraduate Enrollment Rates by Race/Ethnicity for 18- to 24-Year-Olds: 1972–2014



SOURCE: National Center for Education Statistics, Digest of Education Statistics, Table 302.60, "Percentage of 18- to 24-Year-Olds Enrolled in Degree-Granting Postsecondary Institutions, by Level of Institution and Sex and Race/Ethnicity of Student: 1970 through 2014," https://nces.ed.gov/programs/digest/d15/tables/dt15_302.60.asp?current=yes.

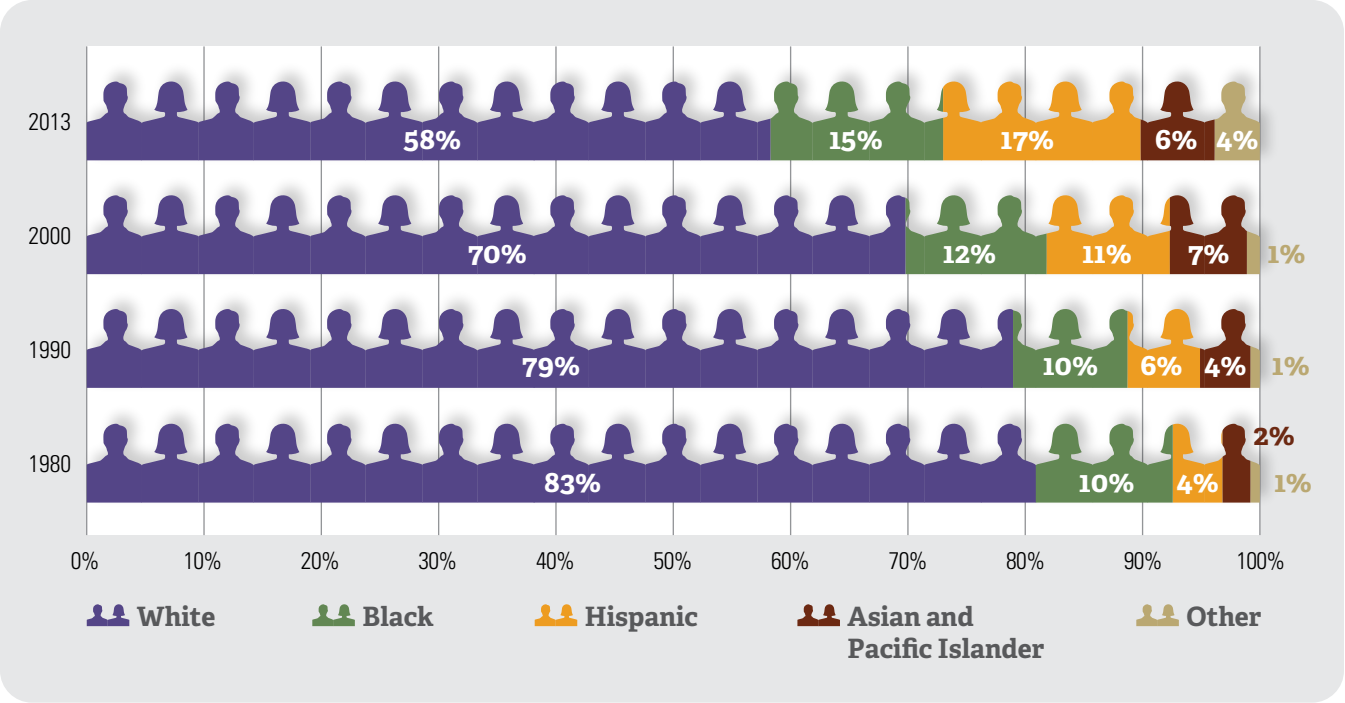
tion of all eighteen- to twenty-four-year-olds enrolled in college. By 2014, almost 43 percent of women between eighteen and twenty-four years old were enrolled in college, compared with 37 percent of men (Figure B). Given these trends, it is not surprising that women outnumber men in undergraduate classrooms. In 2013, women made up 56 percent of undergraduate enrollment (9.9 million women and 7.7 million men).[20]

Turning to enrollment trends based upon race and ethnicity, we see overall increases in the proportion of eighteen- to twenty-four-year-olds enrolled in college across all groups, but gaps persist. As shown in Figure C, 42 percent of white young adults were enrolled in college in 2014, while only 35 percent of Hispanic and 33 percent of black young adults were enrolled. Although the gaps in access have narrowed over the past fifteen years, they have not been eliminated.

The combined effect of the white population growing more slowly than populations of color and of the more rapid growth of college attendance among minority groups than among whites has resulted in a substantial shift in the racial/ethnic composition of college populations. In 1980, white

20. Ibid.

Figure D: Racial Distribution of Total Undergraduate Enrollment: Selected Years



SOURCE: National Center for Education Statistics, Digest of Education Statistics, Table 306.10, "Total Fall Enrollment in Degree-Granting Postsecondary Institutions, by Level of Enrollment, Sex, Attendance Status, and Race/Ethnicity of Student: Selected Years, 1976 through 2014," https://nces.ed.gov/programs/digest/d15/tables/dt15_306.10.asp?current=yes. NOTE: This table does not include students living in the United States without documentation.

By 2014, **81 percent** of high-income high school graduates immediately enrolled in college, compared with **52 percent** of low-income students.

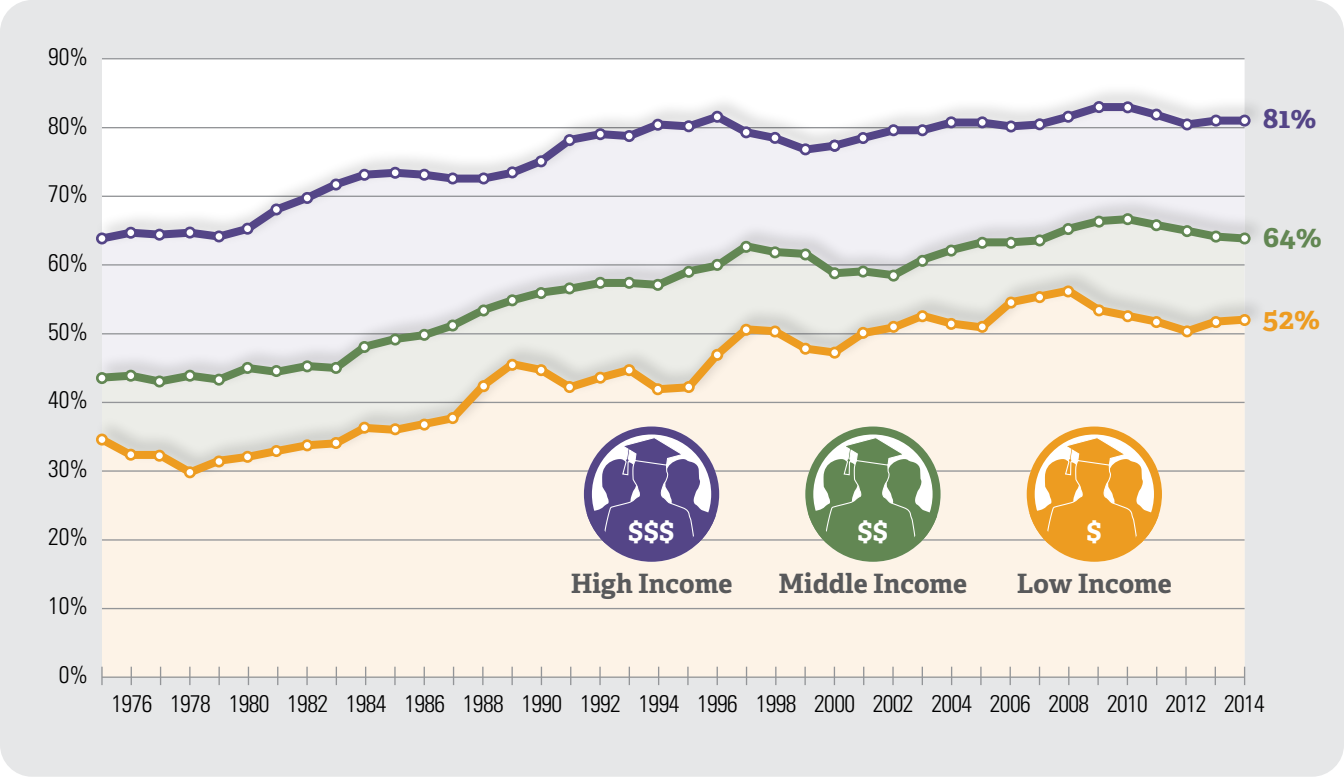
students made up 83 percent of undergraduate enrollments, contrasted with 58 percent in 2013 (see Figure D).

Figure E shows that recent high school graduates across all income levels have been enrolling in college at higher rates over the past several decades. However, significant gaps persist between students from low-income and high-income families. By 2014, 81 percent of high-income high school graduates immediately enrolled in college, compared with 52 percent of low-income students. Even though all income groups have seen increases in college enrollment over time, Figure F shows that the gap between the lowest and top income quartiles grew from a 39-point gap for students born between 1961 and 1964 (who would have started college around 1980) to a 51-point gap for students born between 1979 and 1982 (who would have started college around 2000).[21]

Many factors may explain the considerably lower rates of enrollment of students from low-income backgrounds compared to their wealthier peers. One study

21. Martha J. Bailey and Susan M. Dynarski, "Inequality in Postsecondary Education," in *Whither Opportunity? Rising Inequality, Schools, and Children's Life Chances*, ed. Greg J. Duncan and Richard J. Murnane (New York: Russell Sage Foundation, 2011), 117–132. The study defines the college entry rate as the share of each birth cohort that had any college experience by age nineteen or was in school at age nineteen.

Figure E: Percentage of Recent High School Completers Enrolled in College, by Income Level: 1975–2014



SOURCE: National Center for Education Statistics, Digest of Education Statistics, Table 302.30, "Percentage of Recent High School Completers Enrolled in 2-Year and 4-Year Colleges, by Income Level: 1975 through 2014," https://nces.ed.gov/programs/digest/d15/tables/dt15_302.30.asp?current=yes. NOTE: Low income refers to the bottom 20 percent of all family incomes, high income refers to the top 20 percent of all family incomes, and middle income refers to the 60 percent in between.

notes that students who grow up in families in the bottom quartile of the income distribution are not only less likely than their more privileged peers to graduate from high school, but are also less likely to take the SAT if they do graduate and less likely to earn a high score if they take the test. In fact, the differences in SAT scores by income level increased from the late 1980s to the early 2000s.[22]

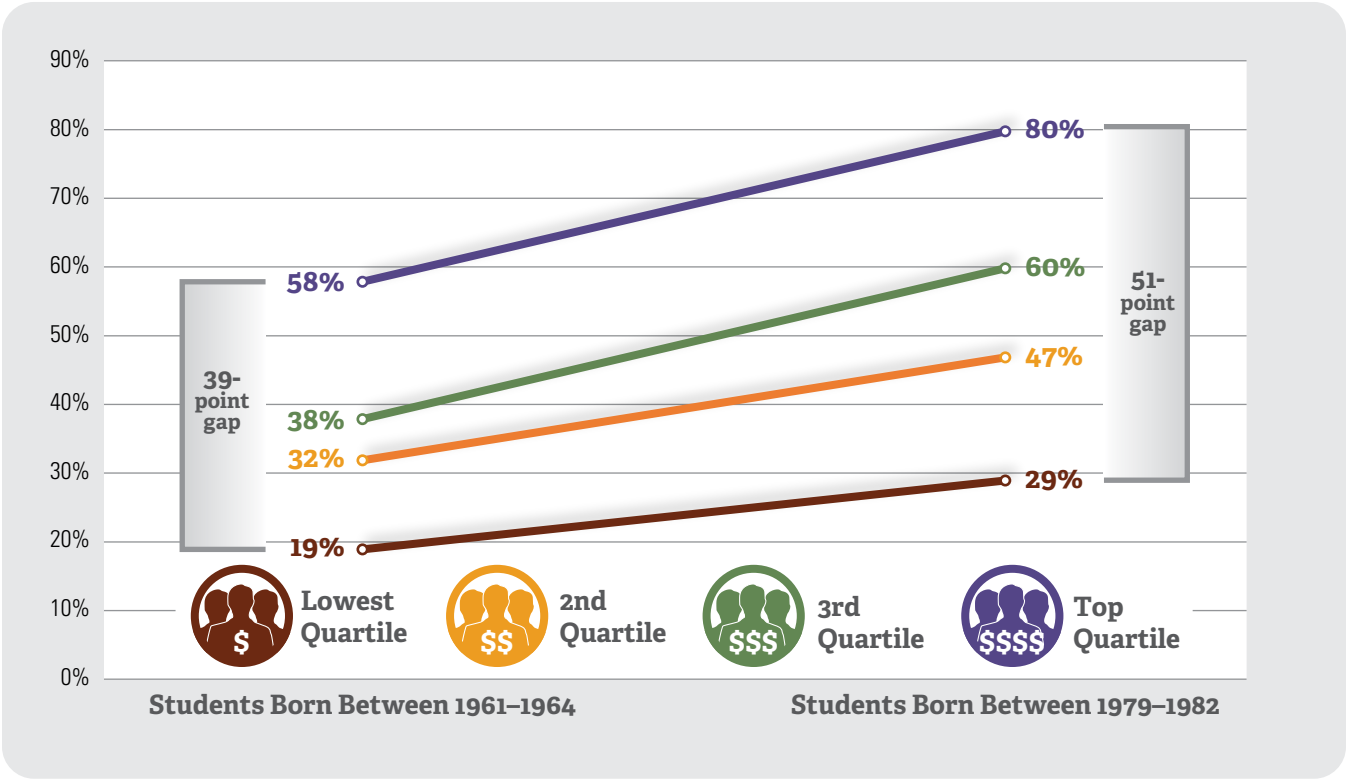
ADULT STUDENT ENROLLMENT TRENDS

By 2013, though there were about twelve million college students under the age of twenty-five, there were also 5.5 million students twenty-five years old and over, or 31 percent of the total undergraduate enrollment (Figure G). Of students twenty-five years old and older, 60 percent were women and 59 percent enrolled part time.[23] Over the 1993 to 2013 period, enrollment in undergraduate programs by students twenty-five years and older peaked in 2009, likely as a result of students returning to college during the Great Recession. Since that time, enrollments have declined slightly. Additionally, the proportion of adult students as a fraction of the entire undergraduate population has declined somewhat over this time period.

22. William G. Bowen, Martin A. Kurzweil, and Eugene M. Tobin, *Equity and Excellence in American Higher Education* (Charlottesville: University of Virginia Press, 2005), Figure 4.3a and 4.3b.

23. National Center for Education Statistics, Digest of Education Statistics, Table 303.45, "Total Fall Enrollment in Degree-Granting Postsecondary Institutions, by Level of Enrollment, Sex, Attendance Status, and Age of Student: 2009, 2011, and 2013," https://nces.ed.gov/programs/digest/d14/tables/dt14_303.45.asp?current=yes.

Figure F: Proportion of Students with Postsecondary Experience by Income Quartile and Year of Birth



SOURCE: Martha J. Bailey and Susan M. Dynarski, "Inequality in Postsecondary Education," in *Whither Opportunity? Rising Inequality, Schools, and Children's Life Chances*, ed. Greg J. Duncan and Richard J. Murnane (New York: Russell Sage Foundation, 2011). NOTE: This graph uses data from the U.S. Department of Labor's National Longitudinal Surveys NLSY79 and NLSY97, and the sample includes all students for whom the authors have information about attainment both at age nineteen and twenty-five, which represents 89 percent of NLSY79 and 95 percent of NLSY97.

INTERNATIONAL STUDENT ENROLLMENT TRENDS

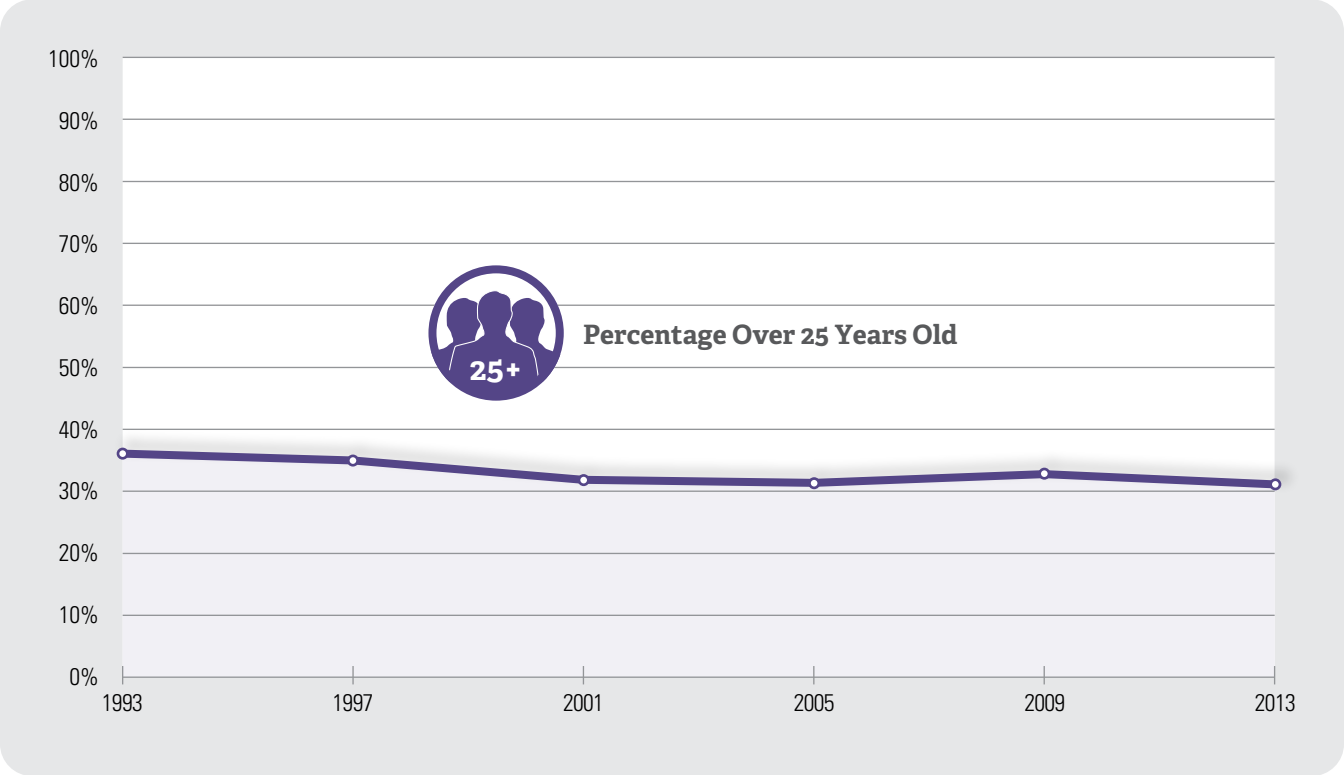
The number of international undergraduate students attending American colleges and universities has increased by 67 percent since 2000, from approximately 288,000 students in 2000 to 482,000 in 2013. More than two-thirds of that increase occurred at public universities.[24] In fall 2014, China, Saudi Arabia, and South Korea were the top countries sending undergraduates to the United States.[25] This increase is attributed to a combination of the growing affluence and academic preparation of students from the sending countries along with more active recruiting by cash-strapped American public universities of international undergraduates who pay full price to attend college in the United States.[26] Researchers at the University of Michigan found that a 10 percent decrease in state appropriations was associated with a 12 percent increase in enrollment of international students at pub-

24. John Bound, Breno Braga, Gaurav Khanna et al., *A Passage to America: University Funding and International Students* (Ann Arbor: University of Michigan Institute for Social Research, 2016).

25. National Science Foundation, *Science and Engineering Indicators 2016*, chap. 2, https://www.nsf.gov/statistics/2016/nsb20161/#/.

26. Miriam Jordan, "International Students Stream into U.S. Colleges," *The Wall Street Journal*, March 24, 2015, http://www.wsj.com/articles/international-students-stream-into-u-s-colleges-1427248801; and Laura McKenna, "The Globalization of America's Colleges," *The Atlantic*, November 18, 2015, http://www.theatlantic.com/education/archive/2015/11/globalization-american-higher-ed/416502/.

Figure G: Percentage of Enrolled Students Aged 25 and Older: 1993–2013



SOURCE: Thomas D. Snyder, Cristobal de Brey, and Sally A. Dillow, *Digest of Education Statistics 2014* (Washington, D.C.: National Center for Education Statistics, 2016), 433, http://nces.ed.gov/pubs2016/2016006.pdf; Thomas D. Snyder and Sally A. Dillow, *Digest of Education Statistics 2010* (Washington, D.C.: National Center for Education Statistics, 2011), 294, https://nces.ed.gov/pubs2011/2011015.pdf; Thomas D. Snyder, Sally A. Dillow, and Charlene M. Hoffman, *Digest of Education Statistics 2006* (Washington, D.C.: National Center for Education Statistics, 2007), 273, http://nces.ed.gov/pubs2007/2007017.pdf; Thomas D. Snyder, Alexandra G. Tan, and Charlene M. Hoffman, *Digest of Education Statistics 2003* (Washington, D.C.: National Center for Education Statistics, 2004), 225, http://nces.ed.gov/pubs2005/2005025.pdf; Thomas D. Snyder and Charlene M. Hoffman, *Digest of Education Statistics 1999* (Washington, D.C.: National Center for Education Statistics, 2000), 205, http://nces.ed.gov/pubs2000/2000031.pdf; and Thomas D. Snyder and Charlene M. Hoffman, *Digest of Education Statistics 1995* (Washington, D.C.: National Center for Education Statistics, 1995), 179, http://nces.ed.gov/pubs95/95029.pdf.

lic universities between 1996 and 2012.[27] This suggests that public universities have reacted to decreases in appropriations by changing the composition of their student body.

AMERICAN STUDENTS STUDYING ABROAD

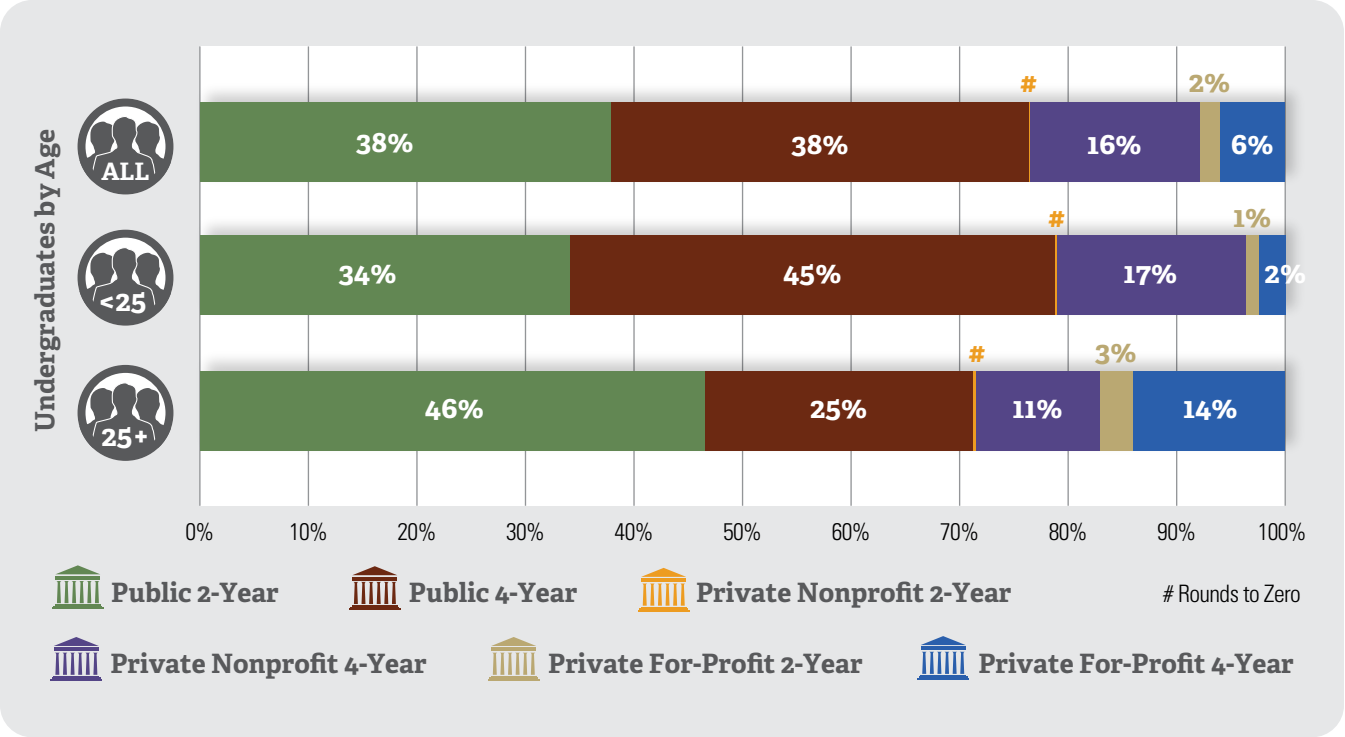
More than 304,000 American students studied abroad for credit during the 2013–2014 academic year. This number has doubled since 2000, and today one in ten undergraduate students study abroad before graduating.[28] The majority of the students studying abroad go to European countries, although Asian countries have become more popular in the last decade.[29] In fall 2013,

27. Bound et al., *A Passage to America: University Funding and International Students*.

28. Institute of International Education, *Open Doors: Report on International Educational Exchange* (New York: Institute of International Education, 2015), http://www.iie.org/Research-and-Publications/Open-Doors#.V7YAPygrJ9N.

29. National Center for Education Statistics, Digest of Education Statistics, Table 310.10, "Number of U.S. Students Studying Abroad and Percentage Distribution, by Sex, Race/Ethnicity, and Other Selected Characteristics: Selected Years, 2000–01 through 2013–14," https://nces.ed.gov/programs/digest/d15/tables/dt15_310.10.asp?current=yes.

Figure H: Enrollment Rates for Undergraduates by Age and Type of Institution: 2013



SOURCE: National Center for Education Statistics, Digest of Education Statistics, Table 303.50, "Total Fall Enrollment in Degree-Granting Postsecondary Institutions, by Level of Enrollment, Control and Level of Institution, Attendance Status, and Age of Student: 2013," https://nces.ed.gov/programs/digest/d14/tables/dt14_303.50.asp?current=yes; and National Center for Education Statistics, Digest of Education Statistics, Table 303.70, "Total Undergraduate Fall Enrollment in Degree-Granting Postsecondary Institutions, by Attendance Status, Sex of Student, and Control and Level of Institution: Selected Years, 1970 through 2025," https://nces.ed.gov/programs/digest/d15/tables/dt15_303.70.asp?current=yes.

the countries hosting the most American students were the United Kingdom (13 percent), Italy (10 percent), and Spain (9 percent).[30] Three-quarters of students who studied abroad in 2014 were white and almost two-thirds were female.[31]

ENROLLMENT ACROSS INSTITUTIONS

In fall 2013, approximately 10.5 million undergraduate students attended a four-year institution (60 percent of undergraduate enrollment), while almost 7 million attended a two-year institution (40 percent of undergraduate enrollment).[32] Figure H shows that undergraduate students are as likely to be enrolled at a public two-year as at a public four-year institution, with those two sectors accounting for almost 80 percent of undergraduate fall enrollments. Additionally, undergraduate students over twenty-five years old enroll in public two-year and for-profit institutions at higher rates than younger students.

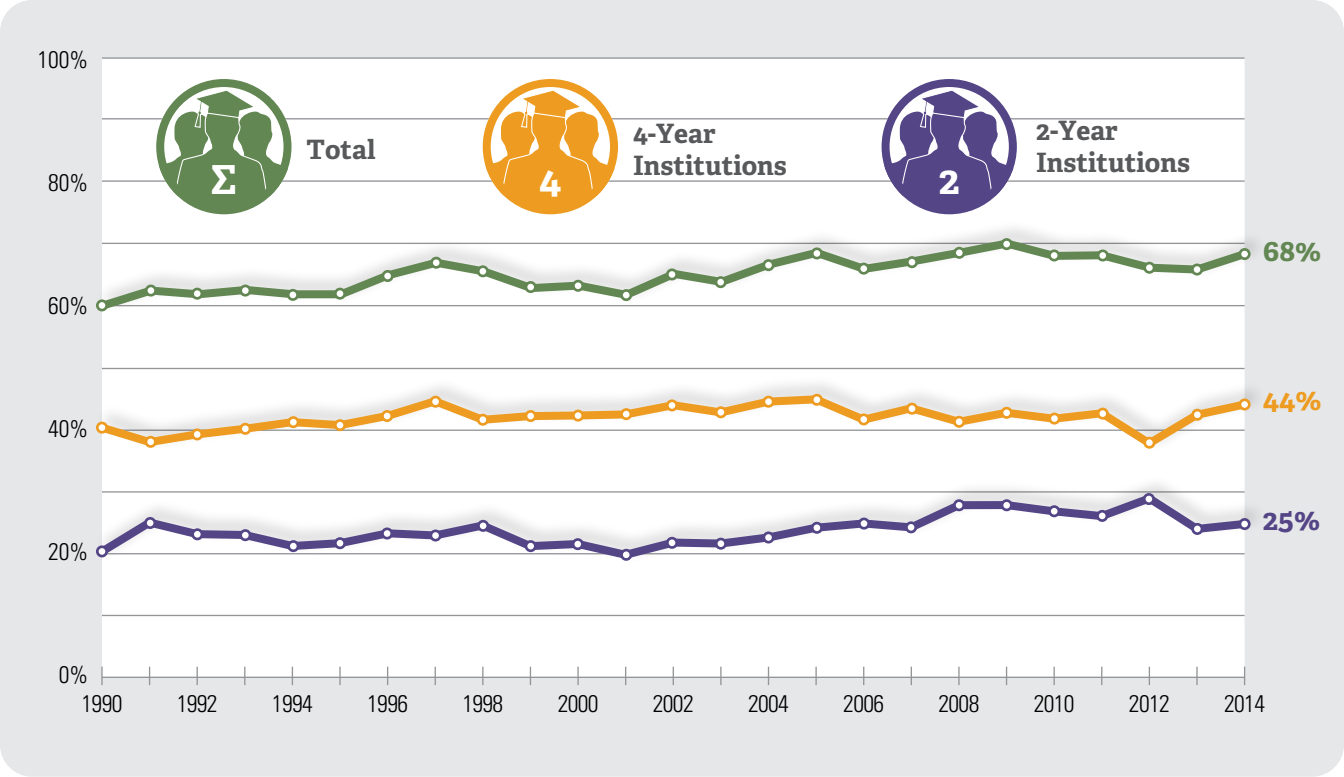
As Figure I demonstrates, enrollment by high school graduates in both two-year and four-year institutions increased between 1990 and 2014. Further, enrollment by recent high school graduates in two-year institutions has increased two and a half times faster than enroll-

30. Institute of International Education, *Open Doors: Report on International Educational Exchange*.

31. National Center for Education Statistics, Digest of Education Statistics, Table 310.10.

32. National Center for Education Statistics, Digest of Education Statistics, Table 303.70.

Figure I: Enrollment Rates for Recent High School Graduates in 2-Year and 4-Year Postsecondary Institutions by Level of Institution: 1990–2014



SOURCE: National Center for Education Statistics, Digest of Education Statistics, Table 302.10, "Recent High School Completers and Their Enrollment in 2-Year and 4-Year Colleges, by Sex: 1960 through 2014," https://nces.ed.gov/programs/digest/d15/tables/dt15_302.10.asp?current=yes.

ment in four-year institutions since 1990 (25 percent versus 10 percent) although the growth at public two-year institutions has declined in the past few years.[33]

VARIATIONS IN INSTITUTIONAL ENROLLMENT BY RACE/ETHNICITY

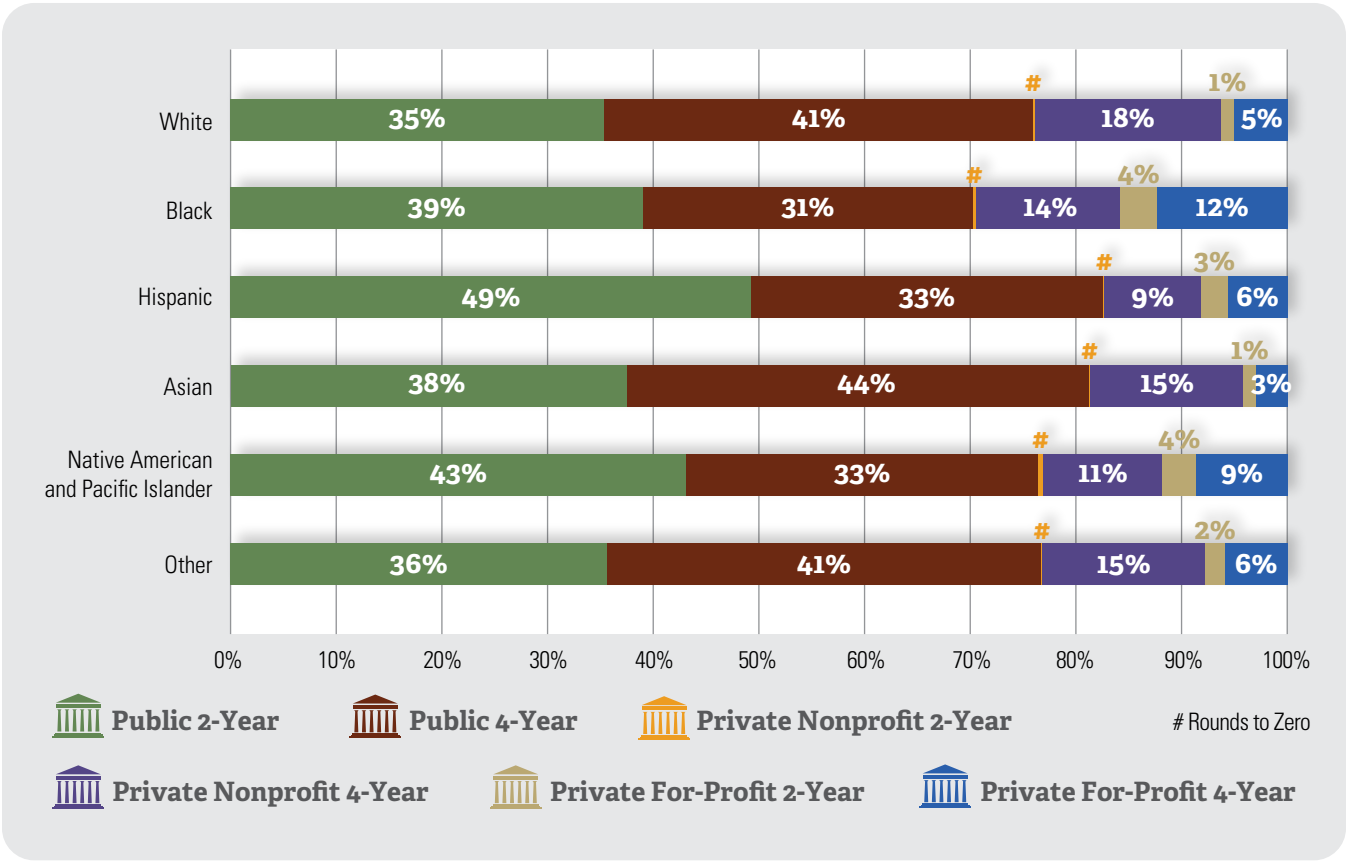
Of all undergraduate students in 2013, 58 percent were white, 17 percent Hispanic, 15 percent black, and 6 percent Asian.[34] Figure J presents the patterns of enrollment for different races and ethnicities by type of institution. Black and Hispanic students enroll in two-year colleges at the highest rates and in public and private four-year colleges at lower rates than their Asian and white counterparts.

Figure K presents the composition of the undergraduate student body by race/ethnicity at various institutional types. White students make up about two-thirds of the student population in public and

33. See National Center for Education Statistics, Digest of Education Statistics, Table 302.10, "Recent High School Completers and Their Enrollment in 2-Year and 4-Year Colleges, by Sex: 1960 through 2014," https://nces.ed.gov/programs/digest/d15/tables/dt15_302.10.asp; and National Center for Education Statistics, Digest of Education Statistics, Table 302.60, "Percentage of 18- to 24-Year-Olds Enrolled in Degree-Granting Postsecondary Institutions, by Level of Institution and Sex and Race/Ethnicity of Student: 1970 through 2014," https://nces.ed.gov/programs/digest/d15/tables/dt15_302.60.asp?current=yes.

34. National Center for Education Statistics, Digest of Education Statistics, Table 306.10,"Total Fall Enrollment in Degree-Granting Postsecondary Institutions, by Level of Enrollment, Sex, Attendance Status, and Race/Ethnicity of Student: Selected Years, 1976 through 2014," https://nces.ed.gov/programs/digest/d15/tables/dt15_306.10.asp?current=yes.

Figure J: Enrollment Rates of Undergraduates by Race and Type of Institution: Fall 2013



SOURCE: National Center for Education Statistics, Digest of Education Statistics, Table 306.50, "Total Fall Enrollment in Degree-Granting Postsecondary Institutions, by Control and Level of Institution, Level of Enrollment, and Race/Ethnicity of Student: 2013," https://nces.ed.gov/programs/digest/d15/tables/dt15_306.50.asp?current=yes.

private nonprofit four-year institutions (62 and 67 percent, respectively) and less than one-half at private for-profits (48 percent). Black and Hispanic students make up a much smaller percentage of the student body at public and private four-year institutions, but almost one-half of the student body at for-profit four-year colleges. The only institutional types where black and Hispanic students make up a larger percentage than white students are two-year private for-profit colleges.

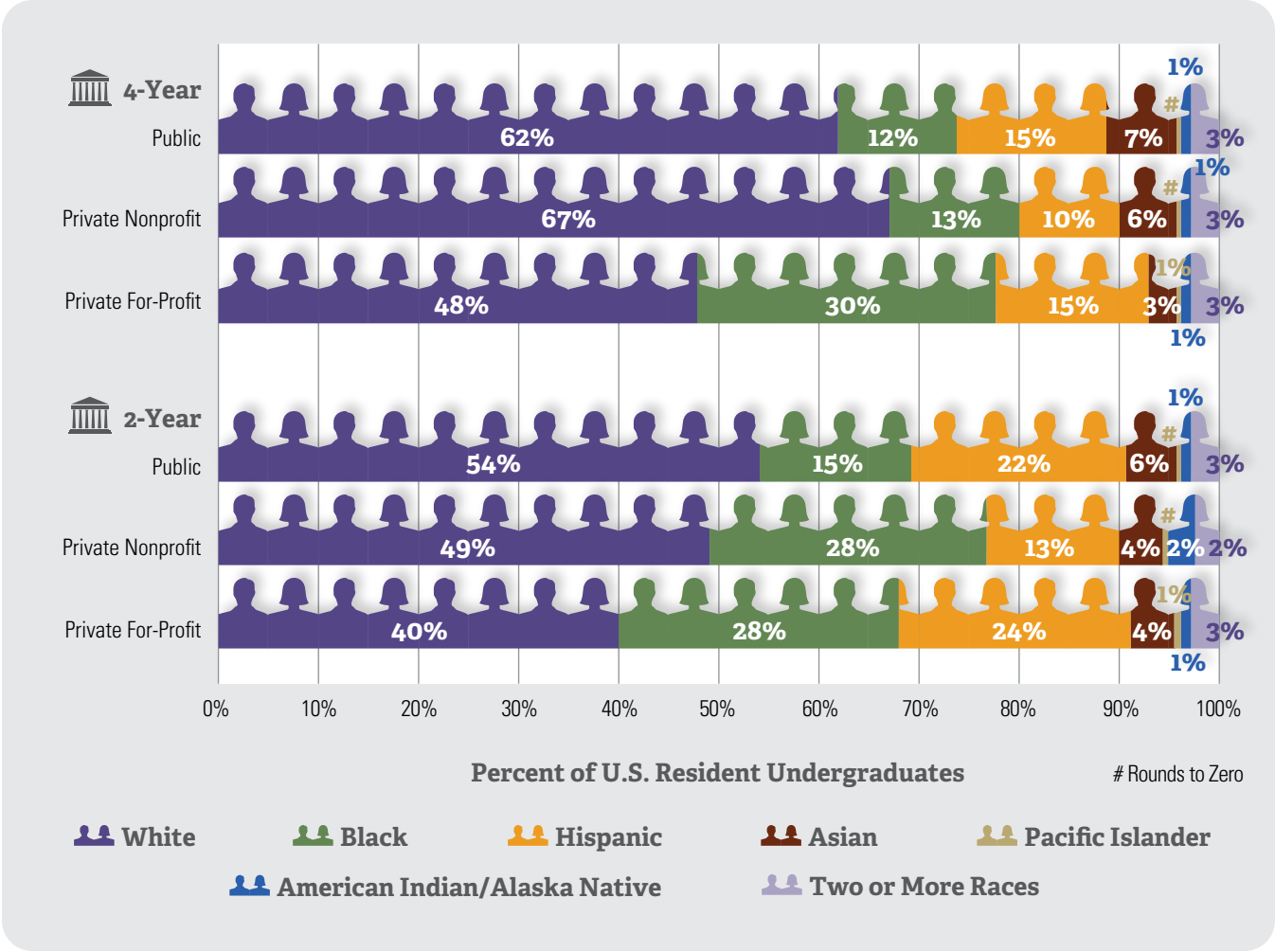
PART-TIME STUDENTS

In 2013, 63 percent of the national undergraduate student body was enrolled full time, and the remaining 37 percent studied part time. (The proportion of part-time students has decreased since the early 1990s when it was five percentage points higher.)[35] Age makes a big difference. Seventy-two percent of students under age twenty-five study full time, compared with only 41 percent of older students, as seen in Figure L. Part-time enrollment is more common among older students because they are more likely to face extra demands on their time from family and job responsibilities.

Young adults enroll in full-time study at higher rates than their older counterparts across all institutional types, except at private for-profit four-year institutions, as depicted in Figure M. For example, 88 percent of full-time students at public four-year colleges are under

35. National Center for Education Statistics, Digest of Education Statistics, Table 303.45.

Figure K: Distribution of Undergraduate Enrollment by Sector and Race/Ethnicity: Fall 2013



SOURCE: Re-creation of Figure 3 in National Center for Education Statistics, *The Condition of Education 2015* (Washington, D.C.: National Center for Education Statistics, May 2015), 196. Original data from Digest of Education Statistics, Table 306.50, "Total Fall Enrollment in Degree-Granting Postsecondary Institutions, by Control and Level of Institution, Level of Enrollment, and Race/Ethnicity of Student: 2013."

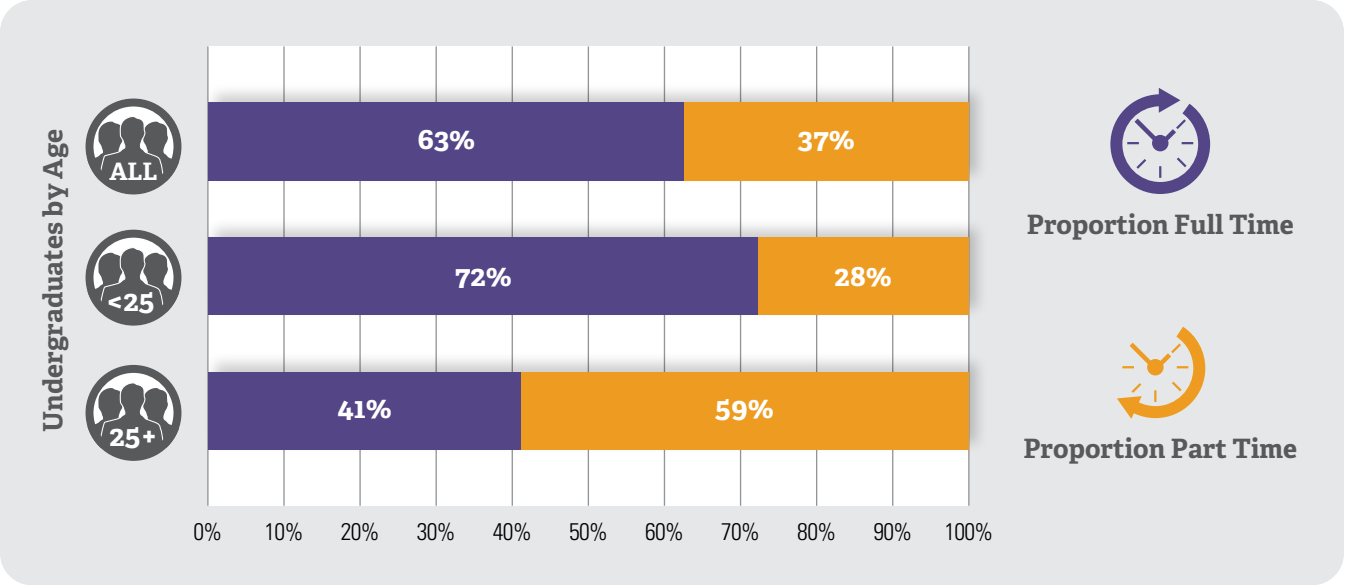
the age of twenty-five, while the remaining 12 percent are twenty-five or older. Similarly, 86 percent of full-time undergraduate students in private nonprofit four-year institutions are under the age of twenty-five. Even at two-year institutions, younger students study full time at higher rates than older students. The only exception is at private for-profit four-year institutions, where 30 percent of undergraduates who study full time are under twenty-five while 70 percent of those twenty-five and older study full time.

The **average acceptance rate** at four-year colleges is about **65 percent** nationwide.

INSTITUTIONAL COMPETITIVENESS

More than 70 percent of undergraduates attend colleges that accept more than half of their applicants; only 3 percent attend schools that accept less than 25 percent and only 1 percent attend colleges that accept less than 10 percent of their appli-

Figure L: Undergraduate Students by Age and Enrollment Intensity: 2013



SOURCE: National Center for Education Statistics, Digest of Education Statistics, Table 303.45, "Total Fall Enrollment in Degree-Granting Postsecondary Institutions, by Level of Enrollment, Sex, Attendance Status, and Age of Student: 2009, 2011, and 2013," https://nces.ed.gov/programs/digest/d14/tables/dt14_303.45.asp?current=yes.

cants.[36] The average acceptance rate at four-year colleges is about 65 percent nationwide.[37] A recent study found that black and Hispanic students are underrepresented in the most selective colleges, even after controlling for family income. The probability of enrolling in a highly selective college is five times greater for white students than for black students. Low- and middle-income students are likewise extremely underrepresented in the most selective colleges.[38] Lastly, while many media stories cover students applying to dozens and dozens of colleges to maximize the chance of being accepted, the median number of applications submitted to traditional four-year colleges per student is two.[39]

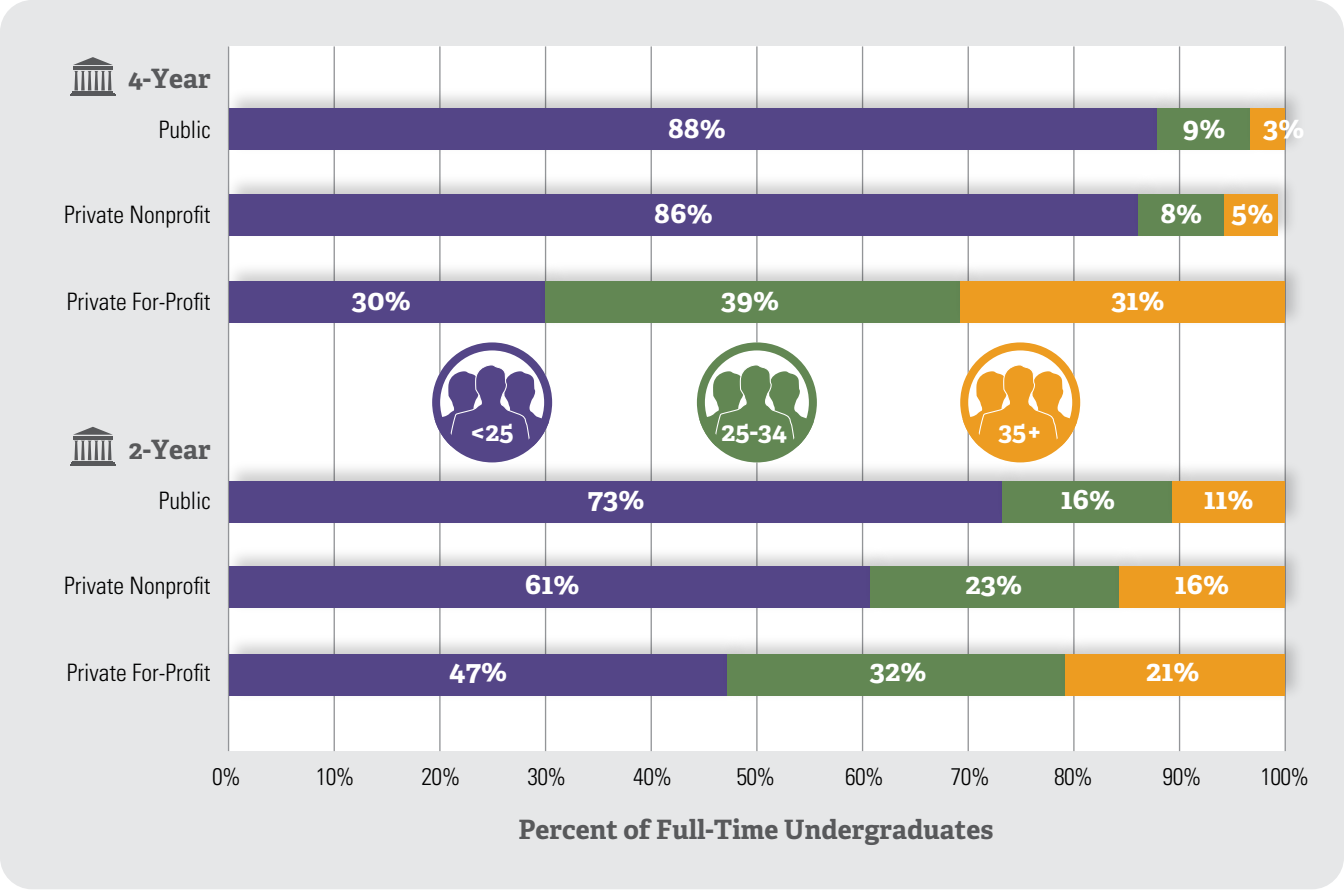
36. National Center for Education Statistics, Digest of Education Statistics, Table 305.40, "Acceptance Rates; Number of Applications, Admissions, and Enrollees; and Enrollees' SAT and ACT Scores for Degree-Granting Postsecondary Institutions with First-Year Undergraduates, by Control and Level of Institution: 2013–14," https://nces.ed.gov/programs/digest/d14/tables/dt14_305.40.asp?current=yes.

37. Anemona Hartocollis, "Greater Competition for College Places Means Higher Anxiety, Too," *The New York Times*, April 20, 2016, http://www.nytimes.com/2016/04/21/us/greater-competition-for-college-places-means-higher-anxiety-too.html.

38. Sean F. Reardon, Rachel Baker, and Daniel Klasik, *Race, Income, and Enrollment Patterns in Highly Selective Colleges, 1982–2004* (Stanford, Calif.: Stanford University Center for Education Policy Analysis, 2012).

39. Christopher Avery, Jessica S. Howell, and Lindsay Page, *A Review of the Role of College Applications on Students' Postsecondary Outcomes* (New York: College Board, 2014).

Figure M: Percentage Distribution of Full-Time Undergraduate Enrollment, by Institution and Student Age: Fall 2013



SOURCE: Re-creation of Figure 1 in National Center for Education Statistics, *The Condition of Education 2015* (Washington, D.C.: National Center for Education Statistics, May 2015), 194. Original data from Digest of Education Statistics, Table 303.50, "Total Fall Enrollment in Degree-Granting Postsecondary Institutions, by Level of Enrollment, Control and Level of Institution, Attendance Status, and Age of Student: 2013."

Key Facts and Figures

Getting into College

1 Over **seventeen million** undergraduates are enrolled in more than 4,700 degree-granting institutions in the United States.

2 While college enrollment rate gaps across race and ethnicity are narrowing, gaps based upon gender and income-level are increasing.

3 Almost **80 percent** of fall undergraduates are enrolled in public colleges and universities.

4 Almost **40 percent** of fall undergraduates are enrolled in two-year public colleges.

5 Adult students make up **31 percent** of the undergraduate population.

6 **Thirty-seven percent** of college students, and the majority of adult college students, study part time.

7 The number of international undergraduate students in the United States has increased by more than **67 percent** since 2000.

8 Black and Hispanic students enroll at two-year colleges at higher rates compared with white and Asian students.

9 Black, Hispanic, and low-income students are underrepresented at the most selective colleges.

10 The most common number of four-year colleges to which students apply is **two** and the average acceptance rate at these schools is **65 percent**.

Section Three: Paying for College

Paying for college weighs heavily on the minds of many students and their families. One recent survey found that the majority of families considered financial aid to be a very important factor in deciding where to attend college and that this decision largely came down to dollars and cents.[40]

Students and their families are increasingly being asked to pay more to finance their college education, and with family incomes stagnating for all but the wealthiest households, the share of students relying on student loans to pay for college has increased.[41] This section provides an overview of the costs of college: what they include, how students and families pay for them, and recent changes and trends in costs data.

Figure N: Average Published and Net Prices for Full-Time Undergraduates by Sector: 2015–2016

	Public 2-Year In-District	Public 4-Year In-State	Private Nonprofit 4-Year	For-Profit
Tuition and Fees				
Published Prices	$3,435	$9,410	$32,405	$15,610
Net Prices	-$770	$3,980	$14,890	$12,175
Tuition, Fees, and Room and Board				
Published Prices	$11,438	$19,548	$43,921	$31,425
Net Prices	$7,230	$14,120	$26,400	$26,980

SOURCE: The College Board, Trends in Higher Education, Table 1A, "Average Published Charges (Enrollment-Weighted) for Full-Time Undergraduates by Sector, 2015–16," https://trends.collegeboard.org/college-pricing/figures-tables/average-published-undergraduate-charges-sector-2015-16; and David Radwin, Jennifer Wine, Peter Siegel, and Michael Bryan, *2011–12 National Postsecondary Student Aid Study (NPSAS:12): Student Financial Estimates for 2011–12* (Washington, D.C.: National Center for Education Statistics, August 2013), http://nces.ed.gov/pubs2013/2013165.pdf.
NOTE: Net price for public and private nonprofit four-year institutions is estimated based on 2014–2015 financial aid. Net price for for-profit colleges is estimated based on 2011–2012 amounts and inflation-adjusted to 2015 dollars. Total grant aid includes federal Pell Grants, federal SEOG, state grants, institutional grants, private grants, and employer grants. Room and board in the public two-year sector refers to housing and food costs for commuter students since few community colleges provide on-campus housing. Prices and grant aid are rounded to the nearest five dollars.

40. Xianglei Chen, Joanna Wu, and Shayna Tasoff, *Getting Ready for College: Financial Concerns and Preparation Among the High School Senior Class of 2003–04* (Washington, D.C.: National Center of Education Statistics, April 2010), https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2010204.

41. Lawrence Mishel, "Causes of Wage Stagnation," Economic Policy Institute, January 6, 2015, http://www.epi.org/publication/causes-of-wage-stagnation/.

PUBLISHED ("STICKER") PRICES VERSUS NET PRICES

The information about tuition, fees, and room and board published on college websites and catalogs constitutes what is commonly referred to as the "sticker price" of attendance. This published or sticker price shows how much students must pay to attend school before subsidies like grants and scholarships. The figure actually paid by students and families after grants, scholarships, and work studies is the net price. Figure N compares published and net prices for full-time undergraduates by institution type for the 2015–2016 school year. The published and net prices differ greatly by sector, but the net price is consistently lower than the published price. For example, the net price to attend a private nonprofit four-year institution is about 40 percent lower than the published price: $26,400 compared with $43,921.

About one-third of all students enrolled in college full time pay the full "sticker" price, while two-thirds pay lower net prices.[42] Thus, the majority of students receive grants and scholarships that reduce their required payments below the sticker price and, as a result, published prices do not capture the true cost of attendance for most students and their families. For example, 85 percent of dependent students (generally students under the age of twenty-four who rely on their families for financial support) from families with annual incomes below $30,000 receive large enough tuition subsidies to cover the full cost of tuition and fees, which explains why average net tuition is actually negative for many lower-income students at public institutions.[43] Yet evidence also suggests that many students and their families, and lower-income families in particular, rule out schools that they can afford because the sticker price is too high.[44] Although most families are not asked to pay those amounts, the reality is that they frequently pay more attention to sticker prices than to net prices—the actual costs that families must pay after grant and scholarship aid is accounted for—because net prices are not well-publicized, and it is usually difficult to know in advance how much grant aid a student will receive.

About **one-third** of all students enrolled in college full time **pay the full "sticker" price**, while **two-thirds pay lower net prices.**

Many students and their families, and lower-income families in particular, **rule out schools that they can afford** because the sticker price is too high.

Figure O shows the average net tuition and fees and total net costs of attendance that families pay, which, as noted above, are substantially lower than the published prices. The average net cost is disaggregated by family income and dependency status to show how the cost of attendance varies by student and family circumstances. We see that average net costs tend to be

42. National Center for Education Statistics, Digest of Education Statistics, Table 331.20, "Full-Time, First-Time Degree/Certificate-Seeking Undergraduate Students Enrolled in Degree-Granting Postsecondary Institutions, by Participation and Average amount Awarded in Financial Aid Programs, and Control and Level of Institution: 2000–01 through 2012–13," https://nces.ed.gov/programs/digest/d14/tables/dt14_331.20.asp.

43. Sandy Baum and Jennifer Ma, *Trends in College Pricing 2015* (New York: College Board, 2015), http://trends.collegeboard.org/sites/default/files/trends-college-pricing-web-final-508-2.pdf.

44. College Board and Art & Science Group, LLC, "A Majority of Students Look at a College's Sticker Price Without Taking Financial Aid into Consideration," *studentPoll* 10 (1) (February 2013), http://www.artsci.com/studentpoll/v10n1/index.aspx.

Figure O: Net Tuition and Total Net Cost of Attendance (including Room and Board and Other Costs) for Full-Time Students by Dependency Status, Family Income Quartile, and College Sector in the 2011–2012 Academic Year

	Public 2-Year		Public 4-Year		Private Nonprofit 4-Year		For Profit	
	Net Tuition and Fees	Total Net Cost	Net Tuition and Fees	Total Net Cost	Net Tuition and Fees	Total Net Cost	Net Tuition and Fees	Total Net Cost
Dependent Students	**-$311**	**$11,237**	**$3,046**	**$18,324**	**$13,337**	**$28,379**	**$13,713**	**$27,474**
Lowest Quartile	-$3,080	$4,985	-$2,320	$9,534	$4,970	$19,358	$11,300	$24,176
Second Quartile	-$310	$10,632	$1,440	$14,947	$8,610	$22,749	$13,730	$27,065
Third Quartile	$1,900	$13,293	$5,350	$19,020	$13,970	$28,516	$18,040	$32,006
Highest Quartile	$2,050	$13,795	$6,330	$20,510	$19,720	$34,958	$17,460	$33,041
Independent Students	**-$1,810**	**$12,253**	**$280**	**$16,711**	**$11,859**	**$25,163**	**$9,060**	**$24,522**

SOURCE: David Radwin, Jennifer Wine, Peter Siegel, and Michael Bryan, *2011–12 National Postsecondary Student Aid Study (NPSAS:12): Student Financial Estimates for 2011–12* (Washington, D.C.: National Center for Education Statistics, August 2013), http://nces.ed.gov/pubs2013/2013165.pdf. NOTE: Lowest income quartile: less than $30,000; second: $30,000 to $64,999; third: $65,000 to $105,999; highest: $106,000 or higher (all in 2011 dollars). In-state tuition and fees are reported for public institutions; tuition and fees for all institutions are reported for private nonprofit four-year and for-profit institutions.

lower for students from lower-income families, although higher-income families also receive substantial tuition subsidies that lower their cost of attendance.[45]

In addition to grants and scholarships, students and their families rely on many other sources of financial aid to help pay for college, including loans, tax credits and deductions, and work study. Across all institutions, dependent students received nearly $12,000 per student in financial aid in 2011–2012, of which:

- More than half (54 percent) was offered as grant aid;
- Thirty percent took the form of student loans; and

45. For example, Baum and Ma report that more than half of the financial aid at private four-year institutions is distributed to students whose annual family incomes exceed $155,000, while these students make up less than 20 percent of the student body at those colleges and universities. Baum and Ma, *Trends in College Pricing 2015*, 31.

At all types of institutions, **there has been an increase in student borrowing** and an overall increase from approximately one-half of graduates in 2000 to almost 60 percent of graduates by 2012. **Community colleges have the smallest share of student borrowers** at 36 percent, **while for-profit institutions have the largest share** at 86 percent.

- Sixteen percent was a combination of work study, tax credits and deductions, and other forms of tuition assistance.[46]

While these numbers provide an overall average of student aid sources, there are significant differences by college sector. For example, dependent students attending public two-year institutions in 2011–2012 received nearly 75 percent of their aid in the form of grants, while those who attended public four-year and for-profit colleges received less than half of their aid as grants.[47]

In general, the data explaining net costs and types of aid highlighted above for dependent students also hold true for independent students.[48] The key difference between dependent and independent students in the financial aid system is that the system expects a dependent student's parents to contribute to paying for their son's or daughter's education, whereas independent students are expected to contribute something from their own earnings and there is no expectation of help from parents. This results in two important differences between dependent and independent students when it comes to college costs:

1. Average net prices for independent students are considerably lower than for dependent students. At public four-year institutions, for example, independent students paid $280 for tuition and fees on average in 2011–2012 after accounting for grants and scholarships, compared with $3,046 for dependent students. This reflects the fact that parents' income is ignored in determining the ability of independent students to pay for college.
2. Despite facing lower net prices on average, independent students tend to borrow more for college because they also need to finance their household expenses while reducing their work earnings to make time for school. For this reason and because they cannot benefit from the Parent PLUS loan program, the maximum federal loan amount that independent students can borrow for college is considerably higher than that of dependent students. As a result, the average amount that independent students borrow is 20 to 30 percent higher in each college sector.

TRENDS IN BORROWING

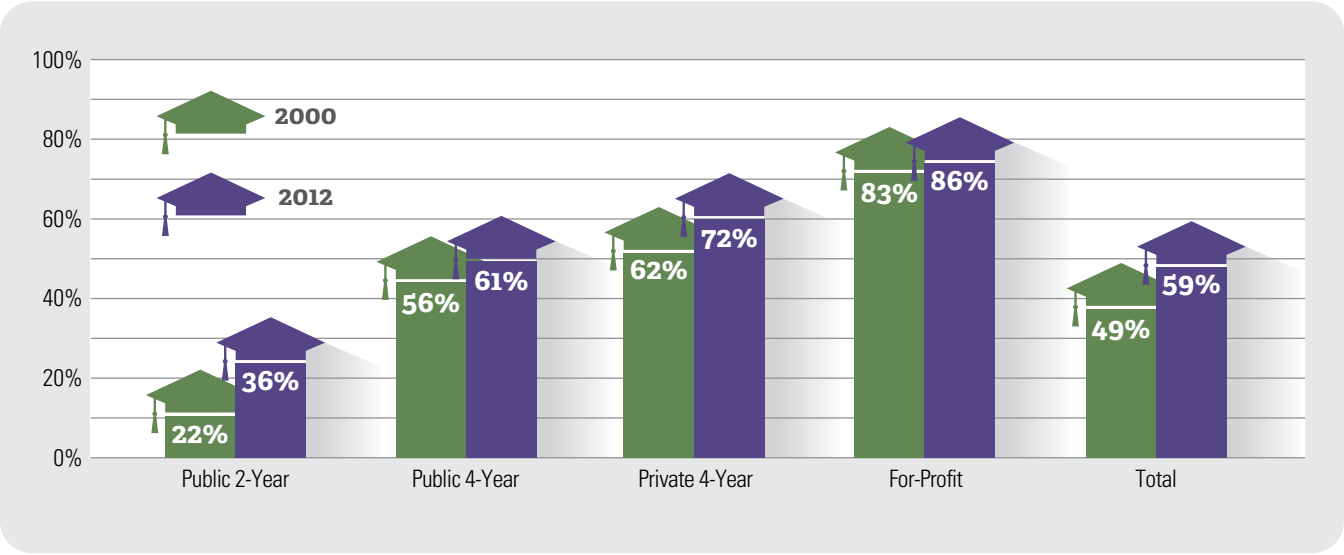
As prices have increased at public and private nonprofit four-year institutions, as well as at for-profit institutions, students and families have become increasingly reliant

46. A key difference between grants/scholarships and loans is that students must repay loan aid after they leave school, whereas they are not required to pay back the grant and scholarship assistance they receive.

47. David Radwin, Jennifer Wine, Peter Siegel, and Michael Bryan, *2011–12 National Postsecondary Student Aid Study (NPSAS:12): Student Financial Aid Estimates for 2011–12* (Washington, D.C.: National Center for Education Statistics, August 2013), http://nces.ed.gov/pubs2013/2013165.pdf.

48. An independent student is one of the following: at least twenty-four years old, married, a graduate or professional student, a veteran, a member of the armed forces, an orphan, a ward of the court, someone with legal dependents other than a spouse, an emancipated minor, or someone who is homeless or at risk of becoming homeless.

Figure P: Share of College Graduates Borrowing for College: 2000 and 2012



SOURCE: John A. Riccobono, Melissa B. Cominole, Peter H. Siegel et al., *National Postsecondary Student Aid Study 1999–2000 (NPSAS:2000): Methodology Report* (Washington, D.C.: National Center for Education Statistics, June 2002), http://nces.ed.gov/pubs2002/2002152.pdf; and David Radwin, Jennifer Wine, Peter Siegel, and Michael Bryan, *2011–12 National Postsecondary Student Aid Study (NPSAS:12): Student Financial Estimates for 2011–12* (Washington, D.C.: National Center for Education Statistics, August 2013), http://nces.ed.gov/pubs2013/2013165.pdf.

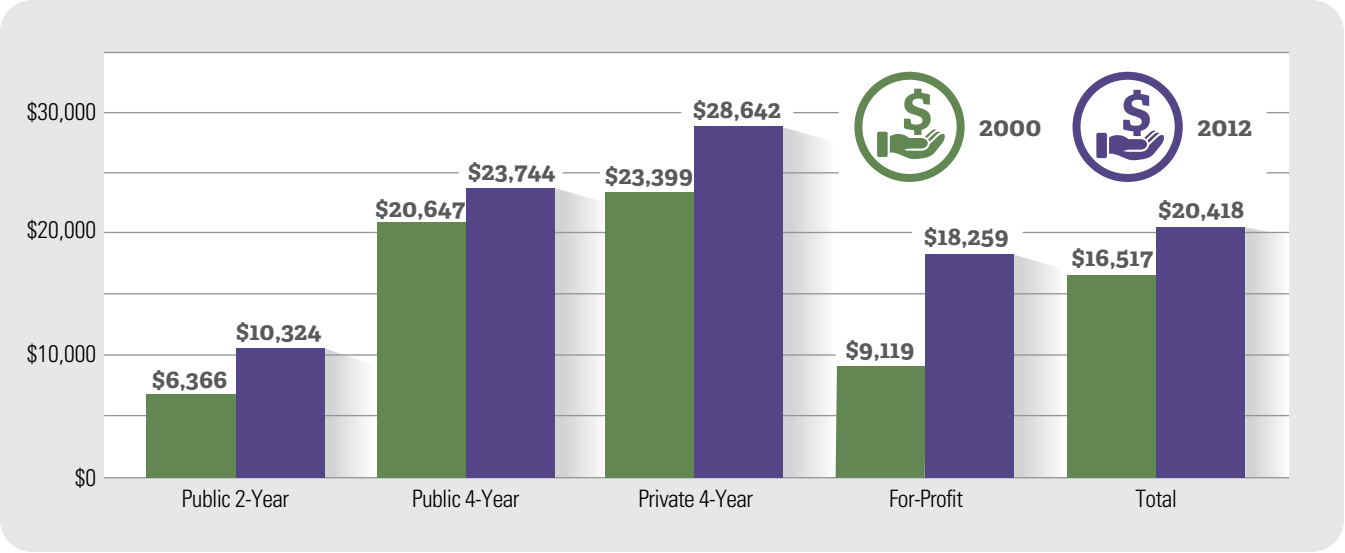
on loan aid to help cover the cost of attendance. And even at public two-year colleges, where net prices have decreased, a growing share of students and their families have chosen to borrow more and pay less out of pocket to cover their college-going expenses.[49] Figure P shows how the share of college graduates taking out loans has increased from 2000 to 2012. At all types of institutions, there has been an increase in student borrowing and an overall increase from approximately one-half of graduates in 2000 to almost 60 percent of graduates by 2012. Community colleges have the smallest share of student borrowers at 36 percent, while for-profit institutions have the largest share at 86 percent.

The median cumulative loan amount borrowed by graduates in 2012 ranged from **just over $10,000** for students attending community college to **almost $30,000** for graduates of private four-year colleges and universities.

In addition to more students borrowing to finance their education, loan amounts among borrowers have been increasing. Figure Q shows that from 2000 to 2012, the median loan amount that college graduates borrowed increased from about $16,500 to $20,400, or nearly 25 percent in inflation-adjusted terms. The median cumulative loan amount borrowed by graduates in 2012 ranged from just over $10,000 for students attending community college to almost $30,000 for graduates of private four-year colleges and universities.

49. Part of this phenomenon may be explained by the unique conditions during, and in the aftermath of, the Great Recession, when students experienced a sharp decline in employment and earnings while attending school. For more information, see Jason Delisle, *Shifting Burdens: How Students & Families Paid for College from 1996 to 2012* (Washington, D.C.: New America, 2016), https://static.newamerica.org/attachments/12956-shifting-burdens/Shifting-Burdens.9c2a91a9ea9d4d4a93ec8cc9c1d15af8.pdf.

Figure Q: Median Cumulative Loan Amount Borrowed in 2015 Dollars for Graduates: 2000 and 2012



SOURCE: John A. Riccobono, Melissa B. Cominole, Peter H. Siegel et al., *National Postsecondary Student Aid Study 1999–2000 (NPSAS:2000): Methodology Report* (Washington, D.C.: National Center for Education Statistics, June 2002), http://nces.ed.gov/pubs2002/2002152.pdf; and David Radwin, Jennifer Wine, Peter Siegel, and Michael Bryan, *2011–12 National Postsecondary Student Aid Study (NPSAS:12): Student Financial Estimates for 2011–12* (Washington, D.C.: National Center for Education Statistics, August 2013), http://nces.ed.gov/pubs2013/2013165.pdf.

Despite the recent rise in borrowing, most undergraduates today are still not taking on exorbitant debt to pay for college. A common measure of excessive borrowing is the share of students who take out more than $50,000 to pay for college. By this definition, less than 10 percent of undergraduate borrowers in 2014 paid for college by taking on exorbitant debt.[50] Additionally, Figure P shows that more than 40 percent of graduates in 2012 did not borrow at all to finance their education.

Among students who do take out loans, research indicates that the borrowers at greatest risk of defaulting are typically those who take out the smallest loan amounts.[51]

Only 9 percent of student borrowers who graduated from college went into default on their loan repayments, compared with 24 percent of the student borrowers who did not graduate in 2012.

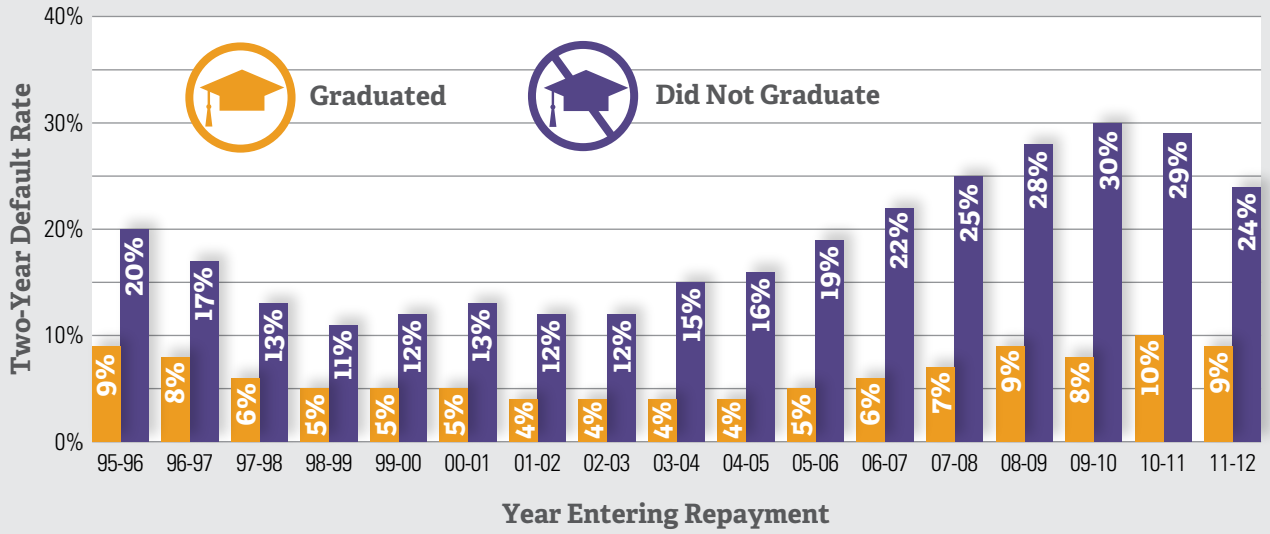
For example, the average loan amount among individuals defaulting on their federal loans is $15,000, compared with $26,000 for all other borrowers.[52] This is because loan defaulters are often students who dropped out of college quickly, with nothing to show by way of a credential for

50. Adam Looney and Constantine Yannelis, *A Crisis in Student Loans? How Changes in the Characteristics of Borrowers and in the Institutions They Attended Contributed to Rising Loan Defaults*, Brookings Papers on Economic Activity, BPEA Conference Draft, September 10–11, 2015 (Washington, D.C.: Brookings Institute, 2015), http://www.brookings.edu/~/media/projects/bpea/fall-2015_embargoed/conferencedraft_looneyyannelis_studentloandefaults.pdf.

51. Ibid.

52. Susan Dynarski, "Why Students with Smallest Debts Have the Larger Problem," *The New York Times*, August 31, 2015, http://www.nytimes.com/2015/09/01/upshot/why-students-with-smallest-debts-need-the-greatest-help.html?_r=0.

Figure R: Two-Year Student Loan Default Rates by Degree Completion Status: 1995–1996 to 2011–2012



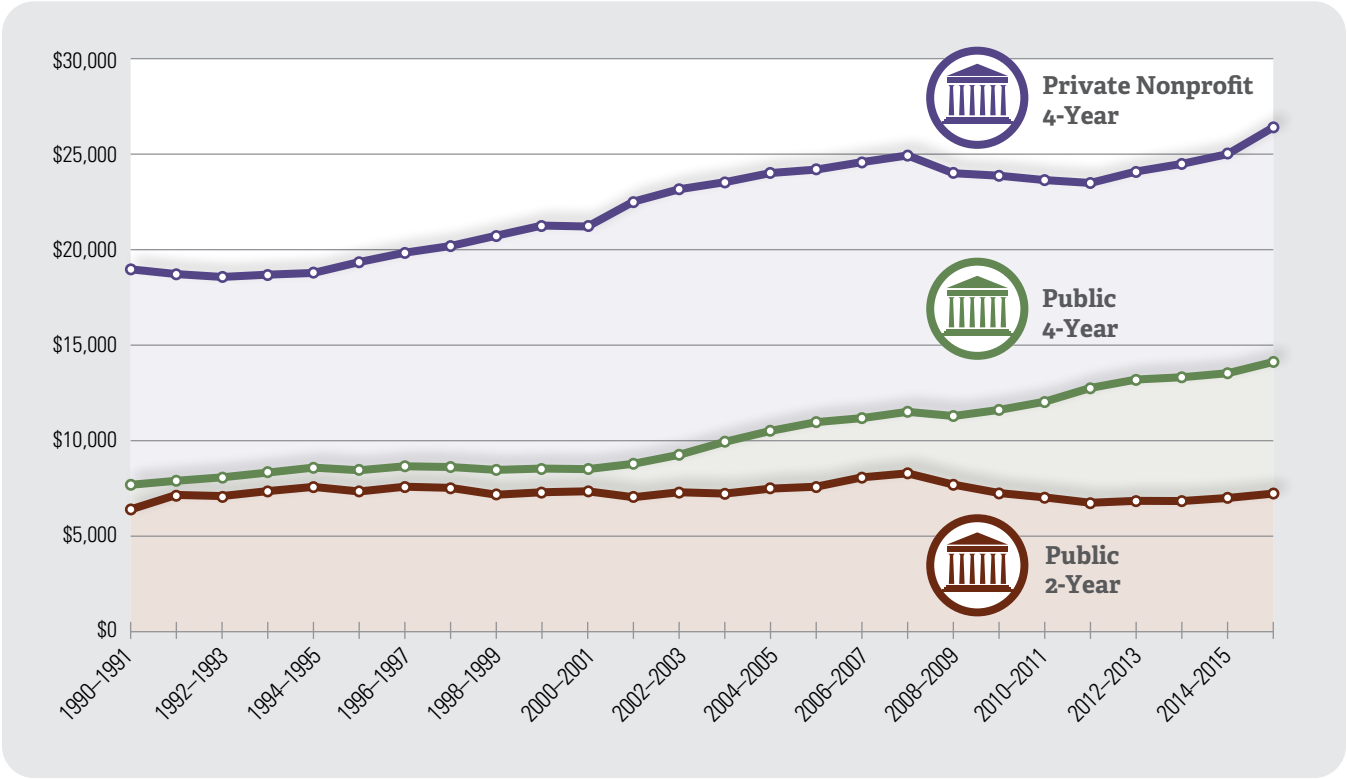
Two-Year Cohort Default Rates, Borrowers Entering Repayment in 2011–2012

	Public 2-Year	Public 4-Year	Private Nonprofit 4-Year	For-Profit	All
All Borrowers	23%	9%	7%	18%	14%
Borrowers Who Graduated	17%	6%	5%	14%	9%
Borrowers Who Did Not Graduate	29%	18%	15%	28%	24%

SOURCE: The College Board, Trends in Higher Education, Table 14A, "Two-Year Student Loan Default Rates by Repayment Cohort and Degree Completion Status, 1995–96 to 2011–12," https://trends.collegeboard.org/student-aid/figures-tables/two-year-student-loan-default-rates-degree-completion-status-over-time. NOTE: Default rates are based on defaults occurring within two calendar years of the date of entering repayment and do not correspond exactly to official two-year cohort default rates, which are based on defaults before the end of the fiscal year following the year in which the borrower enters repayment. Based on sector in which students were enrolled at the time the first federal student loan was issued. Does not include Perkins Loan or Parent PLUS Loan balances. Individual graduation outcomes are as reported by institutions.

the time and money that they invested in school. Figure R shows that only 9 percent of student borrowers who graduated from college went into default on their loan repayments, compared with 24 percent of the student borrowers who did not graduate in 2012. Further, students who graduated from private nonprofit four-year institutions had the lowest default rates, while students who borrowed but did not graduate from community colleges and for-profit institutions had the highest default rates. (Note that default rates are similar in the for-profit and the two-year public sectors, but the vast majority of for-profit students borrow, while nearly two-thirds of community college graduates do not take out student loans.) Students who earn low salaries in the workforce after they leave school

Figure S: Total Net Cost of Tuition and Fees and Room and Board in 2015 Dollars by Sector: 1990–1991 to 2015–2016



SOURCE: The College Board, Trends in Higher Education, Table 7, "Published and Net Prices in 2015 Dollars by Sector, Full-Time Undergraduate Students, 1990–91 to 2015–16," https://trends.collegeboard.org/college-pricing/figures-tables/average-net-price-over-time-full-time-students-sector.

and subsequently struggle to repay the modest amounts that they have borrowed have the highest default rates.

HOW COSTS TO ATTEND COLLEGE HAVE CHANGED

As the trends in Figure S reveal, the net costs of attendance have increased at public and private four-year institutions over the last twenty years while they have actually decreased at public two-year colleges (in inflation-adjusted dollars):

- Students and their families today pay 73 percent more in net tuition and fees to attend public four-year institutions than they did two decades ago. They pay 55 percent more than they did six years ago.[53]
- Students and their families today pay 32 percent more in net tuition and fees to attend private four-year institutions than they did two decades ago. They pay 10 percent more than they did six years ago.
- Students and their families paid 25 percent more in net tuition and fees to attend for-profit institutions in 2012 than in 2000.[54]
- Students and their families today pay half the net tuition and fees to attend public two-year institutions that they paid two decades ago. They pay 16 percent less than they did six years ago.

53. Ibid.

54. The trend in net prices at for-profit institutions covers a shorter time horizon because the sector has tripled in size (in terms of enrollments) since 2000 and represented a very small share of total enrollments before that time. Because the sector has experienced such enormous growth, the overall price trend captures both the fluctuation in prices within schools over time and price changes from new school openings. The price trend in the for-profit sector should be interpreted cautiously for this reason.

Net prices at public four-year institutions have risen most steeply because average aid per student has not kept pace with the growth in prices. At private nonprofit four-year institutions, net price increases are also partly a response to declines in per student tuition subsidies, and reflect increasing sticker prices at research universities where per student spending is on the rise.[55] In contrast, net prices at community colleges have dropped because the dollar increases in grants and tax benefits per student have been large enough to cover tuition increases. Between 1990–1991 and 2015–2016, spending on grants and tax benefits per community college student increased from $1,450 to $4,210 in real dollars, whereas published prices increased from only $1,660 to $3,440 over this period.[56]

While attending public four-year institutions is more expensive today than it was in the past, the average cost of in-state attendance at these schools remains substantially lower than at either private four-year institutions or for-profit colleges. Rising prices therefore do not indicate that four-year institutions are necessarily worse options for students today than they were in the past.

Nevertheless, because families are being asked to cover an increasingly large share of the cost of attending four-year institutions, the issue of affordability at public universities is paramount.

THE DRIVERS BEHIND RISING COLLEGE PRICES

To understand why tuition and fees, even accounting for grants and scholarships, have been rising at four-year institutions, we conclude this section by exploring how higher education spending and revenues have changed over time.

Students and their families today **pay half the net tuition and fees** to attend public two-year institutions that they paid two decades ago.

The recent and dramatic increases in the costs of producing a college education are often attributed to discretionary spending: that colleges are spending more on faculty and instruction, administrative staff and expenses, student services, and other academic support. However, this appears not to be the case. Figure T shows that education-related spending has remained flat, inched up slowly, or even decreased at public institutions over the past decade.

At public four-year institutions, rising prices largely reflect the fact that public subsidies for higher education have declined over time, and that these institutions are relying more heavily on students and families for operating revenue that used to come from state and local government. Figure U shows annual changes in published tuition and fee prices and state funding per student at public institutions over the past thirty years. The trend lines resemble mirrored images of each other, indicating that in years when state funding has declined sharply, institutions have offset the revenue losses by raising prices to students and families.

After adjusting for inflation, state funding per full-time equivalent student in 2014 was nearly 30 percent below the funding level in 2000.[57] Public four-year institutions

55. Dylan Matthews, "The Tuition is Too Damn High, Part III—The Three Reasons Tuition is Rising," *The Washington Post*, August 28, 2013, https://www.washingtonpost.com/news/wonk/wp/2013/08/28/the-tuition-is-too-damn-high-part-iii-the-three-reasons-tuition-is-rising/.

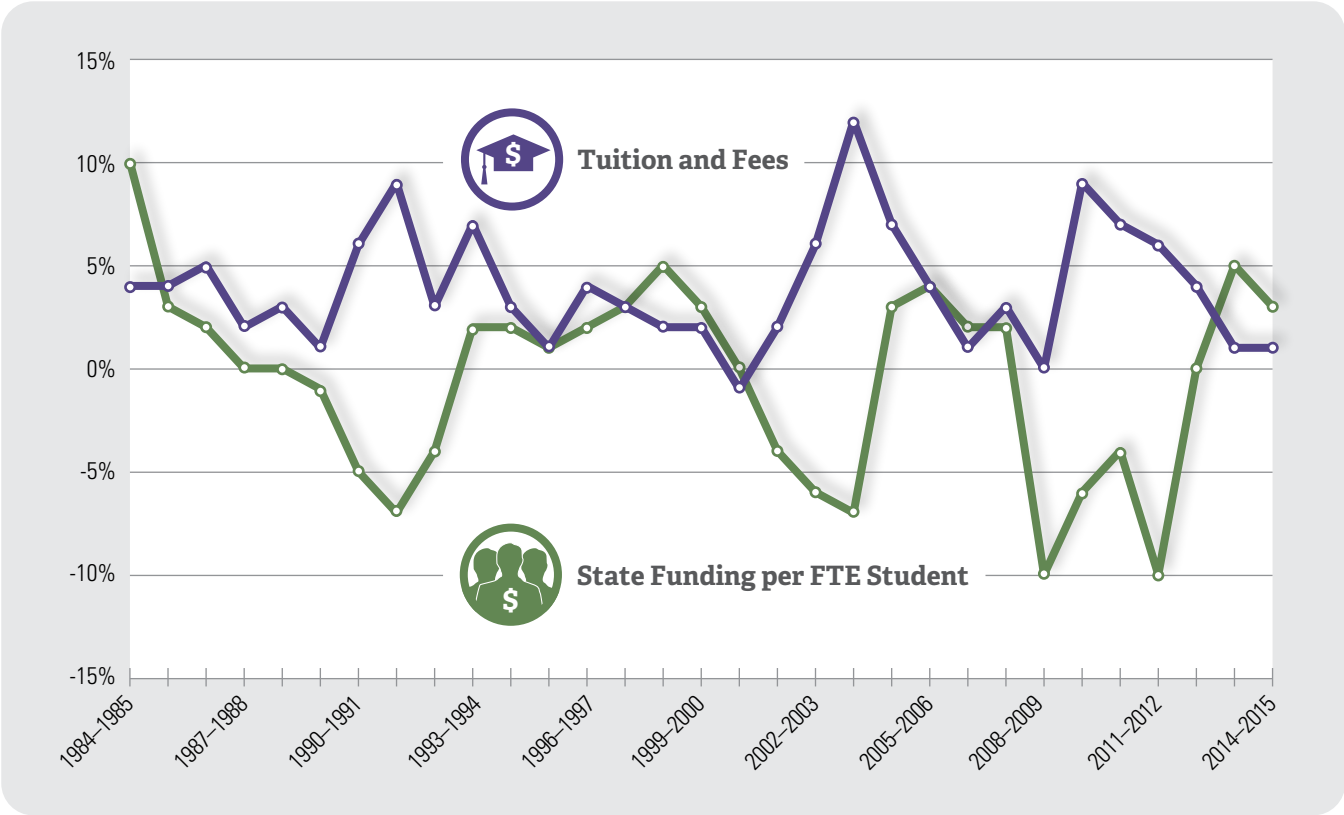
56. Baum and Ma, *Trends in College Pricing 2015*.

57. American Academy of Arts and Sciences, *Public Research Universities: Recommitting to Lincoln's Vision—An Educational Compact for the 21st Century* (Cambridge, Mass.: American Academy of Arts and Sciences, 2016), https://www.amacad.org/multimedia/pdfs/publications/researchpapersmonographs/PublicResearchUniv_Recommendations.pdf.

Figure T: Education and Related Expenditures Per Full-Time Equivalent (FTE) Student in 2012 Dollars by Institution Type: 2002–2003, 2007–2008, 2012–2013

SOURCE: Sandy Baum and Jennifer Ma, *Trends in College Pricing 2015* (New York: College Board, 2015), http://trends.collegeboard.org/sites/default/files/trends-college-pricing-web-final-508-2.pdf. NOTE: Education and related expenditures include spending on instruction, student services, and the education share of central academic and administrative support, as well as operations and maintenance. Expenditures for both undergraduate and graduate students are included in these estimates. Institutional averages are weighted by twelve-month full-time equivalent student enrollments.

Figure U: Annual Percentage Change in Inflation-Adjusted Per-Student State Funding for Higher Education and in Tuition and Fees at Public Institutions, 1984–1985 to 2014–2015



SOURCE: Sandy Baum and Jennifer Ma, *Trends in College Pricing 2015* (New York: College Board, 2015), http://trends.collegeboard.org/sites/default/files/trends-college-pricing-web-final-508-2.pdf.

have become more reliant on tuition revenue to cover the cost of educating students because per-student public funding for higher education has eroded over this time period.

The gap between state support for public two- and four-year institutions, particularly research universities, raises a related set of concerns. In 2012–2013, state and local appropriations per FTE student averaged 44 percent more at public doctoral universities than at community colleges.[58] Public masters' universities received slightly more generous funding than community colleges. In other words, the institutions enrolling the bulk of lower- and moderate-income students receive lower subsidies than those enrolling more affluent student bodies. When the differences in tuition levels are factored in, the resource gaps across sectors are even starker.

Direct educational cost comparisons across sectors are very difficult to make. Comparing educational costs for lower-division students at four-year public institutions would be the best comparison to community college students; however, the data allowing us to separate out the costs to educate lower-division and upper-division students at four-year institutions, or even to separate graduate students from undergraduates, do not yet exist. Further, educational costs vary greatly by program, with courses in the health sciences and engineering, for example, being much costlier than those in the humanities and social sciences.

58. Baum and Ma, *Trends in College Pricing 2015*, Figure 18B, "Institutional Revenues per Student at Public Institutions over Time."

Public research and public bachelor's institutions **receive significantly higher state appropriations** than do community colleges and public master's institutions.

Even taking these limitations into consideration, it is clear that public research and public bachelor's institutions receive significantly higher state appropriations than do community colleges and public master's institutions (the most likely alternative to community colleges). Moreover, in contrast to K–12 education funding in some states and districts, allocations take no account of the appropriate compensatory level of institutional funding based on the academic and social needs of the students served. Because of their socioeconomic and academic backgrounds, community college students and those enrolled in nonselective public four-year institutions require more remedial coursework and higher levels of student support services than their counterparts in public research universities. There is general consensus that community colleges and other broad-access public institutions are significantly underfunded relative to flagship and other more selective public universities.

The growing prices at private colleges and universities, which, again, have been rising at lower rates than at their four-year public counterparts, can be attributed to a number of factors that vary across institutions. Private colleges are not a monolith; different forces act upon these institutions in unique ways. Many small or medium-sized local private colleges that draw primarily from students in their regions provide high levels of aid to students from low- and middle-income backgrounds. These colleges raise their prices so that they secure higher revenues in tuition and fees from the wealthier students who can afford to pay. For many of these colleges, the "sticker price," which is in fact paid by relatively few students, typically rises much more rapidly than the net price, after allowing for student aid awards and tuition discounts. In fact, for a number of private institutions, the net price may be stagnant or falling.

Elite small private colleges also use this tuition pricing strategy, but they too compete with similar institutions at the national and international levels to provide costly "luxury" goods such as new dormitories, fitness centers, and dining facilities to attract students. Some of these luxuries may have little or no educational impact, but others, like very small classes, full financial aid for students who study abroad, and sophisticated laboratory equipment, may provide meaningful educational advantages to students who attend. Catherine "Cappy" Hill, the former president of Vassar College, has persuasively argued that growing economic inequality helps drive the expectations of expensive amenities and educational offerings of the families of many of the students being recruited to elite colleges. Large private research universities also compete nationally for students, contending with the costs related to bringing in the best faculty to advance their research endeavors. Taken together, these explanations tell us much about rising prices at private colleges and universities, but they do not apply equally to all institutions in the sector.

Key Facts and Figures

Paying for College

1 There are big differences between the "sticker price" of college and what most students actually pay: the average sticker price for one year at a private nonprofit four-year college was almost **$44,000** in 2015–2016; but the average net price that students paid (including the amount they borrowed for future payment) was **$26,400**.

2 About **one-third** of all full-time students pay the full sticker price, while the remaining **two-thirds** pay a reduced net price.

3 More students are taking out more money for more loans:

- The proportion of college graduates who took out federal loans increased from approximately **50 percent** in 2000 to **60 percent** in 2012.
- The median amount borrowed among college graduates with debt in 2012 ranged from about **$10,000** at community colleges to almost **$30,000** at private four-year institutions.
- The median cumulative loan amount for college graduates increased nearly **25 percent** from 2000 to 2012.

4 Students who do not graduate and who take out the smallest loan amounts have the highest default rates, whereas students who graduate from private nonprofit four-year colleges have the lowest default rates.

5 Net cost has risen fastest at public four-year institutions and has decreased at public two-year colleges:

- Students today pay **73 percent** more than they did two decades ago to attend public four-year colleges. They also pay **55 percent** more than they did as recently as six years ago.
- Students today pay **32 percent** more than they did two decades ago to attend private four-year colleges and 10 percent more than they did six years ago.
- Students paid **25 percent** more to attend for-profit institutions in 2012 than they did in 2000.
- Students and their families pay **half** of what they paid two decades ago in net tuition and fees to attend public two-year institutions. They pay **16 percent** less than they did six years ago.

6 Decreases in per-student state funding play a major role in explaining increases in tuition and fees at public four-year institutions: adjusted for inflation, state funding per full-time student in 2014 was nearly **30 percent** lower than in 2000.

Section Four:
Getting Through and Getting Out

For many college students, there is no clear pathway to the finish line of a timely graduation. Many take required remedial courses that do not count toward graduation; many transfer to or take classes from other colleges that may or may not meet degree requirements; and many take time off or switch between full-time and part-time study to earn money or attend to family needs. The cumulative effect of these factors means that more students take more time, and often earn more credits, than needed to graduate—if they graduate at all. Nationally, only 40 percent of students complete a bachelor's degree within four years and only 60 percent graduate within six years from the college at which they started.[59]

More students take more time, and often earn more credits, than needed to graduate—if they graduate at all.

DEVELOPMENTAL/REMEDIAL EDUCATION

Developmental or remedial courses are noncredit classes that prepare incoming students who lack the skills to complete college-level coursework. Typically, these are one-semester classes in math, writing, and reading arranged in sequences (ranging from one to four levels) that lead to a "gateway" college-level math or English course. Nearly all public two-year colleges and 75 percent of public four-year institutions offer remedial instruction.[60]

Most colleges and universities require incoming students to take a placement test to determine their academic levels. Based on the results of that test, half of all undergraduates take at least one remedial course while enrolled (averaging 2.6 remedial courses per student).[61] Students attending open-access institutions take developmental education courses at especially high rates. Federal data indicate that 68 percent of community college students and 40 percent of students at public four-year colleges take at least one remedial course.[62]

Beyond the sheer number of students enrolled in developmental courses, there are growing concerns about these students' low rates of success in completing these courses and moving on to college-level classes and degree completion. Fewer than half of all students referred to developmental education complete their recommended curriculum sequence and begin a degree program.[63] Most of these students fail to graduate; only 28 percent of two-year college students who took at least one developmental education course earned a degree or

59. National Center for Education Statistics, Digest of Education Statistics, Table 326.10, "Graduation Rate from First Institution Attended for First-Time, Full-Time Bachelor's Degree-Seeking Students at 4-Year Postsecondary Institutions, by Race/Ethnicity, Time to Completion, Sex, Control of Institution, and Acceptance Rate: Selected Cohort Entry Years, 1996 through 2008," https://nces.ed.gov/programs/digest/d15/tables/dt15_326.10.asp.

60. Midwestern Higher Education Compact, *The Traditional Approach to Developmental Education: Background and Effectiveness* (Minneapolis: Midwestern Higher Education Compact, November 2014), http://www.mhec.org/sites/mhec.org/files/2014nov_traditional_approach_dev_ed_background_effectiveness.pdf.

61. Judith Scott-Clayton, Peter M. Crosta, and Clive R. Belfield, *Improving the Targeting of Treatment: Evidence from College Remediation*, working paper 18457 (Cambridge, Mass.: National Bureau of Economic Research, October 2012), http://www.nber.org/papers/w18457.pdf.

62. Community College Research Center, *What We Know about Developmental Education Outcomes* (New York: Columbia University, January 2014), http://ccrc.tc.columbia.edu/media/k2/attachments/what-we-know-about-developmental-education-outcomes.pdf.

63. Thomas Bailey, Dong Wook Jeong, and Sung-Woo Cho, "Referral, Enrollment, and Completion in Developmental Education Sequences in Community Colleges," *Economics of Education Review* 29 (2) (April 2010): 255–270.

Half of all undergraduates **take at least one remedial course** while enrolled (averaging 2.6 remedial courses per student).

certificate within 8.5 years, compared with 43 percent of nonremedial students.[64]

Additional critiques of developmental education include:

- Charges of inaccurate use and interpretation of placement exams;
- Mixed research results on the effectiveness of developmental education;
- An estimated annual cost of approximately $7 billion;[65] and
- That across all income groups at all types of colleges, students are borrowing an extra $380 million per year to take remedial courses in the first year of college.[66]

In response to the growing awareness of the number of students placed into developmental courses and the concomitant concerns about many aspects of developmental education, a growing number of reforms have recently been introduced:

- Redesigned delivery models that accelerate the traditional sequenced model or offer developmental courses concurrently with college-level courses ("corequisite courses");
- New course content, particularly in math, that is aligned to the student's intended program of study;
- New placement approaches that include multiple measures such as student high school performance and noncognitive attributes; and
- New policy approaches via state legislature, such as Florida's SB-1720 (2013), which allows students to voluntarily accept placement, or not, into developmental education courses, and Connecticut's Public Act No. 12-40 (2012), which requires developmental coursework to be embedded into college-level courses.

There are **growing concerns** about these students' **low rates of success** in completing these courses and moving on to college-level classes and degree completion.

64. Paul Attewell, David Lavin, Thurston Domina, and Tania Levey, "New Evidence on College Remediation," *The Journal of Higher Education* 77 (5) (September/October 2006): 886–924.

65. Midwestern Higher Education Compact, *The Traditional Approach to Developmental Education: Background and Effectiveness*; and Scott-Clayton, Crosta, and Belfield, *Improving the Targeting of Treatment: Evidence from College Remediation*.

66. Mary Nguyen Barry and Michael Dannenberg, *Out of Pocket: The High Cost of Inadequate High Schools and High School Student Achievement on College Affordability* (Washington, D.C.: Education Reform Now and Education Post, April 2016), https://edreformnow.org/app/uploads/2016/04/EdReformNow-O-O-P-Embargoed-Final.pdf.

TRANSFER

Transfer—the process whereby a student moves from one higher education institution to another—is a complex and significant process. A recently published report analyzing the transcripts of college students found that about one-third (35 percent) of first-time undergraduate students transferred from one institution to another or enrolled at the same time at two institutions at least once over a six-year time frame. Of this group, approximately 21 percent transferred/coenrolled once, and another 11 percent transferred/coenrolled more than once.[67]

Transfer is most commonly associated with students moving from two-year institutions to baccalaureate institutions, yet a significant number also transfer laterally. Of all first-time students who started at a two-year public institution in fall 2008, 24 percent transferred to a four-year institution while another 15 percent made a lateral move to another two-year institution.[68] And for students who started at four-year institutions, the rate of transfer to a two-year institution was similar to that of moving to another four-year institution: 17.2 percent and 17.9 percent, respectively.

> One-third (35 percent) of first-time undergraduate students **transferred from one institution to another** or enrolled at the same time at two institutions at least once over a six-year time frame.

A more mobile and diverse college student population, the growing popularity of online courses, and escalating demands on curriculum requirements have converged to create a multidirectional "transfer swirl" of students and credits moving about multiple institutions over time.

The data on successful transfers are not encouraging for the role of community colleges in facilitating transfer to four-year institutions. A joint report released by the Community College Research Center at Teachers College, Columbia University; the Aspen Institute; and the National Student Clearinghouse Research Center found that only 14 percent of students starting in community colleges transfer to four-year schools and earn a bachelor's degree within six years of entry. Further, the report found that lower-income students, who are more likely to start at a community college, fare worse on almost all transfer measures than their higher-income counterparts.[69]

A host of obstacles face students seeking to transfer, leading to lost credits, repetition of courses, low completion rates, and extended time to degree. Potential transfer barriers include:

- Confusing transfer policies and agreements;
- Vague knowledge on how transfer courses will be accepted and applied to the degree;

67. Sean Anthony Simone, *Transferability of Postsecondary Credit Following Student Transfer or Coenrollment* (Washington, D.C.: National Center for Education Statistics, August 2014), http://nces.ed.gov/pubs2014/2014163.pdf. In this study, *student transfer* refers to the movement from one institution to another; if a student returns to the original institution and the enrollment spell is less than four months, this is not considered transfer. Coenrollment refers to overlapping periods of postsecondary enrollment at two or more institutions.

68. National Student Clearinghouse Research Center, *Transfer and Mobility: A National View of Student Movement in Postsecondary Institutions, Fall 2008 Cohort* (Herndon, Va.: National Student Clearinghouse Research Center, July 2015), http://pas.indiana.edu/pdf/SignatureReport9.pdf.

69. David Jenkins and John Fink, *Tracking Transfer: New Measures of Institutional and State Effectiveness in Helping Community College Students Attain Bachelor's Degrees* (New York: Community College Research Center, Teachers College, Columbia University, published with the Aspen Institute and the National Student Clearinghouse Research Center, January 2016), http://www.aspeninstitute.org/sites/default/files/content/docs/pubs/CCRCAspenNSC_Tracking%20Transfer.pdf.

- Inconsistent access to transfer information and to an appeals process; and
- Lack of knowledge about comparable courses taught at other public higher education institutions.

UNDERMATCHING

A growing number of studies indicate that students from low-income or disadvantaged backgrounds who are academically talented do not apply to more competitive colleges that would likely admit them. Had they applied, the evidence indicates that they would have improved their chances of graduating.[70] This so-called *undermatching* mainly occurs during the application process, not because students apply and are turned down. In some cases, undermatching occurs because students believe they will not be able to afford tuition at more competitive colleges. Sometimes they are right; but because of the complexity of the financial aid system, many families that would be eligible for substantial financial help may not even know it.

EXTENDED TIME TO DEGREE

While the bachelor's degree is commonly associated with four years of college coursework, the average time to completion is much longer. For example, students who started at a four-year college in 2007 took an average of five years and ten months to earn a bachelor's degree.[71] In California, half of the state's community college students take four years or longer to complete a "two-year" associate degree.[72] A study of public universities found that extended time to complete a bachelor's degree was predominantly the result of students spending additional semesters enrolled in college, as opposed to taking time away from college, and that the length of time to complete varied by institutional selectivity and student demographics.[73] Another study found that longer time to degree is concentrated among students at less selective institutions and suggested that students from lower-income families took longer to graduate than their wealthier peers because

Students who started at a four-year college in 2007 took an average of **five years and ten months to earn a bachelor's degree.**

70. William G. Bowen, Martin A. Kurzweil, Eugene M. Tobin, and Susanne C. Pichler, *Equity and Excellence in American Higher Education* (Charlottesville: University of Virginia Press, 2005); Caroline M. Hoxby and Christopher Avery, *The Missing "One-Offs": The Hidden Supply of High-Achieving, Low-Income Students*, working paper 18586 (Cambridge, Mass.: National Bureau of Economic Research, December 2012); Melissa Roderick, Vanessa Coca, and Jenny Nagaoka, "Potholes on the Road to College: High School Effects in Shaping Urban Students' Participation in College Application, Four-Year College Enrollment, and College Match," *Sociology of Education* 84 (2011): 178–211; Jonathan Smith, Matea Pender, and Jessica Howell, "The Full Extent of Student-College Academic Undermatch," *Economics of Education Review* 32 (2013): 247–261; and Joshua S. Wyner, John M. Bridgeland, and John J. DiIulio, Jr., *Achievementrap: How America is Failing Millions of High-Achieving Students from Lower-Income Families* (Washington, D.C.: Civic Enterprises, 2007), http://files.eric.ed.gov/fulltext/ED503359.pdf.

71. National Center for Education Statistics, *Profile of 2007–08 First-Time Bachelor's Degree Recipients in 2009* (Washington, D.C.: National Center for Education Statistics, 2012), Table 2.8, "Time to Degree: Among 2007–08 First-Time Bachelor's Degree Recipients, Median and Average Number of Months and Percentage Distribution of Months between Initial Postsecondary Enrollment and Bachelor's Degree Attainment, by Selected Individual and Institutional Characteristics: 2009," http://nces.ed.gov/pubs2013/2013150.pdf.

72. Campaign for College Opportunity, "The Real Cost of College: Time and Credits to Degree in California," YouTube video (July 2014), http://collegecampaign.org/portfolio/july-2014-the-real-cost-of-college-time-and-credits-to-degree-in-california/#.

73. William G. Bowen, Matthew M. Chingos, and Michael S. McPherson, *Crossing the Finish Line: Completing College at America's Public Universities* (Princeton, N.J.: Princeton University Press, 2009).

of difficulties in financing their college education.[74] Additional explanations for why students are taking longer to earn degrees also include enrollment in developmental courses, students making uninformed course selections, institutions not offering required courses in a timely matter, and excessive degree requirements.

While the graduation rate gaps across race and ethnicity tend to be closing, **gaps across gender and income are increasing.**

GRADUATION RATES

Overall, about 40 percent of students who pursue a bachelor's degree obtain it within four years (this increases to 59 percent within six years)[75] and 29 percent of students who start a certificate or associate degree at a two-year college earn a credential within three years.[76]

Graduation rates vary by gender, race and ethnicity, and socioeconomic status. Women complete at higher rates than men, white and Asian students complete at higher rates than black and Hispanic students, and high-income students complete at higher rates than their low-income peers. While the graduation rate gaps across race and ethnicity tend to be closing, gaps across gender and income are increasing.

There are still other factors correlated with student graduation rates. Students who enroll full time, regardless of age, have significantly higher graduation rates than their part-time or mixed-time counterparts. Institutional type also matters, with graduation rates across four-year institutions varying from less than 10 percent to almost 100 percent. A sensitive but important contributor to low baccalaureate completion rates is that even after controlling for differences in precollege levels of academic preparation, students aspiring to earn a baccalaureate degree who choose to attend a four-year college have much higher graduation rates than those who choose to start at a community college.[77] Further, broader economic trends, such as the 2008 recession and changes in the job market, also contribute to fluctuations in graduation rates, with students tending to leave school when jobs are plentiful.[78]

While states and campuses are increasingly prioritizing the improvement of graduation rates, moving these numbers is hugely challenging. In 2011, the national Achieving the Dream initiative found that despite years of focused effort and dedication of resources to improve community college student outcomes—such as course completion, persistence, maintaining good grades, and earning college credentials—success rates have remained relatively unchanged at community colleges.[79] While this underscores the depth of the challenge, many institutions have made progress in improving completion rates.[80]

74. John Bound, Michael F. Lovenheim, and Sarah Turner, "Increasing Time to Baccalaureate Degree in the U.S.," working paper 15892 (Washington, D.C.: National Bureau of Economic Research, April 2010), http://www.nber.org/papers/w15892.pdf.

75. National Center for Education Statistics, Table 326.10.

76. National Center for Education Statistics, *The Condition of Education, 2015* (Washington, D.C.: National Center for Education Statistics, May 2015), http://nces.ed.gov/pubs2015/2015144.pdf.

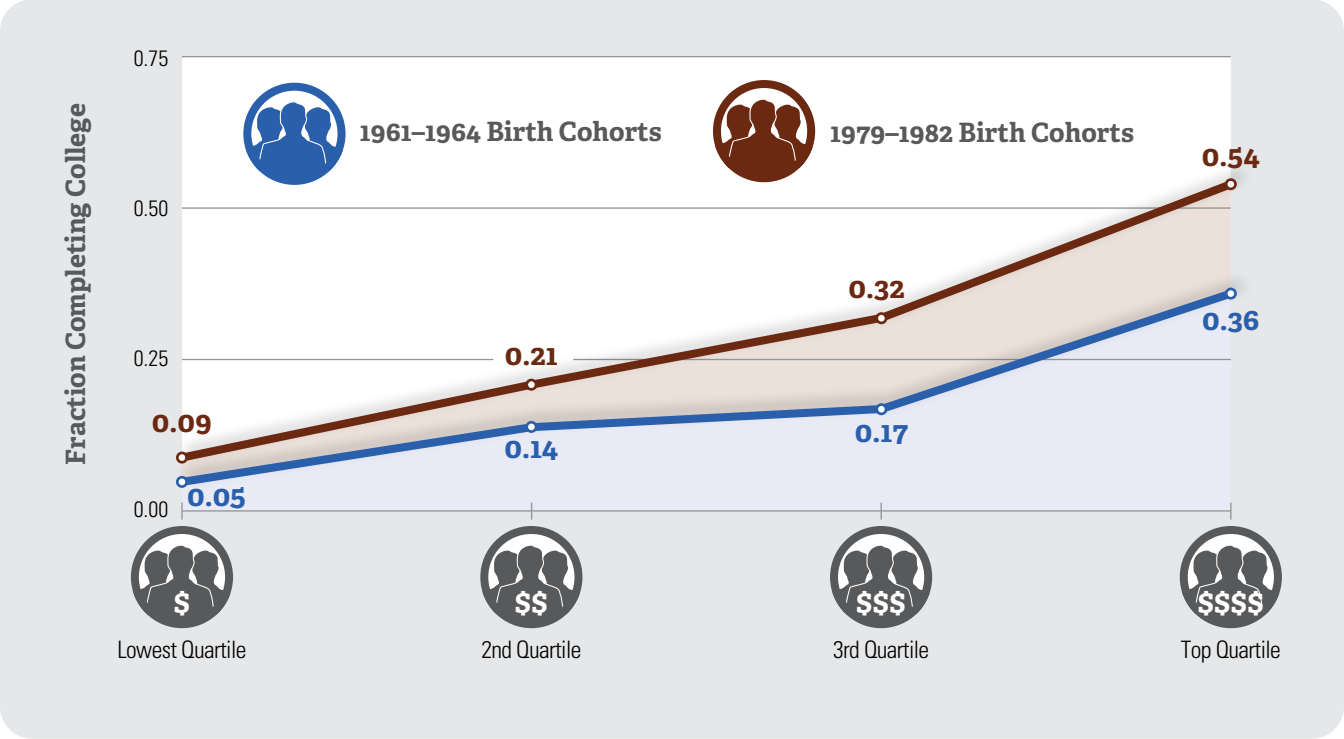
77. William G. Bowen and Michael S. McPherson, *Lesson Plan: An Agenda for Change in American Higher Education* (Princeton, N.J: Princeton University Press, 2016).

78. Ibid.

79. Elizabeth Zachry Rutschow, Lashawn Richburg-Hayes, Thomas Brock, et al., *Turning the Tide: Five Years of Achieving the Dream in Community Colleges* (New York: Community College Research Center, Teachers College, Columbia University, January 2011), xi, http://www.mdrc.org/sites/default/files/full_593.pdf.

80. See Richard Kazis, "Big Change on Campus," *Stanford Social Innovation Review* (Spring 2016), http://ssir.org/articles/entry/big_change_on_campus.

Figure V: Fraction of Students Completing College, by Income Quartile and Year of Birth



SOURCE: U.S. Bureau of Labor Statistics, "National Longitudinal Survey of Youth, 1979 and 1998," quoted in Martha J. Bailey and Susan M. Dynarski, "Inequality in Postsecondary Education," in *Whither Opportunity? Rising Inequality, Schools, and Children's Life Chances*, ed. Greg J. Duncan and Richard J. Murnane (New York: Russell Sage Foundation, 2011).

ATTAINMENT RATES

The combination of inequalities in high school graduation rates, college enrollment, and college graduation rates means that consistently higher percentages of women, students from high-income families, and white and Asian students earn a college education compared with men, students from low-income families, and black and Hispanic students. In 2015, 50 percent of women aged twenty-five to twenty-nine held a bachelor's or higher degree compared with 41 percent of men. In that same year, attainment rates based on race/ethnicity varied as well: 72 percent of Asian students aged twenty-five to twenty-nine held an associate or higher degree compared with 54 percent of white, 31 percent of black, and 27 percent of Hispanic students.[81]

One study found that inequality in college attainment by family income level has increased dramatically in recent decades.[82] Figure V illustrates that students who were born in the 1960s into low-income families earned bachelor's degrees at a rate of only 5 percent, while their higher-income counterparts earned bachelor's degrees at a 36 percent rate. Twenty years later, of students born around 1980 into low-income families, only 9 percent earned a bachelor's degree, while their high-income peers pulled away to a 54 percent attainment rate, widening the gap significantly over this time period.

81. National Center for Education Statistics, Digest of Education Statistics, "Educational Attainment of Young Adults," http://nces.ed.gov/programs/coe/indicator_caa.asp (updated May 2016).

82. Martha J. Bailey and Susan M. Dynarski, *Gains and Gaps: Changing Inequality in U.S. College Entry and Completion*, NBER Paper No. 17633 (Cambridge, Mass.: National Bureau of Economic Research, December 2011), http://www.nber.org/papers/w17633.

CREDENTIALS CONFERRED

Of the undergraduate credentials awarded in 2013–2014 in the United States, less than half—48 percent—were bachelor's degrees, while 26 percent were associate degrees and 25 percent were certificates extending from the liberal arts to technical and career fields.[83] Over the past decade, the number of all levels of credentials awarded by colleges and universities has increased, with the fastest growing college credentials being associate degrees and certificates. The number of certificates awarded increased by 41 percent between 2004 and 2014; associate degrees increased by 51 percent, and bachelor's degrees increased by 34 percent.[84]

Of the one million associate degrees awarded in 2012–2013, the three fields producing the most awards were liberal arts and sciences, general studies, and humanities (34 percent); health professions and related programs (21 percent); and business, management, marketing, and support services (11 percent). The three fields accounting for the greatest portions of the 1.8 million bachelor's degrees earned in 2012–2013 were business (20 percent), health professions and related programs (10 percent), and social sciences and history (10 percent).[85]

Both associate and bachelor's degrees in health professions and related programs have exploded over the last decade. In the period between 2003 and 2013, associate degrees conferred in this field almost doubled, and bachelor's degrees grew by 160 percent. Degrees awarded in the liberal arts and sciences, general studies, and humanities have grown at a much slower pace: 55 percent for associate degrees and 19 percent for bachelor's. Similarly, bachelor's degrees awarded in social sciences and history have increased at a slower rate—35 percent—during the same period.[86]

There has been significant growth in credentials that prepare individuals for specific occupations, often referred to as vocational education, workforce education, or career and technical education. In 2012, students enrolled in certificate or associate degree career-education programs made up approximately one-third of all undergraduate enrollments.[87]

83. National Center for Education Statistics, Digest of Education Statistics, Table 318.40, "Degrees/Certificates Conferred by Postsecondary Institutions, by Control of Institution and Level of Degree: 1969–70 through 2013–14," http://nces.ed.gov/programs/digest/d15/tables/dt15_318.40.asp.

84. National Center for Education Statistics, "Degrees Conferred by Public and Private Institutions," http://nces.ed.gov/programs/coe/indicator_cts.asp (updated May 2016).

85. National Center for Education Statistics, "Undergraduate Degree Fields," https://nces.ed.gov/programs/coe/indicator_cta.asp (accessed April 2015).

86. National Center for Education Statistics, Digest of Education Statistics, Table 321.10, "Associate's Degrees Conferred by Postsecondary Institutions, by Sex of Student and Discipline Division: 2003–04 through 2013–14," https://nces.ed.gov/programs/digest/d15/tables/dt15_321.10.asp?current=yes; and National Center for Education Statistics, Digest of Education Statistics, Table 322.10, "Bachelor's Degrees Conferred by Postsecondary Institutions, by Field of Study: Selected Years, 1970–71 through 2013–14," https://nces.ed.gov/programs/digest/d15/tables/dt15_322.10.asp?current=yes.

87. Mary Alice McCarthy, *Beyond the Skills Gap: Making Education Work for Students, Employers, and Communities* (Washington, D.C.: New America, 2014), https://www.luminafoundation.org/files/resources/beyond-the-skills-gap.pdf.

Key Facts and Figures

Getting Through and Getting Out

1 Only **40 percent** of students complete a bachelor's degree within four years and only **60 percent** graduate from the college at which they started within six years of entry.

2 Only **29 percent** of students who start a certificate or associate degree at a two-year college earn a credential within 150 percent of the time required to do so.

3 While graduation rate gaps across race and ethnicity are narrowing, gaps based upon gender and income are increasing.

4 About **one-third** of undergraduate students transfer or attend two colleges at the same time at some point during their college career.

5 **Fourteen percent** of students starting in community colleges transfer to four-year schools and earn a bachelor's degree within six years.

6 It takes students an average of **five years and ten months** to earn a bachelor's degree.

7 Of recently awarded undergraduate credentials, less than half–**48 percent**–were bachelor's degrees, while **26 percent** were associate degrees and **25 percent** were certificates.

8 Over the past decade, the number of all credentials awarded by colleges and universities has increased; the fastest growing college credentials are associate degrees (**51 percent** increase) and certificates (**41 percent** increase), followed by baccalaureate degrees (**34 percent** increase).

Conclusion: After College

Having reviewed the paths along which Americans proceed through undergraduate education, this primer concludes by reviewing evidence about how the lives of those who engage with college differ from the lives of those who do not. It is worth noting at the outset that differences scholars have found between those who attend college and those who don't should not all be attributed to the effects of the college experience. It is obvious that the people who attend and especially those who complete college were significantly different in many ways before they enrolled. These preexisting differences affect postcollege outcomes, and we need to remind ourselves to distinguish what college *did* for students from how well it did in picking students who would succeed, in college and in life, even without the college experience.

Evidence indicates that people with more experience and success in higher education are more likely than others to **give back to their communities**.

Nonetheless, college affects the lives of graduates in at least three important ways:

1. It increases their social and civic contributions;
2. It improves personal and family well-being; and
3. It strengthens their economic circumstances.

In the current climate, the economic value (or "payoff") of college often receives outsized attention, but people's lives, and our democracy, would be worse off in many ways without other positive outcomes associated with college education.

SOCIAL AND CIVIC CONTRIBUTIONS

Evidence indicates that people with more experience and success in higher education are more likely than others to give back to their communities. For example, a recent study found that over a period of one year, 42 percent of those who earned at least a bachelor's degree spent time volunteering, compared with 29 percent of those who earned an associate degree or some college credit. Meanwhile, 17 percent of high school graduates and 9 percent of those who did not complete high school volunteered over the same period, indicating how the rate of volunteerism rises with higher education levels.[88]

A more direct measure of civic—in contrast with broader community—engagement is voting. The voting rate of twenty-five- to forty-four-year-old baccalaureate degree-holders in 2012 was 1.7 times higher than the voting rate of high school graduates in the same age group (73 percent to 42 percent).[89] Again, correlation does not imply causation; but careful work by scholars like Thomas Dee and Philip Oreopoulos has presented evidence of a causal link between higher education levels and higher voter participation.[90]

PERSONAL AND FAMILY WELL-BEING

Data on tobacco use reveal a striking connection between education level and personal well-being. People with higher levels of education are less likely to smoke—an effect that has persisted over decades. By 2012, only 8 percent of individuals with a bachelor's degree or higher smoked, compared with 25 percent of high school graduates. Further, among smokers with some college experience, almost half tried to stop smoking, contrasted

88. Sandy Baum, Jennifer Ma, and Kathleen Payea, *Education Pays 2013: The Benefits of Higher Education for Individuals and Society* (New York: College Board, 2013), https://trends.collegeboard.org/sites/default/files/education-pays-2013-full-report.pdf.

89. Ibid.

90. Thomas S. Dee, "Are there Civic Returns to Education?" *Journal of Public Economics* (August 2004): 1697–1720; and Kevin Milligan, Enrico Moretti, and Philip Oreopoulos, "Does Education Improve Citizenship? Evidence from the United States and the United Kingdom," *Journal of Public Economics* 88 (2004): 1667–1695.

with 11 percent of those with high school diplomas. As in the study of voting, there is also strong evidence supporting a causal element in this relationship.[91]

Researchers have also found that people with higher levels of college attainment are more likely to exercise regularly and be less obese than those with less education. One report even indicates that these effects on health-supportive behaviors are caused in part by cognitive changes resulting from higher levels of education.[92]

The relationship between education and family well-being is also revealed by evidence that highly educated women are more likely to spend more time with their children, with likely effects on their children's well-being and success in life. Employed mothers with bachelor's degrees spend about 51 percent more time on their children's activities than do employed mothers who are high school graduates (113 minutes versus 75 minutes per day).[93]

The **voting rate of twenty-five- to forty-four-year-old baccalaureate degree-holders in 2012 was 1.7 times higher** than the voting rate of high school graduates in the same age group (73 percent to 42 percent).

The earnings of the average four-year college graduate **exceeded those of a typical high school graduate by more than $21,000**. Compounded over a working life, the sum of this earnings difference greatly exceeds the cost of paying for college.

FINANCIAL WELL-BEING

The data reported here by no means exhaust the evidence of substantial "nonmonetary" effects of higher levels of education on personal, family, and civic well-being. As noted above, it is particularly important to underline these points in an era in which the benefits of education on financial well-being receive such great emphasis. Nonetheless, we must also briefly review the evidence on how investments in higher education influence people's economic well-being.

It has now been more than fifty years since the economists Gary Becker and Jacob Mincer began to estimate systematically the relationship between educational investments and workers' productivity and earnings. It is likely that this relationship between education and earnings has received more empirical documentation in more settings than any other finding in economics, and the evidence that educational investments yield a substantial return in economic terms that more than justifies their costs is very broadly accepted among economists.

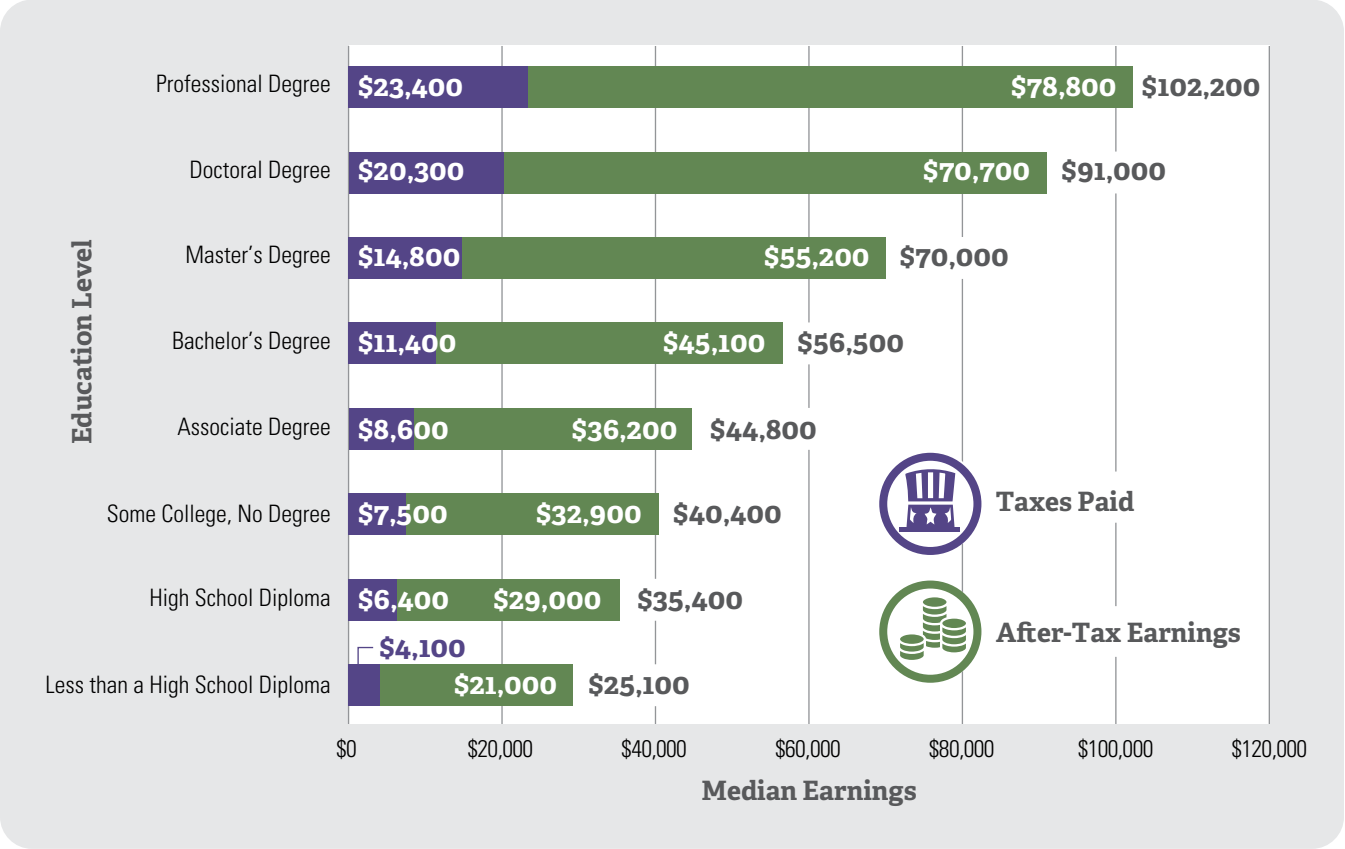
Indeed, evidence for the United States indicates that the rate of return on investments in attending higher

91. Damien de Walque, *Education, Information, and Smoking Decisions: Evidence from Smoking Histories, 1940–2000* (Washington, D.C.: The World Bank, 2004); and Franque Grimard and Daniel Parent, "Education and Smoking: Were Vietnam Draft Avoiders also More Likely to Avoid Smoking?" *Journal of Health Economics* 26 (5) (2007): 896–926.

92. Baum, Ma, and Payea, *Education Pays 2013*.

93. Ibid.

Figure W: Median Earnings and Tax Payments of Full-Time Year-Round Workers Aged 25 and Older, by Education Level, 2011



SOURCE: Sandy Baum, Jennifer Ma, and Kathleen Payea, *Education Pays 2013: The Benefits of Higher Education for Individuals and Society* (New York: College Board, 2013), https://trends.collegeboard.org/sites/default/files/education-pays-2013-full-report.pdf.

education has been higher in recent decades than it has ever been in the past, even without taking into account the many nonmonetary benefits noted above. The simplest way to characterize the economic return on higher education is through examining the *earnings premium*: the gap in wages between those with specified levels of education.

Figure W shows that the earnings of individuals in 2011 increased according to their levels of education. For example, the earnings of the average four-year college graduate exceeded those of a typical high school graduate by more than $21,000. Compounded over a working life, the sum of this earnings difference greatly exceeds the cost of paying for college. Earnings premiums attached to higher education attainment levels below the baccalaureate level are also substantial, although they are smaller than those premiums fixed to bachelor's degrees.

It is important to introduce two cautions about numbers like these. First, they are averages, and averages can hide a great deal of variation. For example, about 16 percent of bachelor's recipients earn less than the average high school graduate, and for these graduates it is hard indeed to claim that higher education paid off, at least in monetary terms. Second, the economic return to higher education appears to be disproportionately higher for those who *complete* a particular higher education level than for those who drop out. With high dropout rates plaguing U.S. higher education, this is a grave warning. It does appear that, even allowing for high dropout rates, undergraduate higher education does pay off on average

in monetary terms, but it is a much closer call than it would be if completion rates were higher.[94]

CLOSING

That everyone is entitled to their own opinions but not their own facts is a familiar saying. A great deal of public discussion about higher education is muddied by misstatements and confusion about relatively straightforward factual questions. In this primer, we have presented reliable facts and evidence and have documented their origins. This overview of the trends—demographic, economic, and technical—that will shape higher education over coming decades offers a starting point for deliberation about the issues and opportunities confronting higher education in the United States in the twenty-first century.

It is, of course, only a starting point. In particular, we would emphasize the data and analyses missing from these pages. We have not, for example, attempted to report on the actual production of college education: What are students expected to learn? What do we know about what they actually learn? Who are the faculty and what do they do? We will, however, address these questions and more in subsequent reports of the American Academy of Arts and Sciences' Commission on the Future of Undergraduate Education.

94. Alan Benson, Raimundo Esteva, and Frank S. Levy, "Dropouts, Taxes and Risk: The Economic Return to College under Realistic Assumptions," *Social Science Research Network* (2015), http://dx.doi.org/10.2139/ssrn.2325657.

Commission on the Future of Undergraduate Education

MEMBERS

Roger W. Ferguson, Jr., *Cochair*, TIAA

Michael S. McPherson, *Cochair*, Spencer Foundation

Joseph E. Aoun, Northeastern University

Deborah Loewenberg Ball, University of Michigan School of Education

Sandy Baum, Urban Institute

Rebecca M. Blank, University of Wisconsin-Madison

John Seely Brown, formerly, Xerox PARC Research

Wesley G. Bush, Northrop Grumman

Carl A. Cohn, California Collaborative for Educational Excellence

Mitchell E. Daniels, Jr., Purdue University

John J. DeGioia, Georgetown University

Jonathan F. Fanton, American Academy of Arts and Sciences

Robert Hormats, Kissinger Associates; formerly, United States Department of State

Freeman A. Hrabowski III, University of Maryland, Baltimore County

Jennifer L. Jennings, New York University

Jeremy Johnson, Andela

Daphne Koller, Coursera, Inc.; Stanford University

Sherry Lansing, Sherry Lansing Foundation

Nicholas Lemann, Columbia University Graduate School of Journalism

J. Michael Locke, formerly, Rasmussen, Inc.

Monica Lozano, U.S. Hispanic Media; *La Opinión*

Gail O. Mellow, LaGuardia Community College

Diana Natalicio, University of Texas at El Paso

Hilary Pennington, Ford Foundation

Beverly Daniel Tatum, Spelman College

Shirley M. Tilghman, Princeton University

Michelle Weise, Southern New Hampshire University

DATA ADVISORY GROUP

Tom Bailey, Columbia University

Sandy Baum, Urban Institute

Ronald G. Ehrenberg, Cornell University

Bridget Terry Long, Harvard Graduate School of Education

Judith Scott-Clayton, Columbia University

PROJECT STAFF

Francesca Purcell

Eliza Berg

Esperanza Johnson, *Consultant*

Zack Mabel, *Consultant*

AMERICAN ACADEMY OF ARTS & SCIENCES

Cherishing Knowledge, Shaping the Future

Since its founding in 1780, the American Academy has served the nation as a champion of scholarship, civil dialogue, and useful knowledge.

As one of the nation's oldest learned societies and independent policy research centers, the Academy convenes leaders from the academic, business, and government sectors to examine the critical issues facing our global society.

Through studies, publications, and programs on Science, Engineering, and Technology; Global Security and International Affairs; the Humanities, Arts, and Education; and American Institutions and the Public Good, the Academy provides authoritative and nonpartisan policy advice to decision-makers in government, academia, and the private sector.

AMERICAN ACADEMY
OF ARTS & SCIENCES

@americanacad
www.amacad.org